Graduate Council Curriculum Report

The Graduate Council Curriculum Report (GCCR), which includes all graduate curricular proposals approved through the Graduate Council curricular review process, is published 12 times each calendar year.

Questions/comments regarding the GCCR or its contents may be directed to the Director of Graduate Education Administration.

April 5, 2017

Graduate Degree Programs

ADD

Bioinformatics and Genomics – new graduate program offering the Ph.D. and M.S. degrees (Intercollege Graduate Degree Programs), page 8

Corporate Innovation and Entrepreneurship – new graduate program offering the M.P.S. degree (Smeal College of Business), page 51

CHANGE

Bioinformatics and Genomics – add a joint M.D./Ph.D. degree program (Intercollege Graduate Degree Programs), page 102

Business Administration – create IUG program with B.S. in Accounting and M.B.A. in Business Administration (Penn State Harrisburg), page 117

Business Administration – create IUG program with B.S. in Finance and M.B.A. in Business Administration (Penn State Harrisburg), page 180

Business Administration – create IUG program with B.S. in Information Systems and M.B.A. in Business Administration (Penn State Harrisburg), page 243

Business Administration – create IUG program with B.S. in Management and M.B.A. in Business Administration (Penn State Harrisburg), page 306

Business Administration – create IUG program with B.S. in Marketing and M.B.A. in Business Administration (Penn State Harrisburg), page 369

Business Administration – create IUG program with B.S. in Project and Supply Chain Management and M.B.A. in Business Administration (Penn State Harrisburg), page 432

Computer Science and Engineering – change Ph.D. degree requirements (College of Engineering), page 495

DROP

Molecular, Cellular, and Integrative Biosciences – drop option in Bioinformatics and Genomics (Intercollege Graduate Degree Programs), page 506
## Graduate Courses

### ADD

**AEREC 531**  
Applied Microeconomic Theory I  
MICROECONOMICS I (3)  
Principles of microeconomic theory and models that economists use to explain the behavior of consumers, firms, and markets. Principles and models are developed using calculus. The emphasis is on applied theory and problem solving, rather than formal proofs and derivations.  
PROPOSED START: FA2017

### CAS 509

Democratic Deliberation  
DEM DELIBERATION (3)  
Modern political systems are as likely to move further away from deliberative ideals as toward them, and such movement can undermine a system’s democratic legitimacy. This problem has inspired the development of deliberative democratic theory and research, which provides a powerful critique of contemporary politics. The study of deliberation dates back to ancient Greece, which gave us forms of speech that endure to the present day. Current conceptions stress public deliberation and dialogue's potential to ameliorate social and political problems, including polarization and incivility, and to generate more robust and reflective public policy solutions to complex problems. These ideas fold into grander theories of deliberative democracy, which considers how everything from cultural practices to large-scale institutions feed into the overall system of public discourse in a society. Students will review philosophical and interpretive works, as well as empirical research on deliberation utilizing case studies, surveys, and experiments. This seminar also helps students plan and execute their own contributions to this growing body of scholarship.  
PROPOSED START: FA2018

### CHEM 810

Liquid Chromatography I  
LIQUID CHROMA I (1)  
The course specifically caters to the needs of the analytical chemical industry and individuals newly hired into entry-level sample management/preparation and quality assurance/quality control positions within companies using liquid chromatographic techniques. The course material is designed to increase student understanding of both the liquid chromatography instrument used in the laboratory and the principles underlying the measurements.  
PROPOSED START: FA2017

### CHEM 811

Liquid Chromatography II  
LIQUID CHROMA II (1)  
The course specifically caters to the needs of the analytical chemical industry and individuals hired into, or transitioning into, technician level positions within companies using liquid chromatographic techniques. The course material is designed to increase student understanding of both the liquid chromatography instrument used in the laboratory and the principles underlying the measurements.
CHEM 812
Liquid Chromatography III
LIQUID CHROMA III (1)
The course specifically caters to the needs of the analytical chemical industry and individuals hired into, or transitioning into, development-level, or senior-level, chemist positions within companies using liquid chromatographic techniques. The course material is designed to increase student understanding of both the liquid chromatography instrument used in the laboratory and the principles underlying the measurements.

GER 534
History of German Film and Photography
GERMAN FILM PHOTOG (3)
This course will examine the history, theory, and practice of German photographic and moving picture technology from its origins to the digital age. The course will be structured around important innovations in visual technology, including: 1) the pre-history and invention of photography, 2) pre-cinematic moving pictures (Anschütz), 3) the invention of cinema (Skladanowsky Bros.), 4) sound and color innovations, 5) video, digital, and installation work. The aim of the course is to provide an historical overview of visual culture in which the radical shifts inaugurated by new technologies are examined in terms of their aesthetic, philosophical, and political impact. In the German context these shifts have been examined by important theoreticians of visual culture (most notably Arnheim, Balácz, Benjamin, Kracauer, and Flusser) whose work has changed the way we think about our relation to images. Practitioners in the German sphere have been no less influential: from Ottomar Anschütz’s pre-cinematic experiments with moving pictures to the very first public demonstration of cinematic technology (the Skladanowskys’ bioscope, one month before the Lumière’s first show) to the avant-garde animation of the Weimar period; from the narrative and design innovations of the Expressionist filmmakers to the rich and varied independent films of the New German Cinema to the radical documentarians of the past decade. By providing students with an understanding of German innovations in and responses to new technologies this course will ground readings of particular works historically.

In broad terms, class discussion will consider questions such as: What is the aesthetic status of the photographic image in relation to painting? What is the ontological status of the photograph as a chemical imprint of light? How do these new technologies lend themselves to political action? How is the spectator differently constructed by these technologies? In what way is the still image integral to the moving image—and what implications do these have for our perception of time? What is the new role of the image in mass, consumer culture (subversive or complicit)? How do the formal and technical affordances of the film-based image contribute to the construction of national, race, and gender identities, to spectator desires, and to new aesthetic categories?

Readings will be available in German and in English. Class discussion will be in English.

HRER 824
Total Rewards
TOTAL REWARDS (3)
This course covers one of the main functional areas of Human Resource Management, total rewards, and prepares students to be effective compensation and benefits professionals. In this course, students
will develop a detailed understanding of the many choices employers make when deciding how to compensate, support, and reward employees, and the consequences of those choices. Students will also learn to think systematically about how the external environmental conditions and internal organizational considerations influence the design and management of an organization’s compensation and benefits systems. Experiences focusing on the transfer of course material to real-world situations will be an integral part of the class.

PROPOSED START: SU2017

PHS 808
Population Health Management
POPULATION HEALTH (3)
This course is designed to provide students with a contextual understanding of the reasons for a renewed focus on population health as a clinical care-delivery model. An overview of the current state of the health of the U.S. population will set the stage for a brief examination of the Affordable Care Act. New care delivery models, such as Accountable Care Organizations, that are promoted in the ACA are discussed.

The course provides an overview of the role Centers for Medicare and Medicaid Services (CMS), state governments, and payers play in creating new healthcare financing models that incentivize a shift from episodic to value-based care. Exploration of changes in reimbursements, the importance of quality measures, and implementation of evidence-based guidelines will be presented.

With this foundation, the course focus turns to examine the many elements of population health management as a concept of broader public health goals. These elements include patient attribution models and risk identification and stratification into sub-populations, as well as care coordination – a key strategy in meeting the health needs of a population across the continuum of care. The specific intervention strategies of chronic condition management and transitions of care are described.

The primary care setting, which is the focal point of population health management, is explored. The transformation of this care provider to a patient-centered medical home is described along with the evolution of interdisciplinary care teams, the use of extenders such as medical assistants, and the shifted emphasis to prevention and health promotion. The emphasis on the role of the patient in population health, the need for improvements in health literacy, consideration of the social determinants of health, and the need for health education are discussed.

An overview of various technology and data analytical tools and processes used to support population health management care delivery models is provided. Discussion of the importance of using data to track, trend, and measure population health interventions will continue in the technology section of the course.

The course will conclude with examinations of the multiple challenges and barriers that health care organizations, payers, and patients experience with value-based care and population health care delivery models. Lastly, a look forward at trends in policy and regulations, application of comparative effectiveness research, and the pervasiveness of ‘big data’ will allow students to explore the future of health care delivery transformation.

PROPOSED START: SU2017

CHANGE

OLD
BA 532
Global Business Environment
GLOBAL BUS ENV (1)
Changes in interest rates, swings in the business cycle, new international trade agreements: all are macroeconomic events, and all can dramatically impact your business. Institutional constraints, as well as theory, and history guide present day macroeconomic analysis and policy. Accordingly, the class is a synthesis of institutional, theoretical, and historical perspectives. A wealth of macroeconomic information and data is now available on the web for those who know how to access and interpret it. We will make extensive use of this material.

EFFECTIVE START: SU2008

NEW

BA 832
Global Business Environment
GLOBAL BUS ENV (1)
Changes in interest rates, swings in the business cycle, new international trade agreements: all are macroeconomic events, and all can dramatically impact business. Institutional constraints, as well as theory, and history guide present day macroeconomic analysis and policy. Accordingly, the class is a synthesis of institutional, theoretical, and historical perspectives. A wealth of macroeconomic information and data is now available on the web for those who know how to access and interpret it.
PROPOSED START: SU2017

OLD

CN ED 595E
Elementary School Counseling Internship and Seminar
ELEM CN INTERN SEM (1-3/Repeatable Max: 6)
Off-campus, supervised internships in elementary school settings with supplementary related topics, discussion, and skills training in on-campus seminars.
EFFECTIVE START: SU2011

NEW

CNED 595E
School Counseling Internship and Seminar
SCH CNG INTERN SEM (3-6/Repeatable Max: 9)
The School Counseling Internship provides a closely supervised field experience in involving the full range of duties involved with professional school counseling in Pre-K-12 schools. Students are expected to utilize every opportunity to become familiar with and participate in the services provided by the schools and related organizations with which they are associated. The expectation is that the Internship student should be providing the same range of services for the school district that the other school counselors provide. In this course, you are expected to engage in various counselor roles at your site, including (a) program development and evaluation: program assessment, planning, design, implementation, and evaluation; (b) counseling: individual, group, group guidance; (c) program administration and leadership; (c) collaboration, coordination, and consultation: work with parents, teachers, administrators, community members, and other appropriate stakeholders; and (d) assessment, career development, program coordination, and other important and appropriate roles.
PROPOSED START: SU2017

OLD

CSD 595G
Speech Diagnostics Practicum
SPCH DIAG PRACT (1-3)
In this practicum course, advanced speech-language pathology graduate students gain experience in interviewing clients, parents and spouses. They learn to counsel clients and their families regarding communication disorders. With supervision, students complete diagnostic evaluations for a broad range of communication disorders and synthesize data. Report writing is also emphasized.

EFFECTIVE START: SP2006

NEW

CSD 895G
Speech Diagnostics Practicum
SPEECH DIAGN PRACT (1-3)
In this practicum course, advanced speech-language pathology graduate students gain experience in interviewing clients, parents, and spouses. They learn to counsel clients and their families regarding communication disorders. With supervision, students complete diagnostic evaluations for a broad range of communication disorders and synthesize data. Report writing is also emphasized.

PROPOSED START: SU2017

OLD

ENTR 502
Starting and Growing a New Business
START UP (2)
An overview of traditional entrepreneurship considerations including competition, management teams, financing, and exit plans.
EFFECTIVE START: SU2002

NEW

ENTR 502
Business Modeling and New Venture Creation
NEW VENTURE CREATE (2-3)
ENTR 502 focuses on the process of launching a new venture, in a corporate setting or as a new startup, including identifying a problem or market opportunity, developing business models, forming a team, financing, analyzing markets, assessing the competitive environment, and planning to acquire leadership talent. A business model canvas framework is used as the primary tool for describing, analyzing, and designing business models. In essence, this course identifies and defines the key components necessary to develop a formal business plan. Concepts and techniques explore new venture creation business strategies, including different approaches for business model development. Students will gain insight into how to translate new ideas into viable projects and business ventures. Students will learn the importance of understanding markets, customer segments, and the competitive landscape, as well as how to obtain funding for new ventures. Lastly, the issue of how to acquire leadership and human resource talent to make a new venture viable over time is investigated.

PROPOSED START: SU2017

OLD

HI ED 504
Research and Assessment in Student Affairs
RESEARCH IN SA (2)
Course provides basic knowledge and skills necessary to plan, design, implement, and evaluate and assess programs in student affairs and higher education.
EFFECTIVE START: FA2014
Hi Ed 841
Research and Assessment in Student Affairs
RESEARCH STU AFFRS (2)
Accreditation bodies, state legislatures, critics, and the public at large continue to challenge colleges and universities to demonstrate what and how students are actually learning. Further, student affairs departments are being scrutinized—both internally and externally—regarding the importance, relationship, and effectiveness of their initiatives for student learning and persistence. This course suggests that research, program evaluation, and assessment are critical skills for student affairs practitioners to develop in responding to such concerns and in order to undertake and accomplish their efforts with excellence. More specifically, this course will help students to contextualize and evaluate student affairs programs with an eye towards effectiveness and improvement.
PROPOSED START: SU2017

Old
Phs 522
Multivariate Biostatistics
MULTIVARI BIOSTATS (3)
This course focuses on advanced topics in biostatistics involving multivariate responses in biomedical research.
PREREQUISITES: PHS 520 and PHS 521
EFFECTIVE START: FA2014

New
Phs 522
Multivariate Biostatistics
MULTIVARIATE BIOST (3)
This course focuses on advanced topics in biostatistics involving multivariate responses in biomedical research.
PREREQUISITES: PHS 520 or STAT 500 and PHS 521
PROPOSED START: SU2017
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Graduate School
Department or Instructional Area: IGDPs

New Graduate Program, Option, or Minor: [✓] Add

Designation of new graduate program: Intercollege Graduate Degree Program in Bioinformatics and Genomics
Classification of Instructional Programs (CIP) Code: 26.1103
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
☐ First semester following approval
☐ Second semester following approval

Existing Graduate Program Option, or Minor: [ ] Change [ ] Drop

Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
☐ First semester following approval
☐ Second semester following approval

Submitted by Graduate Program Head
C. Shashikant, J. Broach

C. Shashikant
Signature

Date: Feb 23, 2016

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

M. Verdemark

Printed name
Signature
Date: 10/30/16

Approved by College/School Dean/Chancellor (or Designee):

M. Verdemark

Printed name
Signature
Date: 10/30/16
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of John Challis

Printed name

Signature

Date: 4/4/2017

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of M. Kathleen Heid

Printed name

Signature

Date: 4/4/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken

Printed name

Signature

Date: 4/4/2017
1. **New programs**, options **, and minors ***
a. A justification for the program*. The proposal should include a statement regarding the necessity for the program, i.e., why the program should be offered; and information on the ability of the department to offer a quality program. Included in the section should be the projected size of the program and its impact on current course offerings and faculty load as well as additional faculty advising duties.

**Background and Justification**

This is a proposal for a new Intercollege Graduate Degree Program (IGDP) in Bioinformatics and Genomics (BG). Currently, BG exists as a Program Option within the IGDP in Molecular, Cellular and Integrative Biosciences (MCIBS) with the Graduate School as the academic home and The Huck Institutes of Life Sciences as the administrative home. The IGDP in BG will include faculty and students from multiple Colleges on two campuses, who are organized into centers and institutes supporting research and educational activities in the area of genomic sciences. In the following we provide some background and a justification for creating a new IGDP in BG.

**The Huck Institutes of Life Sciences**

Dr. Peter Hudson, the Willaman Chair in Biology, is the current Director of the Huck Institutes of Life Sciences (referred to as Huck Institutes) of The Pennsylvania State University. The Huck Institutes were established to promote excellence in the life sciences, integration of interdisciplinary and innovative research and teaching, and cooperation among different life sciences units on the University Park (UP) and College of Medicine (COM), as well as the business community. It functions as both an intercollege and an interdisciplinary organization, providing resources to colleges, departments, and faculty working in the life sciences through the following mechanisms:

- Co-funding salaries of new faculty active in the life sciences
- Supporting graduate students (including joint recruiting and counseling)
- Enhancing graduate education in the life sciences
- Supporting shared technology facilities and electronic resources
- Supporting a variety of activities fostering research and education, e.g. seminars, workshops, and symposia.

Existing academic units, including colleges, departments, laboratories, and IGDPs, have access to the activities and support functions of the Huck Institutes. All faculty members engaged in these activities and functions, including the director, have academic appointments in departments of participating colleges within the University.

The Huck Institutes provide administrative support and oversight to the following IGDPs: (1) Ecology, (2) Molecular, Cellular and Integrative Biosciences (MCIBS), including the current BG Program Option, (3) Neuroscience, (4) Physiology, and (5) Plant Biology. The Council of Graduate Program Chairs and Option Directors meets regularly with Dr. Troy Ott, the Associate Director of the Huck Institutes in charge of overseeing graduate education and determining the overall direction of the IGDPs.

**Genome Sciences Institute and Affiliated Centers**

The Genome Sciences Institute (originally named Institute for Genomics, Proteomics and Bioinformatics) is one of the oldest Huck Institutes. Its mission is to foster excellence and interdisciplinary collaborations in research and training in the Genome Sciences. Understanding the function and evolution of genomes, how they interact with each other and the environment, and the consequences for health and fitness, requires a combination of new high throughput experimental techniques and innovative approaches to handling, analyzing, and integrating the
massive data these techniques produce. Insight and understanding in this 21st century enterprise are quintessentially interdisciplinary.

This Institute, cutting across departments and colleges at Penn State, brings together people with a range of expertise and scientific perspectives. This Institute focuses on four broad thematic areas: (1) Algorithms, computational tools, and bioinformatics, (2) Statistics and machine learning for high throughput data analysis and integration, (3) Functional, evolutionary, and ecological genomics, and (4) Translation and biomedical applications.

Several centers of excellence are associated with the Genome Sciences Institute, including, among others: (1) the Center for Comparative Genomics and Bioinformatics, (2) the Center for Eukaryotic Gene Regulation, (3) the Center for Medical Genomics, (4) the Center for RNA Molecular Biology, (5) the Center for Statistical Genetics, and (6) the Center for Systems Genomics.

In addition to fostering interdisciplinary research and collaborations, this Institute provides support for various seminar series and the student-hosted Annual Bioinformatics and Genomics Retreats. Dr. Francesca Chiaromonte is the current Director of the Genome Sciences Institute.

**Computation, Bioinformatics and Statistics (CBIOS) Predoctoral Training Program**

CBIOS is a predoctoral training program funded by the National Institutes of Health (NIH) in 2013 aimed at preparing young scientists to excel in interdisciplinary research cutting across the life sciences, computer sciences, bioinformatics, and statistics. The program builds upon the curriculum of the BG Program Option and research by BG faculty. It trains students from the participating IGDP in MCIIS, including the BG Program Option, as well as departmental graduate programs in (1) Biology, (2) Biochemistry, Microbiology, and Molecular Biology and (3) Statistics. Students from other biomedical and quantitative science programs are also considered for training. Selected students are supported for up to two years in their respective graduate programs. CBIOS is one of a handful of predoctoral training programs in the country funded by the National Institute of General Medical Sciences under the label of 'Bioinformatics and Computational Biology Predoctoral Research Program'. Currently in its fourth year, CBIOS is already facilitating the recruitment of talented students to participating Penn State graduate programs. Moreover, it received supplemental funding to organize annual summer camps focused on training graduate students in 'Data Reproducibility and Scientific Transparency'. We expect a successful renewal of CBIOS to further contribute to the scope and quality of graduate education at Penn State. Drs. Francesca Chiaromonte (Statistics), Ross Hardison (Biochemistry and Molecular Biology), Kateryna Makova (Biology) and Cooduvalli Shashikant (Animal Science) direct the CBIOS Predoctoral Training Program.

**Biomedical Big Data to Knowledge (B2D2K) Predoctoral Training Program**

B2D2K is a predoctoral training program funded by the National Institutes of Health (July 2016) aimed at preparing young scientists to manage, process, analyze and interpret massive data generated through modern technologies. The program is funded by the National Institutes of Science through BD2K initiatives. The program trains students from the BG program option in addition to departmental programs in (1) Computer Science and Engineering, (2) Human Development and Family Studies, (3) Information Sciences and Technology, (3) Biochemistry, Microbiology and Molecular Biology, and (4) Statistics. Several faculty from Geisinger Health System are also active participants in the program. Drs. Marylyn Ritchie (Biochemistry and Molecular Biology, and Geisinger Health System), Vasant Honavar (Information Sciences and Technology) and Runze Li (Statistics) direct the B2D2K Predoctoral Training Program.
Penn State World Campus has begun offering a ‘Graduate Certificate in Applied Bioinformatics’ in Spring 2014. Currently four courses are offered online: Genomics (MCIBS/BMMB 551), Foundations in Data Driven Life Sciences (MCIBS/BMMB 554), Applied Bioinformatics (BMMB 852) and Statistical Analysis of Genomic Data (STAT 555), which are core courses of the proposed IGDP in BG program. The certificate launch has been successful, and since Spring 2014 it has been operating at close to full enrollment -- indicating and validating the need for expanding education in bioinformatics. The program plans to launch additional courses and offer specializations of the certificate for medical sciences, agricultural applications, or materials research-oriented technologies. Dr. Istvan Albert is the Director of the Graduate Certificate Program.

The IGDP in MCIBS

Following approval by the Pennsylvania State University’s Graduate Council in 1996, Integrative Biosciences (IBIOS) was established as an IGDP. The goal of this new program was to develop an integrated graduate curriculum in the life sciences that built upon and facilitated interactions between multiple and diverse academic disciplines. In subsequent years, IBIOS expanded into a program with as many as ten options, some of which developed into independent IGDPs. In 2014, the name IBIOS was changed to Molecular Cellular and Integrative Biosciences (MCIBS) to include the following emphasis areas (1) Cell and Developmental Biology, (2) Molecular and Evolutionary Genetics, (3) Immunology and Infectious Disease, (4) Molecular Medicine, (5) Molecular Toxicology, and (6) Neurobiology. BG is a Program Option in MCIBS. Dr. Melissa Rolls is the current Director of the IGDP in MCIBS.

The BG Program Option in MCIBS

The BG Program Option was founded in 2005 as part of IBIOS (Integrative Biosciences; now MCIBS) with the primary goal to bring together faculty members from several departments and colleges to train graduate students in the fast-growing areas of bioinformatics and evolutionary, functional and systems genomics, which rely strongly on development and application of both computational and statistical methods. The BG Program Option plays a critical role in integrating various disciplines in the “omics” era, consistent with the strategic vision of the Huck Institutes. Successful graduates are expected to become leaders in both academic institutions and the private sector, contributing to basic science and impacting health, agriculture, and biotechnology.

In 2013, the Task Force for Review and Restructuring of the Intercollegiate Graduate Degree Programs in the Life Sciences of the Pennsylvania State University, chaired by Drs. Doug Cavener and Neil Sharkey, noted: “The BG Option has demonstrated high level of success and stability and should be graduated to a full IGDP. Therefore we recommend that the BG IBIOS Option be converted to a stand-alone IGDP and be administered and financed accordingly.” The BG Program has since remained an Option in the recently reorganized MCIBS IGDP, with the intention to become an independent IGDP. Drs. Cooduvalli Shashikant (UP) and James Broach (CoM) are the current Co-Directors of the BG Program Option.

The Proposed IGDP in BG

The BG Program Option was built upon a strong history of collaboration among founding faculty members. The program now comprises more than 60 faculty members representing departments from seven different colleges (the Colleges of Agricultural Sciences, Liberal Arts, Engineering, Health and Human Development, Information Sciences and Technology, Medicine, and the Eberly College of Science). BG faculty will teach all of the required courses for the proposed
IGDP, and participate in the teaching of elective courses as needed. The required courses will be accessible to students at both the University Park and Hershey campuses. Because of BG’s long history of attracting students’ interest and interdisciplinary collaborations, courses taught by BG faculty are very well attended. At the same time, we do not anticipate additional burden on faculty members with respect to course instructions and/or advising students.

The proposed IGDP in BG will include Options: (1) Algorithms and Computation, and (2) Statistical Genomics. Students will be able to select either option, but will not be required to do so. Furthermore, it will offer both M.S. and Ph.D. degrees. A change in the proposal to incorporate a joint M.D./Ph.D. program in the IGDP in BG is also submitted. Building on its established record as an Option, the new IGDP in BG will provide an interdisciplinary and collaborative environment for students, facilitating productive interactions and creative efforts in contemporary “omics” research. Students in the program will be eligible to participate in the NIH-funded Computation, Bioinformatics, and Statistics (CBIOS) predoctoral training program directed by BG faculty members. Even more than for the current BG Program Option graduates, graduates of the IGDP in BG will be expected to succeed as leaders in academic institutions and the private sector, to contribute to basic science, and to impact health, agriculture, and biotechnology.

b. The objectives of the program: an explanation of how the proposal meets the new educational objectives and/or strengthens existing programs of the college(s) and the University; what students may expect to accomplish through the new program; and a statement of how the new offering does not duplicate other degree programs within the department/college/University.

Genomics has fundamentally transformed biology into a data-rich and data-driven discipline. Extracting meaningful biological information from the large datasets produced by high-throughput technologies requires sophisticated computational and statistical methods, and constant innovation in such methods. With the advent of the “omics” era comes the need for a new generation of scientists with strong computational and statistical skills and the ability to effectively interact with experimentalists. The goal of the IGDP in BG is to develop a cadre of young scientists that, in addition to being fluent in the contemporary life sciences, can think algorithmically and statistically, use computational and statistical tools, and generate innovation in such tools to keep pace with the quickly evolving landscape of high-throughput “omics” technologies.

The main objectives of the program are:
1. To provide students with comprehensive training in the use and development of advanced computational and statistical techniques needed to collect, process, analyze, integrate, and interpret large and complex “omics” data.
2. To provide students with an in-depth understanding of the use of these techniques for addressing basic and applied research questions in the life sciences, and with the skills to communicate within interdisciplinary work teams, as well as to a broad target audience.
3. To enhance the collaborative environment and to facilitate productive interactions and creative efforts in “omics” research at Penn State.

These objectives will be met by offering a set of required and elective courses, which are designed to cover knowledge in the following areas:
1. Foundations of genomics, molecular genetics
2. Sequencing technologies, genome assembly, alignments, read mapping
3. Basic programming and scripting for bioinformatics
4. Algorithm development in bioinformatics
5. Statistical methods in genomics and bioinformatics; competence in R or equivalent.
6. Transcriptome analyses and techniques (microarray, RNA-seq)
7. Comparative genomics, molecular evolution, function inferred from signatures of negative and positive selection
8. Finding and functional analysis of protein-coding genes
9. Genome variation, mutagenesis, connections to phenotypes
10. Genome mapping, Mendelian inheritance of genes and DNA markers.

Option in Algorithms and Computation

The objective of the Option in Algorithms and Computation is to provide students in the Intercollege Graduate Degree Program (IGDP) in Bioinformatics and Genomics (BG) the opportunity to focus their graduate curriculum and research on the principles and applications of advanced computational techniques, from specialized data structure and algorithms to the use of novel software and hardware frameworks. The Algorithms and Computation Option will offer the specialized training and background needed for students to become leaders and contributors to the development of novel computational techniques. The option will also expose students to forefront developments in modern computer science and give them an opportunity to translate those advances for use in bioinformatics and genomics. Students in this option will take a foundational computer science course covering fundamental algorithm analysis and design techniques and their applications in bioinformatics and genomics.

Option in Statistical Genomics

The objective of the Option in Statistical Genomics is to provide students in the Intercollege Graduate Degree Program (IGDP) in Bioinformatics and Genomics (BG) the opportunity to focus their graduate curriculum and research on the principles and applications of advanced statistical techniques, from experimental design, to data processing, to statistical inference, visualization, and the use of statistical programming tools. The Statistical Genomics Option will offer the specialized training and background needed for students to become leaders and contributors to the development of novel data analysis and inference methods. The option will also expose students to forefront developments in modern statistics and give them an opportunity to translate those advances for use in bioinformatics and genomics.

Students graduating from the IGDP in BG program will thus be familiar with the vast and interdisciplinary research landscape of the “omics” sciences, and in a position to push its frontiers, impacting health, agriculture and biotechnology.

Overlap

The proposed IGDP in BG is a unique program within Penn State, with its strong emphasis on training students on how to best pursue ‘dry lab’ research while actively collaborating with experimentalists who perform ‘wet lab’ research. Students in many Penn State graduate programs use parts of the BG curriculum to gain varying degrees of training in the analysis of contemporary “omics” data. The doctoral minor we will offer as part of the IGDP in BG addresses precisely this need for training a wider range of students whose research requires the analysis of complex, large datasets. Students in the BG program tend to be stronger than graduate students in other life sciences programs in terms of computational and statistical skills. In comparison to graduate students from quantitative programs including Statistics, Computer Science, and Engineering, students in the BG program have stronger backgrounds in biological subjects. The goals of the IGDP in BG are both unique and uniquely cross-disciplinary.

c. A list of new courses to be established as a part of the new offering

All required courses for the new offering are in place.
d. A complete program statement. This should be an arrangement of courses in accordance with degree requirements, as well as non-course degree requirements for each degree proposed to be offered, and with identification of the pattern of scheduling. A list of the required courses, typical electives, etc., that will logically be taken by a student enrolling in the new program should be included. Courses being newly proposed should be distinguished from existing courses. The proposal must include a copy of the Bulletin description in a format suitable for inclusion in the Graduate Degree Programs Bulletin.

The Bioinformatics and Genomics (BG) Graduate Program with its options in (1) Algorithms and Computation, and (2) Statistical Genomics, will provide graduate students curricular training in the fast-growing areas of bioinformatics and evolutionary, functional, and systems genomics, which rely strongly on the development and application of both computational and statistical methods. Students will receive comprehensive training in the use and development of advanced computational and statistical approaches to collect, process, analyze, integrate, and interpret complex, large “omic” data. Students will acquire an in-depth understanding of the potential application of these approaches to basic and applied research and the skills to communicate approaches within interdisciplinary work teams, as well as to a broad audience. The program will provide a collaborative environment for students, and facilitate productive interactions and creative efforts in genomics and bioinformatics research.

The first-year curriculum builds a solid knowledge and understanding of the basic principles of bioinformatics statistics applied to “omics” data, and contemporary genomics. The Fall curriculum includes (1) MCIBS 551 Genomics (3 credits), (2) BMMB 852 Applied Bioinformatics (2 credits), and (3) STAT 500 Applied Statistics (3 credits). The Spring curriculum includes (1) MCIBS 554 Foundations in Data Driven Life Sciences (3 credits), (2) STAT 555 Statistical Analysis of Genomics Data (3 credits), and (3) BIOL 405 Molecular Evolution (3 credits). Spring requirements also include MCIBS 591 Ethics in the Life Sciences (1 credit), a course that examines scientific integrity in life sciences research including issues of misconduct, data collection, privacy, publication, authorship, peer review, intellectual property, and social aspects of scientific discoveries. Both Fall and Spring curricula also include (1) MCIBS 541 Critical Analysis of Bioinformatics and Genomics Research Topics (1 credit), a course that reviews recent developments made in genomics and bioinformatics research, and (2) MCIBS 589 Colloquium in Bioinformatics and Genomics (1 or 2 credits), which comprises seminars by Penn State faculty members, graduate students, and outside speakers on topics in the areas of bioinformatics, computation, statistics, and genomics.

In addition, students will be required to complete an online Responsible Conduct of Research (RCR) training course offered through the CITI (Collaborative Institutional Training Initiative) Program. This supplements the in-class, discussion-based RCR training provided in MCIBS 591 Ethics in the Life Sciences, which meets for at least five hours during the semester. Topics covered in MCIBS 591 course include, but are not limited to the following topics: plagiarism, fraud in science, scientific misconduct, collaborative research, peer review, responsible authorship and publication, mentoring, conflict of interest, use of plants and animals in research, human subjects in biomedical research, social responsibilities of scientists. These two courses satisfy RCR training requirements mandated by the Penn State’s SARI (Scholarship and Research Integrity) Program, an RCR initiative organized through the Office for Research Protections (an administrative unit within the Office of the Vice President for Research). Students will also be required to take a refresher course in CITI RCR after completing four years in the program.

During the first year, students will complete three research rotations that expose them to the wide range of research interests of the Penn State graduate faculty involved in the BG program. These rotations help the students select a dissertation adviser and doctoral committee.
After the completion of the first year of coursework, each student is required to take a candidacy examination based on the coursework in MCIBS 541, MCIBS 551, MCIBS 554, STAT 500, STAT 555, and BIOL 405. The decision to admit or not to admit a student to candidacy will be made by a committee composed of graduate faculty of the BG program.

Curriculum in the second year is determined by the choice to participate in one of the Options or, as an alternative, through an individualized curricular pathway determined by the student together with his/her dissertation adviser and doctoral committee. Students will also take one semester of MCIBS 602 Supervised Experience in College Teaching (1) while teaching in a graduate or undergraduate course related to the program.

Option in Algorithms and Computation

Students are admitted to the Option in Algorithms and Computation after successfully completing: (1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be with faculty affiliated with the Algorithms and Computation Option; and (3) the candidacy examination. During the second year, Ph.D. candidates choosing this option will be required to take (1) CSE/BMMB 566 Algorithms and Data Structures in Bioinformatics (3); (2) one of the two courses CMPSC 465 Data Structures and Algorithms (3) or CSE 565 Algorithm Design and Analysis (4); and (3) two courses from a list of prescribed electives which includes, but is not limited to the following: CMPSC 431 Database Management Systems (3), CMPSC 450 Concurrent Scientific Programming (3), CSE 557 Concurrent Matrix Computations (3), CMPSC 464 Introduction to the Theory of Computation (3), CSE 583 Pattern Recognition – Principles and Applications (3), CSE 562 Probabilistic Algorithms (3), CMPEN 455 Digital Image Processing (3), CMPEN 454 Fundamentals of Computer Vision (3), and CHE 512 Optimization in Biological Networks (3).

Option in Statistical Genomics

Students are admitted to the Option in Statistical Genomics, after successfully completing: (1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be with faculty affiliated with the Statistical Genomics Option; and (3) the candidacy examination. During the second year, Ph.D. candidates choosing this option will be required to take: (1) one of the two courses STAT 501 Regression Methods (3) or STAT 511 Regression Analysis and Modeling (3); (2) STAT 557 Data Mining I (3); and (3) two courses from a list of prescribed electives which includes, but is not limited to the following: STAT 414 Introduction to Probability Theory (3), STAT 415 Introduction to Mathematical Statistics (3), STAT 416 Stochastic Modeling (3), STAT 502 Analysis of Variance (3), STAT 504 Analysis of Discrete Data (3), STAT 505 Applied Multivariate Analysis (3), and STAT 540 Statistical Computing (3).

A comprehensive examination is administered after the completion of all coursework. It is anticipated that the typical student will require two years to complete the coursework, so a typical student would undergo the comprehensive examination during the third year. He/she will also undergo a final oral examination in defense of the Ph.D. dissertation, to occur at least three months after the successful completion of the comprehensive examination. Successful completion of the Program will result in conferral of the Ph.D. Degree in Bioinformatics and Genomics.

Course offerings are summarized in Tables 1-3, and a representative course schedule is summarized in Table 4. Course requirements for IGDP in BG and its Options in (1) Algorithms and Computation and, (2) Statistical Genomics are summarized in Table 5.
### TABLE 1 Required Courses (Total credits: 17)

<table>
<thead>
<tr>
<th>SEM</th>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>INSTRUCTOR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA</td>
<td>MCIBS 551</td>
<td>Genomics</td>
<td>Santhosh Girirajan</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>MCIBS 554</td>
<td>Foundations in Data Driven Life Sciences</td>
<td>Anton Nekrutenko</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>STAT 555</td>
<td>Statistical Analysis of Genomics Data</td>
<td>Qunhua Li</td>
<td>3</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 541</td>
<td>Critical Analysis of Bioinformatics and Genomics Research Topic</td>
<td>Mary Poss, (Fall), George Perry (Spring)</td>
<td>1+1</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 591</td>
<td>Ethics in Life Sciences</td>
<td>Cooduvalli Shashikant</td>
<td>1</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 589</td>
<td>Colloquium in Bioinformatics and Genomics</td>
<td>Cooduvalli Shashikant</td>
<td>2+1</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 596</td>
<td>Independent Studies</td>
<td>Cooduvalli Shashikant</td>
<td>2</td>
</tr>
</tbody>
</table>

### TABLE 2 Common Courses (Total Credits: Variable)

<table>
<thead>
<tr>
<th>SEM</th>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>INSTRUCTOR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA/SP</td>
<td>MCIBS 595</td>
<td>Internship</td>
<td>Student's adviser</td>
<td>1-9</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 600</td>
<td>Thesis Research</td>
<td>Student's adviser</td>
<td>1-9</td>
</tr>
<tr>
<td>FA/SP/SU</td>
<td>MCIBS 601</td>
<td>Dissertation Preparation</td>
<td>Student's adviser</td>
<td>0</td>
</tr>
<tr>
<td>FA/SP</td>
<td>MCIBS 602</td>
<td>Supervised Experience in College Teaching</td>
<td>Course instructor</td>
<td>1</td>
</tr>
</tbody>
</table>

### TABLE 3 Elective Courses (Total Credits: Variable)

<table>
<thead>
<tr>
<th>SEM</th>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>INSTRUCTOR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA/SP/SU</td>
<td>STAT 500</td>
<td>Applied Statistics</td>
<td>STAT faculty</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>BMMB 852</td>
<td>Applied Bioinformatics</td>
<td>Istvan Albert</td>
<td>2</td>
</tr>
<tr>
<td>SP</td>
<td>BIOL 405</td>
<td>Molecular Evolution</td>
<td>Kateryna Makova</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>STAT 501</td>
<td>Regression Methods</td>
<td>STAT Faculty</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>STAT 511</td>
<td>Regression Analysis and Modeling</td>
<td>STAT Faculty</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>STAT 557</td>
<td>Data Mining</td>
<td>STAT Faculty</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>CSE 566</td>
<td>Algorithms and Data Structures in Bioinformatics</td>
<td>Paul Medvedev</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>CMPSE 465</td>
<td>Data Structures and Algorithms</td>
<td>Paul Medvedev</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>CSE 565</td>
<td>Algorithm Design and Analysis</td>
<td>Adam Smith</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>BIOL 428</td>
<td>Population Genetics</td>
<td>Michael DeGiorgio</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>BMB 400</td>
<td>Molecular Biology of the Gene</td>
<td>BMB Faculty</td>
<td>3</td>
</tr>
<tr>
<td>SP</td>
<td>BMB 484</td>
<td>Functional Genomics</td>
<td>Santhosh Girirajan</td>
<td>3</td>
</tr>
<tr>
<td>FA</td>
<td>MCIBS 556</td>
<td>Computation, Bioinformatics and Statistics Practicum</td>
<td>Francesca Chiaromonte</td>
<td>3</td>
</tr>
</tbody>
</table>

### TABLE 4 Logical Course Schedule

<table>
<thead>
<tr>
<th>SEMESTER</th>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>INSTRUCTOR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA1</td>
<td>MCIBS 541*</td>
<td>Critical Analysis of Bioinformatics and Genomics Research Topics</td>
<td>Mary Poss, Yu Zhang</td>
<td>1</td>
</tr>
<tr>
<td>FA1</td>
<td>MCIBS 551*</td>
<td>Genomics</td>
<td>Santhosh Girirajan</td>
<td>3</td>
</tr>
<tr>
<td>FA1</td>
<td>MCIBS 589*</td>
<td>Colloquium in Bioinformatics and Genomics</td>
<td>Cooduvalli Shashikant</td>
<td>2</td>
</tr>
<tr>
<td>FA1</td>
<td>MCIBS 596*</td>
<td>Independent Studies</td>
<td>Cooduvalli Shashikant</td>
<td>1</td>
</tr>
<tr>
<td>Semester</td>
<td>Course Code</td>
<td>Course Title</td>
<td>Instructor(s)</td>
<td>Credits</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>FA1</td>
<td>BMMB 852**</td>
<td>Applied Bioinformatics</td>
<td>Istvan Albert</td>
<td>2</td>
</tr>
<tr>
<td>FA1</td>
<td>STAT 500**</td>
<td>Applied Statistics</td>
<td>STAT Faculty</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>SP1</td>
<td>MCIBS 541*</td>
<td>Critical Analysis of Bioinformatics and Genomics Research Topics</td>
<td>Marylyn Ritchie, George Perry</td>
<td>1</td>
</tr>
<tr>
<td>SP1</td>
<td>MCIBS 554*</td>
<td>Foundations in Data Driven Life Sciences</td>
<td>Anton Nekrutenko</td>
<td>3</td>
</tr>
<tr>
<td>SP1</td>
<td>MCIBS 591*</td>
<td>Ethics in Life Sciences</td>
<td>Cooduvalli Shashikant</td>
<td>1</td>
</tr>
<tr>
<td>SP1</td>
<td>MCIBS 596*</td>
<td>Independent Studies</td>
<td>Cooduvalli Shashikant</td>
<td>1</td>
</tr>
<tr>
<td>SP1</td>
<td>MCIBS 589*</td>
<td>Colloquium in Bioinformatics and Genomics</td>
<td>Cooduvalli Shashikant</td>
<td>1</td>
</tr>
<tr>
<td>SP1</td>
<td>STAT 555*</td>
<td>Statistical Analysis of Genomics Data</td>
<td>Naomi Altman</td>
<td>3</td>
</tr>
<tr>
<td>SP1</td>
<td>BIOL 405**</td>
<td>Molecular Evolution</td>
<td>Kateryna Makova</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
<tr>
<td>SU1</td>
<td>MCIBS 595***</td>
<td>Internship</td>
<td>Student's Adviser</td>
<td>1</td>
</tr>
<tr>
<td>FA2</td>
<td>MCIBS 595***</td>
<td>Internship</td>
<td>Student's Adviser</td>
<td>1</td>
</tr>
<tr>
<td>FA2</td>
<td>MCIBS 600***</td>
<td>Thesis Research</td>
<td>Student's Adviser</td>
<td>1-9</td>
</tr>
<tr>
<td>FA2</td>
<td>Elective Course</td>
<td></td>
<td></td>
<td>1-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Credits</strong></td>
<td></td>
<td><strong>Variable</strong></td>
</tr>
</tbody>
</table>

*Required, **Requirement waived for students with prior knowledge and coursework, ***Optional for Ph.D. students

**TABLE 5 COMPARISON OF COURSE REQUIREMENTS FOR VARIOUS OPTIONS**

<table>
<thead>
<tr>
<th>BG PROGRAM WITH NO OPTION</th>
<th>ALGORITHMS AND COMPUTATION OPTION</th>
<th>STATISTICAL GENOMICS OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 credits required</td>
<td>35 credits required</td>
<td>35 credits required</td>
</tr>
<tr>
<td>17 core requirement credits</td>
<td>17 core requirement credits</td>
<td>17 core requirement credits</td>
</tr>
<tr>
<td>18 elective credits</td>
<td>12 option specific credits</td>
<td>12 option specific credits</td>
</tr>
<tr>
<td></td>
<td>6 Elective credits</td>
<td>6 elective credits</td>
</tr>
</tbody>
</table>

Core Requirements
| Core requirement | MCIBS 541 Critical Analysis of Bioinformatics Research Topics (1 X 2) | MCIBS 541 Critical Analysis of Bioinformatics Research Topics (1 X 2) | MCIBS 541 Critical Analysis of Bioinformatics Research Topics (1 X 2) |
| Core requirement | MCIBS 551 Genomics (3) | MCIBS 551 Genomics (3) | MCIBS 551 Genomics (3) |
| Core requirement | MCIBS 554 Foundations in Data Driven Life Sciences (3) | MCIBS 554 Foundations in Data Driven Life Sciences (3) | MCIBS 554 Foundations in Data Driven Life Sciences (3) |
| Core requirement | MCIBS 591 Ethics in Life Sciences (1) | MCIBS 591 Ethics in Life Sciences (1) | MCIBS 591 Ethics in Life Sciences (1) |
| Core requirement | MCIBS 596 Independent Studies (1 X 2) | MCIBS 596 Independent Studies (1 X 2) | MCIBS 596 Independent Studies (1 X 2) |
| Core requirement | MCIBS 589 Colloquium in Bioinformatics and Genomics (2 + 1) | MCIBS 589 Colloquium in Bioinformatics and Genomics (2 + 1) | MCIBS 589 Colloquium in Bioinformatics and Genomics (2 + 1) |
| Core requirement | STAT 555 Statistical Analysis of Genomic Data (3) | STAT 555 Statistical Analysis of Genomic Data (3) | STAT 555 Statistical Analysis of Genomic Data (3) |

**Option Specific Requirements**

| Option Specific | CSE 565 Algorithm Design and Analysis (3) or CSE 465 Data Structures and Algorithms (3) | STAT 501 Regression Methods (3) or STAT 511 Regression Analysis and Modeling (3) |
| Option Specific | CSE/BMMB 566 Algorithms and Data Structures in Bioinformatics (3) | STAT 557 Data Mining (3) |

**Program or Option Electives**

| Option Specific | Electives (6) | Electives (6) |
| Program Specific | Electives (18) | Electives (6) |

**Program Specific Electives:** STAT 500 Applied Statistics (3), BMMB 852 Applied Bioinformatics (2), BIOL 405 Molecular Evolution (3); Research Credits (6+), and others from Table 3.


Listing for Degree Bulletin

Bioinformatics and Genomics

Program Home Page: (http://www.huck.psu.edu/content/graduate-programs/bioinformatics-and-genomics)

Contact Information:

Cooduvalli Shashikant
Program Co-chair
Css13@psu.edu
814-863-0658

James Broach
Program Co-chair
Jrb62@psu.edu
717-531-5470

Jean Pierce
Records Specialist
101 Life Science Building
The Pennsylvania State University
University Park PA 16802
Jep32@psu.edu
814-867-0371

Degrees conferred:

Ph.D., M.D./Ph.D., M.S.

THE GRADUATE FACULTY

- **Istvan Albert**, Ph.D. (UNIVERSITY OF NOTRE DAME), Associate Professor of Bioinformatics
- **Reka Albert**, Ph.D. (UNIVERSITY OF NOTRE DAME), Professor of Physics and Biology
- **Naomi Altman**, Ph.D. (STANFORD UNIVERSITY), Professor of Statistics
- **Raquel Assis**, Ph.D. (UNIVERSITY OF MICHIGAN AT ANN ARBOR), Assistant Professor of Biology
- **Sarah M. Assmann**, Ph.D. (STANFORD UNIVERSITY), Waller Professor of Biology; Director, Plant Sciences Institute
- **Michael J. Axtell**, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Associate Professor of Biology
- **Le Bao**, Ph.D. (UNIVERSITY OF WASHINGTON), Assistant Professor of Statistics
- **Colin J. Barnstable**, Ph.D. (UNIVERSITY OF OXFORD), Professor and Chair, Neural and Behavioral Sciences
- **Arthur S. Berg**, Ph.D. (UNIVERSITY OF CALIFORNIA SAN DIEGO), Associate Professor of Public Health Sciences and Statistics
- **Philip Bevilacqua**, Ph.D. (UNIVERSITY OF ROCHESTER), Professor of Chemistry and Biochemistry and Molecular Biology
- **James Broach**, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Professor and Chair
- **John E. Carlson**, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Professor of Molecular Genetics; Director, Schatz Center for Tree Molecular Genetics
• Laura Carrel, Ph.D. (STANFORD UNIVERSITY), Associate Professor of Biochemistry and Molecular Biology
• Keith C. Cheng, Ph.D., M.D. (NEW YORK UNIVERSITY), Professor of Pathology
• Francesca Chiaromonte, Ph.D. (UNIVERSITY OF MINNESOTA MINNEAPOLIS), Professor of Statistics
• Surinder Chopra, Ph.D. (VRIJE UNIVERSITY), Professor of Maize Genetics
• Claude W. de Pamphilis, Ph.D. (UNIVERSITY OF GEORGIA), Professor of Biology
• Michael DeGiorgio, Ph.D. (UNIVERSITY OF MICHIGAN AT ANN ARBOR), Assistant Professor of Biology
• Sinisa Dovat, Ph.D., M.D. (UNIVERSITY OF NOVI SAD), Associate Professor of Pediatrics, and Biochemistry and Molecular Biology
• David M. Geiser, Ph.D. (UNIVERSITY OF GEORGIA), Professor of Plant Pathology
• Santhosh Girirajan, Ph.D. (VIRGINIA COMMONWEALTH UNIVERSITY), Assistant Professor of Biochemistry & Molecular Biology and Assistant Professor of Anthropology
• Mark J. Guiltinan, Ph.D. (UNIVERSITY OF CALIFORNIA IRVINE), Professor of Plant Molecular Biology
• Ross C. Hardison, Ph.D. (UNIVERSITY OF IOWA), T. Ming Chu Professor of Biochemistry and Molecular Biology
• Heather Hines, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Assistant Professor of Biology and Entomology
• Vasant Honavar, Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), Professor and Edward Frymoyer Chair of Information Sciences and Technology and Bioinformatics and Genomics; Affiliate Professor of Huck Institutes of the Life Sciences
• Judie Howrylak, M.D. (UNIVERSITY OF MICHIGAN), Ph.D. (CARNEGIE MELON UNIVERSITY AND UNIVERSITY OF PITTSBURGH), Assistant Professor of Medicine
• Seogchan Kang, Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), Professor of Plant Pathology
• Sagarika Kanjilal, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Associate Professor of Pharmacology and Veterinary and Biomedical Sciences
• Vivek Kapur, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Professor of Veterinary and Biomedical Sciences
• Daniel Kifer, Ph.D. (CORNELL UNIVERSITY), Assistant Professor of Computer Science and Engineering
• Jesse Lasky, Ph.D. (UNIVERSITY OF TEXAS AT AUSTIN), Assistant Professor of Biology and Plant Biology
• Arthur Lesk, Ph.D. (PRINCETON UNIVERSITY), Professor of Biochemistry and Molecular Biology
• Qunhua Li, Ph.D. (UNIVERSITY OF WASHINGTON), Assistant Professor of Statistics
• Lin(Lynn) Lin, Ph.D. (DUKE UNIVERSITY), Assistant Professor of Statistics
• Dajiang Liu, Ph.D. (RICE UNIVERSITY), Assistant Professor
• Wansheng Liu, Ph.D. (NORTHWEST A & F UNIVERSITY), Associate Professor of Genomics
• Yanxi Liu, Ph.D. (UNIVERSITY OF MASSACHUSETTS IN AMHERST), Associate Professor of Computer Science and Engineering
• Manuel Llinas, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Associate Professor of Biochemistry and Molecular Biology
• Hong Ma, Ph.D., (MASSACHUSETTS INSTITUTE OF TECHNOLOGY), Professor of Biology
• Kamesh Madduri, Ph.D. (GEORGIA INSTITUTE OF TECHNOLOGY), Assistant Professor of Computer Science Engineering
• Shaun Mahony, Ph.D. (NATIONAL UNIVERSITY OF IRELAND), Assistant Professor of Biochemistry and Molecular Biology
• Kateryna Makova, Ph.D. (TEXAS TECH UNIVERSITY), Pentz Professor of Biology
• Costas D. Maranas, Ph.D. (PRINCETON UNIVERSITY), Donald B. Broughton Professor of Chemical Engineering
The IGDP in BG is an interdepartmental program that engages faculty members from six colleges on two campuses. This broad-reaching Program provides students a wide range of understanding of multiple disciplines with specific expertise in a chosen area, and encourages interdisciplinary research that is truly changing biological research as well as health and lifestyles.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the General Information section of the Graduate Bulletin.

1. Fully completed, official online Penn State Graduate Application.
2. Paid, nonrefundable application fee (see Requirements for Graduate Admission for current fee).
3. Official transcripts from all post-secondary institutions attended.
4. Completed BG-specific questions on the Graduate Application.
5. Application for a U.S. visa (international applicants only).
6. Officially submitted Graduate Record Examination (GRE) General Test scores. Successful applicants generally have scores above the 75th percentile for each of the verbal, quantitative, and analytical writing section.
7. Names and contact information, including business email addresses, for three references.
8. Statement of goals that pertain to the life sciences including motivation for pursuing a research degree; research experience and interests; and professional experience. The statement should include problems that are of interest to the applicant and how the applicant’s past experiences have prepared him or her to pursue this research.
9. International applicants are required to submit English proficiency test scores, unless they are from one of the countries listed as exempt in the Graduate Bulletin. English proficiency test scores must meet or exceed the minimum acceptable scores listed in the Bulletin. Applicants to the BG program must have a minimum TOEFL score of 575 for the paper-based test, or a total score of 90 with a 19 on the speaking section for the Internet-based test (iBT). Successful applicants generally have a minimum score of 100 (including 23 on the speaking component) on the Internet-based test.
10. Successful applicants generally will have a minimum 3.5 on a 4.0 scale junior/senior undergraduate grade point average, and will have completed course work in both quantitative and life science subjects.

DEGREE REQUIREMENTS

M.S. Degree

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

For master’s degree, a minimum of 30 graduate credits and a 3.0 overall GPA are required. At least 18 credits in the 500 and 600 series combined must be included in the program. Required courses for master’s degree are: MCIBS 551 Genomics (3), MCIBS 554 Foundations in Data Driven Life Sciences (3), STAT 555, Statistical Analysis of Genomics Data (3), BMMB 852 Applied Bioinformatics (2), BIOL 405 Molecular Evolution (3), MCIBS 541 Critical Analysis of Bioinformatics and Genomics Research Topics (1 credit per semester, maximum of 2 credits), MCIBS 589 Colloquium in Bioinformatics and Genomics (3), MCIBS 591 Ethics in Life Sciences (1), MCIBS 596 Individual Studies (2), and MCIBS 600 Thesis Research (6). No more than 6 credits of Thesis Research may be counted toward 30 credit minimum. MCIBS 595 Internship and electives also count towards the minimum 30 credit requirement. Options are not offered for the M.S. degree.

Students must complete original laboratory research and internship that culminates in a thesis. The thesis must be accepted by the advisers and/or committee members, the head of the graduate program, and the Graduate School, and the student must pass a thesis defense.

Ph.D. Degree

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.
For the Ph.D., a minimum of 35 credits is required. During the first year of study, Ph.D. candidates are required to take 17 credits of core required courses: MCIBS 551 Genomics (3), MCIBS 554 Foundations in Data Driven Life Sciences (3), STAT 555, Statistical Analysis of Genomics Data (3), MCIBS 541 Critical Analysis of Bioinformatics and Genomics Research Topics (1 credit per semester, maximum of 2 credits), MCIBS 589 Colloquium in Bioinformatics and Genomics (3 credits total) MCIBS 591 Ethics in Life Sciences (1), and MCIBS 596, Individual Studies (2 credits total), representing three Research Rotations. Each candidate for the Ph.D. degree must fulfill written and spoken English communication requirements that are satisfied by preparing written and oral reports describing the laboratory rotations during the first year.

At the end of the first year, admission to Ph.D. candidacy is determined by performance in coursework, laboratory rotations, and the BG Graduate Program Candidacy Examination. Students join their research laboratory by the end of the second semester of the first year.

The doctoral committee of a Ph.D. student is formed upon entry into the dissertation laboratory, and must comply with all Graduate Council requirements. Students are strongly encouraged to consider joint co-advisers, each representing a different area of expertise within the field of bioinformatics and genomics.

During the second year, students may take additional courses in consultation with the doctoral committee. Students may select an option area in which they conduct research and take additional courses specified by the Option (see below). Students are not required to choose an Option. Additionally, students will complete one semester of Teaching Assistantship in a graduate or undergraduate course and complete required training to perform duties of Teaching Assistantship.

Ph.D. candidates must pass a comprehensive examination prior to the end of the fifth semester of enrollment, the written portion of which is in the format of a grant application. As part of this examination, the candidate also gives an oral presentation of this proposal to their doctoral committee.

A dissertation must be prepared and defended by each Ph.D. candidate. Students must present their dissertation in accordance with Graduate Council and Graduate School guidelines as described in the THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations. To earn the Ph.D. degree, the dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School and the student must pass a final oral examination (the dissertation defense).

The final examination of the doctoral candidate is an oral examination administered and evaluated by the entire doctoral committee. It consists of an oral presentation of the dissertation by the candidate and a period of questions and responses. These will relate in large part to the dissertation, but may cover the candidate's entire program of study, because a major purpose of the examination is also to assess the general scholarly attainments of the candidate. The portion of the examination in which the dissertation is presented is open to the University community and the public; therefore, it is expected that the examination will take place at University Park or the Hershey campus. It is expected that the Ph.D. candidate will have at least one paper submitted for publication in a major peer-reviewed scientific journal prior to the final oral examination.

Ph.D. students in Bioinformatics and Genomics may enroll in one of two options, but are not required to do so.

Option in Algorithms and Computation
Students are admitted to the Option in Algorithms and Computation after successfully completing:
(1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be
with faculty affiliated with the Algorithms and Computation Option; and (3) the candidacy
examination. During the second year, Ph.D. candidates choosing this option will be required to
take (1) CSE/BMMB 566 Algorithms and Data Structures in Bioinformatics (3); (2) one of the two
courses CMPSC 465 Data Structures and Algorithms (3) or CSE 565 Algorithm Design and
Analysis (4); and (3) two courses from a list of prescribed electives which includes, but is not
limited to the following: CMPSC 431W Database Management Systems (3), CMPSC 450
Concurrent Scientific Programming (3), CSE 557 Concurrent Matrix Computations (3), CMPSC
464 Introduction to the Theory of Computation (3), CSE 583 Pattern Recognition – Principles and
and CMPEN 454 Fundamentals of Computer Vision (3) and CHE 512 Optimization in Biological
Networks (3).

Option in Statistical Genomics

Students are admitted to the Option in Statistical Genomics, after successfully completing:
(1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be with faculty
affiliated with the Statistical Genomics Option; and (3) the candidacy examination. During the
second year, Ph.D. candidates choosing this option will be required to take: (1) one of the two
courses STAT 501 Regression Methods (3) or STAT 511 Regression Analysis and Modeling (3);
(2) STAT 557 Data Mining I (3); and (3) two courses from a list of prescribed electives which includes, but is not
limited to the following: STAT 414 Introduction to Probability Theory (3), STAT 415 Introduction to Mathematical Statistics (3),
STAT 416 Stochastic Modeling (3), STAT 502 Analysis of Variance (3), STAT 504 Analysis of Discrete Data (3),
STAT 505 Applied Multivariate Analysis (3), and STAT 540 Statistical Computing (3).

M.D./Ph.D. JOINT DEGREE PROGRAM

M.D./Ph.D. Admissions Requirements

Students interested in simultaneously pursuing an M.D. and Ph.D. degree must apply to the
College of Medicine M.D. program using the national American Medical College Application
Service (AMCAS) application system and indicate their intent to pursue the joint degree program.
The College of Medicine M.D./Ph.D. Admissions Committee reviews applications and evaluates
candidates for acceptance into both the M.D. and Ph.D. program. Students not accepted into the
joint degree program can be referred to either the M.D. or Ph.D. program, depending on their
qualifications.

The general admission requirements for the Ph.D. degree are listed above. Additional
requirements for the joint degree are listed below. Admissions requirements and applications for
admission for Penn State College of Medicine are available at the M.D. Program
section of the Penn State College of Medicine website. After the review committee has accepted an applicant
to the joint degree program, s/he must apply to the Graduate School for admission to the graduate
program. Students must be admitted to the joint degree program prior to taking the first course
they intend to count towards the graduate degree.

In addition to the basic college level premedical school requirements for the Penn State College
of Medicine (one each year of biology, chemistry, physics, math, and organic chemistry), the
M.D./Ph.D. program has the following requirements:

- **Academic Achievement** Applicants to our program generally have very strong grades
and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.

- **Research Experience** We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively in-depth research experience as an undergraduate can suffice.

- **Recommendations** We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.

- **Goals** Applicants must be able to clearly articulate the reasons for pursuing the joint degree.

- **International Students** All qualified students are eligible to apply regardless of citizenship.

**M.D./Ph.D. Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the M.D. program are listed on the [Penn State College of Medicine](#) website. Degree requirements for the Ph.D. degree are listed in the Ph.D. Degree Requirements section above.

During the first two years of medical school, the student conducts at least three research rotations. After successful completion of the first two years of medical school the candidate enters the MCIBS Graduate Program.

During the summer after the second year of medical school M.D./Ph.D. students take Step 1 of the United States Medical Licensing Examination (USMLE), which serves in lieu of the knowledge based part of the candidacy examination for the BG program. Successful completion of BMS 506 A and B, which is taken in the second year of medical school, with a grade of B or higher meets the critical thinking and paper analysis requirement of the candidacy exam.

**BG Program Requirements**

The doctoral committee of an M.D./Ph.D. student in the BG program is formed upon entry into the dissertation laboratory, and must comply with all Graduate Council requirements. The committee must include at least two members of the BG program graduate faculty and one M.D./Ph.D. steering committee member.

The required courses: MCIBS 589, Colloquium, MCIBS 591, Ethics in the Life Sciences, MCIBS 551 Genomics, MCIBS 554 Foundations in Data Driven Life Sciences, MCIBS 541, Critical Analysis in BG Research Topics, STAT 555, Statistical Analysis of Genomics Data. In addition, based on the background and needs of the student the following elective courses will also be taken: BIOL 405, Molecular Evolution, STAT 500, Applied Statistics, BMMB 852, Applied Bioinformatics (2).

The BG program will accept SPM 711 Scientific Principles of Medicine (8 credits) in lieu of 6 credits of elective courses and 2 credits of MCBIS 596. If students accepted into the joint degree program are unable to complete the M.D. degree, they are still eligible to receive the Ph.D. degree if all Ph.D. degree requirements have been satisfied.

The M.D./Ph.D. candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee.
M.D./Ph.D. candidates are required to have at least one paper submitted for publication in a major peer-reviewed scientific journal prior to the final doctoral examination, and this must be accepted before they return to the third year of medical school. A dissertation must be prepared and defended by each M.D./Ph.D. candidate.

STUDENT AID

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin. Students on graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

COURSES

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

e. A statement of admission requirements should be included, i.e., required test scores, minimum junior/senior GPA, as deemed appropriate by the proposer.

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

1. Fully completed, official online Penn State Graduate Application.
2. Paid, nonrefundable application fee (see Requirements for Graduate Admission for current fee).
3. Official transcripts from all post-secondary institutions attended.
4. Completed BG-specific questions on the Graduate Application.
5. Application for a U.S. visa (international applicants only).
6. Officially submitted Graduate Record Examination (GRE) General Test scores. Successful applicants generally have scores above the 75th percentile for each of the verbal, quantitative, and analytical writing section.
7. Names and contact information, including business email addresses, for three references.
8. Statement of goals that pertain to the life sciences including motivation for pursuing a research degree; research experience and interests; and professional experience. The statement should include problems that are of interest to the applicant and how the applicant’s past experiences have prepared him or her to pursue this research.
9. International applicants are required to submit English proficiency test scores, unless they are from one of the countries listed as exempt in the Graduate Bulletin. English proficiency test scores must meet or exceed the minimum acceptable scores listed in the Bulletin. Applicants to the BG program must have a minimum TOEFL score of 575 for the paper-based test, or a total score of 90 with a 19 on the speaking section for the Internet-based test (iBT). Successful applicants generally have a minimum score of 100 (including 23 on the speaking component) on the Internet-based test. Applicants with iBT speaking scores between 15 and 18 may be considered for provisional admission, which requires completion of specified remedial English courses ESL 114G (American Oral English for Academic Purposes) and/or ESL 116G (ESL/Composition for Academic Disciplines) and attainment of a grade of B or higher.
10. Successful applicants generally will have a minimum 3.5 on a 4.0 scale junior/senior undergraduate grade point average, and will have completed course work in both quantitative and life science subjects.
f. A justification for the program. The proposal should include a statement regarding the necessity for the program, i.e., why the program should be offered; and information on the ability of the department to offer a quality program. Included in the section should be the projected size of the program and its impact on current course offerings and faculty load as well as additional faculty advising duties.

A Justification of the Program: Bioinformatics is recognized as one of the emerging fields within the field of “Biological and Health Sciences” (See Appendix B, Taxonomy of Fields, http://www.nap.edu/rdp/). Bioinformatics represents the growing importance of computation to biology, especially in the subfields of genetics and genomics (http://www.nap.edu/rdp/).

A justification of the Program Title: The program title is “Bioinformatics and Genomics,” BG for short, which provides continuity with the preceding program title of IBIOS/MCIBS Program Option in BG. The program has name recognition in the field, especially at institutions from which the student population is derived. The term “bioinformatics” appears in different combinations in degree titles offered by other Universities, reflecting the interdisciplinary nature of the field. Degree titles including the term bioinformatics are: “Bioinformatics,” “Bioinformatics and Computational Biology,” “Bioinformatics and Systems Biology,” “Applied Bioinformatics and Genomics,” and “Genetics, Genomics, and Bioinformatics.” NC State University offers separate M.S. and Ph.D. titles in “Functional Genomics” and “Bioinformatics,” as well as “Co-majors” in “Functional Genomics and Bioinformatics.” UNC Charlotte has a Department of Bioinformatics and Genomics and offers a Ph.D. in “Bioinformatics and Computational Biology.”

The BG Program Option was founded in 2005 as one of the Options in IBIOS (now MCIBS) with the primary goal to bring together faculty members from several departments to train graduate students in the fast growing areas of computational, evolutionary, and functional genomics, that requires developing theory and practice in the areas of bioinformatics, computation, statistics, genomics, and systems biology. The BG Program Option plays a critical role in integrating various disciplines in the post-genomic era, consistent with the strategic vision of the Huck Institutes. The successful graduates are expected to be leaders both in academic institutes and private industry, impacting health, agriculture, and biotechnology besides making contributions towards basic science. To date, the Program Option has graduated 31 students, who are well placed in their careers (4 Assistant Professors, 14 postdoctoral scholars in academia, 10 in private industry and 2 in research and government institutions; see Appendix 4).

In 2013, the ‘Task Force for Review and Restructuring of the Intercollegiate Graduate Degree Programs in the Life Sciences of the Pennsylvania State University’, chaired by Drs. Doug Cavener and Neil Sharkey, noted: ‘The BG Option has demonstrated high level of success and stability and should be graduated to a full IGDP. Therefore we recommend that the BG IBIOS Option be converted to a stand-alone IGDP and be administered and financed accordingly’. The BG Program has since remained an Option in the recently organized IGDP in MCIBS, with Drs. Cooduvalli Shashikant (UP) and James Broach (CoM) as the current Co-Directors of the BG Program Option.

A justification for separation from MCIBS. The only required course that is common to the MCIBS and the proposed IGDP in BG is the MCIBS 591 ‘Ethics in Life Sciences’. Students in the MCIBS program are required to complete only one quantitative course specified by each emphasis area in addition to core courses focused on providing exposure to core concepts in Bio-molecular Sciences. Students in the BG program, in contrast, are required to complete several quantitative courses. Students in MCIBS complete three 5-week rotations and identify primary dissertation advisers by the end of the first semester. In contrast, students in BG participate in three 8-week rotations and identify primary dissertation advisers by the end of the second semester.
A justification for the New Options in IGDP in BG. Options provide a mechanism to embrace emerging fields that require young scientists with strong bioinformatics training, help faculty members to organize around common themes, and attract diverse applicants to the program. Students in the BG Program Option currently enroll in a doctoral minor program in Statistics and some consider concurrent master’s degrees in Applied Statistics, indicating a need for course-oriented specialization in the field. Unlike doctoral minors offered by other graduate programs, options provide a mechanism within the IGDP in BG to offer specialized training that is concurrent with doctoral research in the chosen Option.

A justification for the Algorithms and Computation Option: This Option provides training for students interested in developing novel computational techniques. This Option formalizes a training strategy that some students in the current program have already taken at the urging of their advisers. This Option does not conflict with other programs. The Graduate Program in Computer Science and Engineering offers degrees in Computer Science, but without a Bioinformatics component. The proposed curriculum provides a certain depth of the faculty and student interests and is expected to attract a new cadre of computer science students interested in genomics research. The graduate faculty members associated with the Option are actively engaged in design and implementation of the curriculum. It is anticipated that this Option will include approximately 20 faculty members and a steady enrollment of approximately 20% of students joining the IGDP in BG. The advising load and service on committees will also remain unchanged. The teaching load on faculty will remain approximately the same since most courses are already being taught and current students in the program take these courses. Since administration of the IGDP in BG is centralized, we do not expect any additional load due to increased efficiency. No new administrative structure specific to this Option area will be created.

A justification for Statistical Genomics Option: This Option provides training for students interested in developing new statistical methods and inference techniques. This Option formalizes a training strategy that some students in the current program have already taken at the urging of their advisers. This program does not conflict with other programs. The Graduate Program in Statistics offers degrees in Statistics, but without a Bioinformatics component. The proposed curriculum provides a certain depth of the faculty and student interests and is expected to attract a new cadre of statistics students interested in genomics research. The graduate faculty members associated with the Option are actively engaged in design and implementation of the curriculum. It is anticipated that this Option will include approximately 12 faculty members and a steady state of approximately 20% students joining the IGDP in BG. The advising load and service on committees will also remain unchanged. The teaching load on faculty will remain approximately the same since most courses are already being taught and current students in the program take these courses. Since administration of the IGDP in BG is centralized, we do not expect additional load due to increased efficiency. No new administrative structure specific to this Option area will be created.

A justification for the M.S. degree offering: An M.S. in Bioinformatics and Genomics provides an intermediate training between the Ph.D. and the Certificate in Applied Bioinformatics offered at Penn State. The core curriculum and rotation research projects remain the same for both M.S. and Ph.D. degrees. Additionally, M.S. students will be required to complete one semester of internship, which is critical for immediate employment upon completion of the degree. Master’s level training is offered in different formats by different institutes, including online, professional science, research, and by paper. We opt for a degree based on intense course work, research, and internship requirements. Unlike online programs, a residential program is more efficient in providing hands-on training to students who will be physically present on the campus. Unlike professional programs, students in an M.S. program will gain considerable research experience through independent studies. Although not a requirement, students are expected to contribute
towards research publications. A research-oriented training is critical in a field that is continuously innovating and rapidly changing. Students in the master’s program will be part of the same cohort as doctoral students. No separate criteria, other than the student choice, will be used to determine admissions to either an M.S. or a Ph.D. program. The M.S. program is also expected to provide cross training to students from non-bioinformatics background and prepare them for future Ph.D. program. No new administrative structure specific to an M.S. program will be created.

g. Accreditation

No accreditation body is applicable to the IGDP in BG program.

h. Original Written Responses from Departments Affected

See Appendix 2.

i. Written evidence of consultation with the Office for Research Protections regarding SARI requirements.

See Appendix 3.
APPENDIX 2

Original Written Responses and Letters of Support

1. Peter Hudson, Director and Troy Ott, Associate Director, The Huck Institutes of Life Sciences
2. Francesca Chiaromonte, Director, Institute for Genome Sciences
3. Doug Cavener, Dean, and Chuck Fisher, Associate Dean for Graduate Education, Eberly College of Science
4. Gary Thompson, Associate Dean for Research and Graduate Education, College of Agricultural Sciences
5. Amr Elnashai, Harold and Inge Marcus Dean, College of Engineering
6. Peter Butler, Associate Dean for Education, College of Engineering
7. Andrew Sears, Dean, College of Information Science and Technology
8. Charles Lang, College of Medicine, Hershey
9. Melissa Rolls, Chair, Molecular, Cellular and Integrative Biosciences Graduate Program
10. Robert Levenson and Leslie Parent, Co-Directors, MD/PhD Program
11. Tracy Langkilde, Head, Department of Biology
12. Scott Selleck, Head, Department of Biochemistry and Molecular Biology
13. Dave Hunter, Head, Department of Statistics
September 2nd, 2016

Dear Shashi,

We fully support formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP) with two proposed options in 'Algorithms and Computation' and 'Statistical Genomics'. The Graduate School has agreed to serve as academic home of this program.

Since its inception almost a decade ago, BG has matured into a dynamic program bringing together faculty and students from two campuses and several colleges. The program faculty members are also drivers of two prestigious predoctoral training programs funded by the National Institutes of Health. The program is characterized by a strong curriculum, active and well-attended seminar series, annual retreat and workshops with active participation among faculty and students. BG faculty members continue to play prominent roles in the rapidly evolving field of genomics research and former BG students are well-placed in academic, industrial or allied careers.

This proposal is consistent with the recommendations in the Report of the Task Force for Review and Restructuring of the Intercollege Graduate Degree Programs in the Life Sciences, recommendation #2: "The BG IBIOS option should be converted to a stand-alone IDGP and be administered and financed accordingly." It is built on the belief that a sustainable IDGP must achieve enrollment of 40-50 students on a continuing basis and function in a truly interdisciplinary fashion. Because of the diverse origins and academic backgrounds of students entering this program (from computer science to molecular biology), it is truly interdisciplinary. The proposal does not request additional financial support from the Graduate School.

In addition to support provided by participating colleges outlined elsewhere in the proposal, the Huck Institutes is committing the following resources to the program:

1) The Huck Institutes Graduate Education Office will continue to handle the day-to-day operation and oversight of BG as it does with the other 5 life science IDGP.

2) Huck will continue to provide financial support for the co-Director of BG ($15K/yr) on the UP campus.

3) Including contributions from CoM (2 semesters), ECoS (4 semesters) and IST (2 semesters) the Huck will provide 8 semesters of stipend support, summer wages, and GIA. The stipend support from the Huck and collaborating colleges will be provided on a continuing basis tied to the 5 year program review schedule.
4) CoM will continue providing support for the co-Director of the BG program and program activities conducted at Hershey.

5) Huck will continue to provide funds and administrative support for recruiting ($5K) and other program related activities ($1K).

The BG program has been consistently competitive for UGF, Bunton Waller and Huck Fellowships as well as FEGR, Graham and Braddock top up awards. For example, this recruiting cycle BG applicants were awarded 4 UGF, 2 Huck Fellowships and 2 Bunton Waller Fellowships along with 11 FEGR and 3 Graham top up awards. This speaks to the high quality of the applicant pool for BG. Furthermore, the NIH CBIOs and BD2K T32 training grants provide substantial opportunity for BG students to gain out year support for their training. We are pleased with the growth of the BG program and believe that an independent BG program based on the concepts outlined in this proposal will support our faculty by attracting the best graduate students and will provide them with the training needed to be successful.

Sincerely,

Peter Hudson
Willaman Professor of Biology
Director

Troy Olt
Professor
Associate Director

Cc Jim Marden, Vivek Kapur, Wendy Buterbaugh, Dana Coval-Dinant
To: Profs. James Broach and Cooduvalli Shashikant  
Re: proposal for the establishment of an independent IGDP in Bioinformatics and Genomics

Jan 14, 2016

Dear Jim and Shashi,

I am writing in support of the proposal to establish Bioinformatics and Genomics (BG) as an independent Intercollegiate Graduate Degree Program (IGDP). Over the years, I have had a chance to follow closely and appreciate the development of the BG option – with Penn State researchers from diverse backgrounds and disciplinary fields joining its faculty, and a growing number of very good graduate students.

I have seen first hand how BG students benefit from the continued interdisciplinary interaction with each other and with the diverse faculty, and I believe BG and the training of its students has functioned as an important catalyst for research in the Genome Sciences at both the UP and HES campuses.

An independent IGDP in BG with its proposed Options will provide increased visibility to Penn State for this type of interdisciplinary training and research, helping us to attract outstanding graduate students and new faculty. In this respect, the proposed program will contribute towards strengthening already robust interactions that are core to the mission of the Huck Institutes of the Life Sciences in general, and of the Institute for Genome Sciences in particular.

The Institute for Genome Sciences, with its affiliated Centers, is intended exactly as a forum for fostering interdisciplinary research and collaborations. We have long considered BG as an integral part of this mission. We will continue to support various seminar series and the student-hosted Annual Bioinformatics and Genomics Retreats, which are central to the activities of the BG program.

With best wishes

Francesca Chiaromonte

Professor of Statistics, and of Public Health Sciences (courtesy)  
Director, Institute for Genome Sciences (Huck Institutes of the Life Sciences)  
The Pennsylvania State University  
University park, PA 16802
February 11, 2016

Regina Vasilatos-Younken
Vice Provost for Graduate Education and Dean of the Graduate School
Michael Verderame
Senior Associate Dean
211 Kern Graduate Building

Dear Jean and Michael,

We are very supportive of the Bioinformatics and Genomics Program graduating from an IBIOS program to a full IGDP with its academic home in the Graduate School. This is a field that is growing exponentially, with no sign it will slow down in the future. The program already includes many of the top faculty at the University, and it will be a powerful recruiting tool for the additional faculty in this area that departments all over the University are certain to need. It is inherently interdisciplinary and is not a good fit to merge with the MCIBS program. As a stand-alone program, it will continue to be very well poised to attract training grants, as well as top notch students and faculty.

We are strongly opposed to this truly “Intercollege” program being housed in a single college. This is against the basic concept of intercollege programs, would inevitably result in a disproportionate burden on the host college and even more importantly, change the way the program would be viewed by other colleges. However, we remain strongly supportive of Intercollege Graduate Degree Programs. This year we have modified one of our prime mechanisms to provide financial support of IGDPs and this year we will be providing top off recruiting funds directly to the IGDPs based on the numbers of their students working with ECoS faculty. We use this metric (number of students working with our faculty) because the donor of the funds we will be distributing specified that they be used to recruit grad students to ECoS. To assist the BG program in recruiting this year, we will provide them with $19,000 to use as recruiting top off funds. It is our intention to continue to provide recruiting top off funds as long as they remain an Intercollege Program. We will also guarantee support of these students for years 2-5 (after the introductory fellowship support is over), as we do for all students working with our faculty. In addition, to celebrate their move to the Graduate school we are willing to provide them with 2 semesters of tuition support for each of the next three years, at which point we will revisit these grants in aid.

Sincerely,

Douglas R. Cavener
Verne M. Willaman Dean

Charles Fisher
Associate Dean for Graduate Education

An Equal Opportunity University
February 12, 2016

To: Cooduvalli Shashikant and James Broach, Co-chairs
RE: MCIBS Graduate Program Option in Bioinformatics and Genomics

I am writing in support of the proposal for the Bioinformatics and Genomics Option within the MCIBS Graduate Program to be established as an independent IGDP. The related areas of genomics and bioinformatics comprise a set of advanced tools and approaches that are fundamental to virtually all elements of modern experimental research conducted in the life and agricultural sciences. I anticipate that the BG IGDP will attract outstanding students and have the broad support of faculty, which is necessary to create a robust graduate educational program.

I believe that this program will best serve our graduate students and the institution as a whole as an Intercollege Graduate Degree Program within the Graduate School. Such an organizational structure will strongly encourage interdisciplinary work across Penn State and ensure broad faculty participation throughout the university.

Sincerely,

Gary A. Thompson
DATE:    February 22, 2016

FROM:    Amr S. Elnashai, Harold and Inge Marcus Dean

TO:    Cooduvalli Shashikant and James Broach, Co-Chairs, 
        MCIBS Graduate Program Option in Bioinformatics and Genomics

SUBJECT: Intercollege Graduate Degree Program in Bioinformatics and Genomics

I am writing to support the formation of an Intercollege Graduate Degree Program (IGDP) in Bioinformatics and Genomics (BG) with two options in "Algorithms and Computation" and "Statistical Genomics." The program integrates the disciplines of computation, informatics, statistics, genetics and genomics. Several faculty members from our college are active in the program and have trained graduate students in this interdisciplinary space. The new expanded curriculum also provides opportunities to attract students with a background in computer science and interest in working with large genomic datasets. An independent IGDP in BG will strengthen the program further and will enhance recruitment of talented students as well as faculty in the rapidly expanding areas of genomics and bioinformatics research. I am in agreement with the Deans of Science, Agriculture, and Medicine in recognizing the value of this IDGP having its academic home in the Graduate School with the existing IDGPs.

In conclusion, I lend my strong support to the new Intercollege Graduate Degree Program in Bioinformatics and Genomics and look forward to continued interactions between the new program and our engineering departments.

cc:    Cheng Dong
        Costas Maranas
Date: March 3, 2016

To: Cooduvalli Shashikant and James Broach, Co-Chairs
MCIBS Graduate Program Option in Bioinformatics and Genomics

I am writing to support the formation of Bioinformatics and Genomics (BG) with its two options in 'Algorithms and Computation' and 'Statistical Genomics' as a stand alone Intercollege Graduate Degree Program (IGDP). The program integrates disciplines of computation, informatics, statistics, genetics and genomics. Several faculty members from our college are active in the program and have trained graduate students in this interdisciplinary area. The newly expanded curriculum also provides opportunities to attract a new type of student with a background in computer science and interest in working with large genomic datasets. An independent IGDP in BG strengthens the program further and will enhance recruitment of talented students as well as faculty in the rapidly expanding areas of genomics and bioinformatics research. I am in agreement with the Deans of Science, Agriculture, and Medicine in recognizing the value of this IGDP having its academic home in the Graduate School with the other IGDPs.

In sum, I reiterate my strong support for the new IGDP in BG and look forward to continued interactions between this new program and our departmental programs.

Sincerely,

Peter J. Butler, PhD
Associate Dean for Education
College of Engineering
Date: February 21, 2016

To: Cooduvalli Shashikant and James Broach, Co-Chairs, MCIBS Graduate Program Option in Bioinformatics and Genomics

From: Andrew Sears, Professor and Dean, College of Information Sciences and Technology

Re: Bioinformatics and Genomics (BG) Intercollege Graduate Degree Program

I fully support the formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP). A stand-alone graduate program, which aims to integrate diverse disciplines of computation, informatics, statistics, genetics and genomics, is of great interest to faculty in my college and aligns with some of our long-term goals, especially in health informatics. Furthermore, several IST faculty are key contributors to the program and a number of BG students choose to work with IST faculty members.

The College’s strategic priorities, especially in Data Sciences, are aligned broadly with the growing importance of Informatics in Biomedical and Life Sciences research and training. For example, Dr. Vasant Honavar was hired by the College of Information Sciences and Technology (IST) two years ago to help strengthen the College’s research collaborations with the life sciences. He is a PI, along with Marylyn Ritchie of Biochemistry and Molecular Biology, and Runze Li of Statistics, on a pending NIH (T32) in Biomedical Data to Knowledge (BD2K) training program, which will benefit from an independent BG IGDP. The BD2K program complements the current focus of the BG program on bioinformatics and genomics by offering enhanced training opportunities in Big Data Analytics, Biomedical and Translational Health Informatics. The Data Sciences core of the BD2K curriculum is designed to allow repurposing in a number of different contexts, including a planned Data Sciences option in the BG IGDP. I understand that Dr. Honavar is already in discussions with the leadership of the BG program on introducing a Data Sciences option in the BG program. The BD2K program is designed to accept students recruited through multiple graduate programs (e.g., IST, CSE, HDFS, Statistics, BG).

An independent IGDP in BG, if structured appropriately, with stronger ties to informatics research and education programs around the campus, will substantially elevate the profile of Bioinformatics research and training efforts on campus, enhance recruitment of talented students as well as faculty, and contribute to excellence in Biomedical Data Sciences. The College of IST has hired several new faculty in Data Sciences. A significant number of faculty in the College have research foci on various aspects of Data Sciences (e.g., Dr. Vasant Honavar, Dr. Lee Giles, Dr. John Yen, Dr. Prasenjit Mitra, Dr. James Wang, Dr. Jessie Li, Dr. Dashun Wang, Dr. Dongwon Lee, Dr. Guoray Cai, Dr. David Reitter, and Dr. Anna Squicciarini). The College has plans to hire additional faculty in Data Sciences, including one through an active search this year, with a focus on Biomedical Data Sciences. I strongly support the college’s participation in Data Sciences and Informatics training across a broad range of disciplines, including, in particular, Biomedical and Life Sciences.

I am in strong agreement with the Deans of Science, Agriculture, and Medicine in recognizing the value of this IGDP having its academic home in the Graduate School with the other 5 IGDPs. Continent upon approval of the Data Sciences option within the BG program and sufficient engagement of IST faculty, I am prepared to commit up to two semesters of graduate student support to this program each year to be used in a way that is consistent with the use of college-funded positions in support of the IST Ph.D. program.

In summary, I strongly endorse the proposed new IGDP in BG and look forward to mutually beneficial interactions between the College of IST and both research and graduate training efforts in the Biomedical and Life Sciences.
18 February 2016

Regina Vasilatos-Younken, PhD
Vice Provost for Graduate Education
and Dean of the Graduate School
The Pennsylvania State University

Dear Dr. Vasilatos-Younken:

After review of the program proposal, the College of Medicine enthusiastically supports the formation of an independent IGDP in Bioinformatics and Genomics (BG). The College of Medicine will continue to provide administrative support supplementing that offered by the Huck. Additionally, we are pleased to provide financial support of this new IGDP. Specifically, we commit to the support of one (1) matriculating graduate student whose primary mentor and research is in residence at the College of Medicine. This support will be a ½ time, Grade 16, Graduate Assistantship for Fall and Spring semesters and the associated graduate assistant tuition. During the Summer semester, the student will be eligible for STAP (Summer Tuition Assistance Program) funds and will be appointed as a Graduate Lecturer/Researcher (as is usual and customary for HY doctoral students). Support will be provided from AY 2016 through AY2021, after which the program will be evaluated prior to continued support.

This is an exciting opportunity for Penn State and the College of Medicine is fully supportive of this initiative.

Sincerely,

Charles H. Lang, PhD
Distinguished University Professor
Associate Dean Graduate Studies (Interim)
To: Cooudavall Shashikant and James Broach, 
Co-Chairs, 
MCIBS Graduate Program Option in Bioinformatics and Genomics

I fully support the formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP) with its options in 'Algorithms and Computation' and 'Statistical Genomics'. With the transformation of the IBIOS grad program incubator into the MCIBS graduate program, BG, which was an IBIOS Option, became the only MCIBS Option. BG is a thriving graduate program with a distinct curriculum and student pool. Moreover, it covers an area that has been emphasized for faculty hiring over the last few years and so there is a strong pool of faculty associated with the program.

As an Option in MCIBS, BG has a distinct curriculum, a separate admissions and curricular committee, and is administered by Drs Shashikant and Broach as Co-Directors representing University Park and Hershey campuses. Students in the program are strongly trained in quantitative subjects including computation, bioinformatics and statistics and less in experimental biology, which requires 'wet lab' expertise. In contrast, most MCIBS students are expected to come in with an experimental background. Separating BG option from MCIBS is thus appears to be reasonable, and will also decrease confusion about the programs with prospective students and faculty. It will allow MCIBS to become a UP-only program; the only reason it maintained Hershey as a campus was for BG. It will also simplify MCIBS administration. Currently MCIBS and BG must coordinate award nominations even though they operate as separately run programs.

A stand-alone graduate program, which aims to integrate diverse disciplines of computation, statistics, genetics and genomics, is of a great interest to Penn State and draws on an area of strength. I reiterate my strong support for the new IGDP in BG and look forward to continued interactions between MCIBS and an independent BG program.

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Chair, Molecular, Cellular and Integrative Biosciences Graduate Program
The Pennsylvania State University
January 22, 2016

Dr. Cooduvalli S. Shashikant
Associate Professor of Molecular and Developmental Biology
Department of Animal Science, College of Agricultural Sciences
Program Director, CBIOS Predoctoral Training Program
Co-Director, MCIBS Graduate Program Option in Bioinformatics and Genomics
The Pennsylvania State University
State College, PA

Dear Shashi:

We are delighted to give you our enthusiastic support for the creation of a joint degree program between the Penn State MD/PhD Program and the Intradepartmental Bioinformatics and Genomics (BG) Graduate Program. The establishment of this joint degree program will provide an opportunity for our students to perform their thesis work with outstanding faculty members on either the Hershey or University Park campuses, and provides exciting options for our students when choosing a research mentor at Penn State.

We already have several MD/PhD students matriculating in the MCIBS BG program option. Establishing a formal joint degree program will provide students with a curricular focus that will clearly augment and strengthen their graduate training. We are extremely excited about forming this partnership with you and your colleagues in this new joint degree graduate program. We look forward to working with you in this collaborative effort to expand the options for the MD/PhD students.

Best regards,

Robert Levenson, PhD
Co-Director, MD/PhD Program

Leslie Parent, MD
Co-Director, MD/PhD Program
To: Gooduvalli Shashikant and James Broach  
Co-Chairs  
MCIRS Graduate Program Option in Bioinformatics and Genomics  

I fully support the formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP) housed within the Graduate School. The program serves a rapidly integrative growing field that is relevant to diverse disciplines of computation, statistics, genetics and genomics. As a stand-alone graduate program, the BG IGDP will enhance recruitment of talented students to work with faculty across the university, within multiple colleges and departments, including Biology.  
The Biology Department will provide support to students that are recruited through this program to work with Biology faculty. They will be provided with Braddock recruitment funds, and Biology will guarantee support of these students for years 2-5, as we do for all students working with our faculty.  

In sum, I reiterate my strong support for the new IGDP in BG. This stand-alone program will be poised to attract the best students and faculty in many interdisciplinary fields across the university, and provide opportunities to secure training grants in these areas.  

Sincerely,  

Tracy Langkilde  
Head of Department of Biology
February 12, 2016

TO:

Cooduvalli Shashikant and James Broach,
Co-Chairs,
MCIBS Graduate Program Option in Bioinformatics and Genomics

I support the formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP) with its options in ‘Algorithms and Computation’ and ‘Statistical Genomics’. A stand-alone graduate program, which aims to integrate diverse disciplines of computation, statistics, genetics and genomics, is an important element of the education and research efforts of BMB faculty and students. Our faculty members are key contributors to the program in advising, teaching and serving on admissions, curricular, candidacy, dissertation and other committees. A significant number of BG students choose to work with BMB faculty members. One of our faculty members, Dr. Hardison leads the NIH funded predoctoral training program, which is based upon the curriculum of the BG program option. The curriculum also complements and strengthens the online certificate course in Applied Bioinformatics, coordinated by Dr. Istvan Albert, also a faculty member in BMB. An independent IGDP in BG strengthens the program further and hope to enhance recruitment of talented students as well as faculty in the rapidly expanding areas of genomics research.

In summary, I support the new IGDP in BG unequivocally and look forward to continued interactions with our departmental programs.

Sincerely,

Scott B. Selleck, MD, PhD
February 11, 2016

Dear Dr. Shashikant and Dr. Broach:

I fully support the formation of Bioinformatics and Genomics (BG) as an Intercollege Graduate Degree Program (IGDP) with two proposed options, in statistical genomics and in algorithms and computation. A stand-alone graduate program that aims to integrate the diverse disciplines of statistics, computing, genetics, and genomics is of a great interest to faculty in the Department of Statistics.

Several of our faculty members play an active role in the BG program. They are involved in teaching required and elective courses, advising students, serving on admissions and curricular committees, and participating on individual candidacy, comprehensive, and dissertation committees of students in the BG program. The NIH-funded pre-doctoral training program in computation, bioinformatics and statistics (CBIOS), which bases its curriculum on the BG program, has a strong focus on training students in the area of statistical genomics.

Although students in the BG program often enroll in a doctoral minor in statistics, the new option in statistical genomics consolidates training by combining both research and coursework in a more effective manner. Furthermore, we expect that the new option will attract a cadre of statistics students, those interested in genomics research, who are currently sometimes missed by both statistics and the BG graduate program options.

In summary, the new BG program with its two options complements our interest in building faculty-student interactions in the area of bioinformatics and genomics. The proposal has my strong support.

Sincerely,

David Hunter
Professor and Head
Department of Statistics
Penn State University
New Graduate Program Proposal/SARI requirement

7 messages

Cooudvalli Shashikant <css13@psu.edu> Wed, Jan 13, 2016 at 6:52 AM
To: ORPProtections@psu.edu
Cc: Troy Ott <tlo12@psu.edu>, James Broach <jrb62@psu.edu>

Jim Broach and I, as Co-Directors of the MCIBS Graduate Program Option in Bioinformatics and Genomics are ready to submit a program proposal for a new IGDP in Bioinformatics and Genomics (BG). Please see attached.

As per requirement of the Graduate School (http://www.gradschool.psu.edu/faculty-and-staff/faculty/progprop/), I would like to request a letter of support by the end of the month regarding SARI requirements. The letter should indicate that we have consulted with ORP about SARI.

Students in the program will fulfill SARI requirement as described on p6 and pasted below;

In addition, students will be required to complete an online Responsible Conduct of Research (RCR) training course offered through the CITI (Collaborative Institutional Training Initiative) Program. This supplements the in-class, discussion-based RCR training provided in MCIBS 591, Ethics in the Life Sciences. Together, these two courses satisfy RCR training requirements mandated by the Penn State’s SARI (Scholarship and Research Integrity) Program, an RCR initiative organized through the Office for Research Protections (an administrative unit within the Office of the Vice President for Research). Students will also be required to take a refresher course in CITI RCR after completing four years in the program.

I will be happy to discuss this further and provide additional clarifications. I appreciate your support for the proposal.

Thanks
Shashi

Cooudvalli S Shashikant
Associate Professor of Molecular and Developmental Biology
Department of Animal Science, College of Agricultural Sciences

Program Director, CBIOS Predoctoral Training Program
Co-Director, MCIBS Graduate Program Option in Bioinformatics and Genomics
The Huck Institutes of the Life Sciences
The Pennsylvania State University
Twitter: @Shashi323

Mail: 324 Henning Building, University Park, PA 16802.
Office: 323 ASI, Lab: 308 Henning, Tel no. 814-863-0658 (O); 814-863-6042 (Fax)
814-883-5572 (cell)

BG Program proposal-Jan 92016.docx
86K

Cooudvalli Shashikant <css13@psu.edu> Fri, Feb 12, 2016 at 1:00 PM
To: Brad Woods <brw150@psu.edu>
Cc: Troy Ott <tlo12@psu.edu>

Brad,

I wrote this email last month and got no response. We are ready to submit a proposal as outlined below and need
https://mail.google.com/mail/u/0?ui=2&ik=0094129d4b&view=pt&q=brad%20woods&q=on%3Dtrue%26&query%3D1523ad46e845093e&siml=1523ad46e845093e&...
a support letter to accompany our proposal. I wonder if you could provide required letter.

I have a class between 2:30-3:30PM today. Otherwise I could be reached on 863-0658.

Thanks
Shashi

Cooduvalli S Shashikant
Associate Professor of Molecular and Developmental Biology
Department of Animal Science, College of Agricultural Sciences

Program Director, CB IOS Predoctoral Training Program
Co-Director, MCIBS Graduate Program Option in Bioinformatics and Genomics
The Huck Institutes of the Life Sciences
The Pennsylvania State University
Twitter: @Shashi323

Mail: 324 Henning Building, University Park, PA 16802.
Office: 323 ASI, Lab: 308 Henning, Tel no. 814-863-0658 (O); 814-863-6042 (Fax)
814-883-5527 (cell)

---

Woods, Brad <brw150@psu.edu> Fri, Feb 12, 2016 at 1:43 PM
To: Cooduvalli Shashikant <css13@psu.edu>
Cc: Troy Ott <tio12@psu.edu>

Shashi,

Sorry to learn no one responded to your email. I'll review your program proposal this afternoon and will be in touch Monday if I have any questions or need clarification. Otherwise, I'll send you an official consultation letter once I review/approve your proposal.

Best,

Brad

Brad R. Woods, Ph.D.
Research Ethics Educator
Office for Research Protections
The 330 Building
Suite 205
The Pennsylvania State University
University Park, PA 16802
BRW150@psu.edu
Hi Shashi-

I'm happy to help with this. The Graduate School ensures that all graduate programs meet the SARI@PSU requirements. Usually I review new program proposals and respond with an email that you can forward to the grad school as proof of our consultation.

As you’ve indicated in your program proposal, the SARI@PSU program has a two-part requirement: online RCR (responsible conduct of research) training offered by the CITI Program, and five hours of discussion-based RCR education. Based on the wording of your proposal, there’s no indication of the number of RCR discussion hours provided by MCIBS 591. I’d suggest amending this paragraph to note that students will receive at least five hours of discussion-based training via MCIBS 591.

Since I know you are facing a deadline, if you add the necessary statement to your proposal, you can use this email as confirmation that we have consulted and that your new program will meet the SARI@PSU requirements. Also, I’d suggest adding one or two sentences with a bit more detail than what is currently contained in your proposal, something like (please edit so that it’s accurate): "The required MCIBS 591 course, taken by all students in the program, will address [list the relevant RCR topics] through readings and class discussions. At least 5 hours of class time will be devoted to these topics; these activities will ensure that students in the program meet the University's SARI@PSU requirements."

Before you actually start enrolling students, you'll need to submit a SARI@PSU plan to us, describing how the program will meet the SARI@PSU requirements. All graduate programs need to submit a SARI@PSU plan: it’s not a long form, but will include a little more detail about the RCR topics to be covered in the course. We'll also ask you to forward the course syllabus. We keep the plan and syllabus on file in our office, and match it to annual tracking reports of your students' SARI@PSU activities. I've attached a copy of the planning form for you; more information about the SARI@PSU program (including examples of completed program planning forms) can be found on our website at http://www.research.psu.edu/training/sari

Please let me know if you have any questions!

Best,

https://mail.google.com/mail/u/0?w=1&ik=0094129d4b&view=p&u=brad%20woods&q=true&search=query&th=1523ad46e845093e&xsm1=1523ad46e845093e&... 3/5
From: Cooduvalli Shashikant [mailto:css13@psu.edu]
Sent: Friday, February 12, 2016 1:01 PM
To: Woods, Brad
Cc: Troy Ott
Subject: Fwd: New Graduate Program Proposal/SARI requirement

[Quoted text hidden]

SARI-PSU plan template.doc
280K

---

Cooduvalli Shashikant <css13@psu.edu> Mon, Feb 15, 2016 at 12:13 PM
To: "Woods, Brad" <brw150@psu.edu>
Cc: "Poveromo, Debrah" <dap192@psu.edu>

Thanks so much for quick response. I will include changes as suggested in the proposal and send it to you in a day or two. We are still waiting for another letter of support before we proceed.

Just to clarify, MCIBS 591 Ethics in Life Sciences course meets for about 18-20 hrs per semester and covers all the topics you mentioned and more. I started teaching this courses since last fall. I will include the requested information when we submit SARI@PSU for the new program.

Best,
Shashi
[Quoted text hidden]

---

Cooduvalli Shashikant <css13@psu.edu> Tue, Feb 16, 2016 at 7:14 PM
To: "Woods, Brad" <brw150@psu.edu>
Cc: "Poveromo, Debrah" <dap192@psu.edu>

Brad,

Attached is the revised proposal with suggested changes. Let me know if this satisfies the SARI requirement.

On page 6, the changed paragraph is the following:

In addition, students will be required to complete an online Responsible Conduct of Research (RCR) training course offered through the CITI (Collaborative Institutional Training Initiative) Program. This supplements the in-class, discussion-based RCR training provided in MCIBS 591 Ethics in the Life Sciences, which meets for at least five hours during the semester. Topics covered in MCIBS 591 course includes, but not limited to the following topics: plagiarism, fraud in science, scientific misconduct, collaborative research, peer review, responsible authorship and publication, mentoring, conflict of interest, use of plants and animals in research, human subject in biomedical research, social responsibilities of scientists. These two courses satisfy RCR training requirements mandated by the Penn State's SARI (Scholarship and Research Integrity) Program, an RCR initiative organized through the Office for Research Protections (an administrative unit within the Office of the Vice President for Research). Students will also be required to take a refresher course in CITI RCR after completing four years in the program.

[Quoted text hidden]
Hi Shashi,

Thank you for making the suggested changes. This satisfies the requirements for SARI@PSU.

When you have an opportunity—and this doesn’t need to happen until the program is approved—I’ll need a completed version of the Program Plan that I attached in my last email to you. Once this has been completed and returned, we’ll move forward with formally adopting Bioinformatics and Genomics under SARI@PSU and establish a site on Angel with corresponding records and paperwork.

Best regards,

Brad

From: Cooduvalli Shashikant [mailto:css13@psu.edu]
Sent: Tuesday, February 16, 2016 7:14 PM
To: Woods, Brad
Cc: Poveromo, Debra
Subject: Re: New Graduate Program Proposal/SARI requirement

[Quoted text hidden]
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of
the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate
Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate
Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review
Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding
the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of
the Graduate School.

College/School: Smeal College of Business
Department or Instructional Area: Professional Graduate Programs

New Graduate Program, Option, or Minor: [ ] Add

Designation of new graduate program: MPS in Corporate Innovation and Entrepreneurship
Classification of Instructional Programs (CIP) Code: __________________

Designation of new graduate option: __________________
Designation of new graduate minor: __________________

Indicate effective semester:
[ ] First semester following approval
[ ] Second semester following approval

Existing Graduate Program Option, or Minor: [ ] Change [ ] Drop

Current designation of graduate program: ____________________________

Current designation of graduate option: ____________________________

Current designation of graduate minor: ____________________________

New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
[ ] First semester following approval
[ ] Second semester following approval

Submitted by Graduate Program Head:

Printed name: ____________________________
Signature: ____________________________
Date: ____________________________

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Printed name: ____________________________
Signature: ____________________________
Date: ____________________________

Approved by College/School Dean/Chancellor (or Designee):

Printed name: ____________________________
Signature: ____________________________
Date: 10/31/16
<table>
<thead>
<tr>
<th>Name</th>
<th>Printed name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of John Challis</td>
<td></td>
<td>Valmoreitt</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td></td>
<td>Valmoreitt</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>Noted by Dean of the Graduate School:</td>
<td></td>
<td>Valmoreitt</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
<td></td>
<td>Valmoreitt</td>
<td>4/4/2017</td>
</tr>
</tbody>
</table>
PROPOSAL —

MASTER OF PROFESSIONAL STUDIES IN CORPORATE INNOVATION AND ENTREPRENEURSHIP

THE PENNSYLVANIA STATE UNIVERSITY — SMEAL COLLEGE OF BUSINESS

DR. SHAWN M. CLARK — CLINICAL PROFESSOR OF INNOVATION AND ENTREPRENEURSHIP
Contents

Introduction ................................................................................................................................................ 4
A. Program Justification ............................................................................................................................. 5
   Faculty Members ...................................................................................................................................... 7
   The Graduate Faculty ............................................................................................................................. 7
B. Program Objectives .............................................................................................................................. 10
   Learning Goals and Objectives ................................................................................................................ 11
   Target Market ......................................................................................................................................... 13
   Projected Size of the Program ................................................................................................................ 15
   Impact on Existing Programs .................................................................................................................. 16
C. New and Redesigned Courses .............................................................................................................. 18
   ENTR 810:  Emerging Trends, Technology, and Corporate Innovation (New) ........................................ 18
   ENTR 820:  Corporate Innovation Strategies and Entrepreneurial Methods (New) ............................... 19
   ENTR 830:  Entrepreneurial Business Planning and Strategy Execution (New) ...................................... 19
D. Program Statement .............................................................................................................................. 20
   Program Description ............................................................................................................................... 20
   Pattern of Course Scheduling for the Master of Professional Studies in Corporate Innovation and
   Entrepreneurship Program ..................................................................................................................... 21
E. Graduate Bulletin Copy ........................................................................................................................ 23
   Corporate Innovation and Entrepreneurship ......................................................................................... 23
   Degree Conferred: .................................................................................................................................. 23
   The Graduate Faculty .............................................................................................................................. 23
   Master of Professional Studies in Corporate Innovation and Entrepreneurship ................................... 26
   Admission Requirements ........................................................................................................................ 26
   Language of Instruction .......................................................................................................................... 27
   Degree Requirements ............................................................................................................................. 27
   Student Aid ............................................................................................................................................. 28
   Refer to the Student Aid section of the Graduate Bulletin. Students in this program are not eligible for
   graduate assistantships ........................................................................................................................... 28
   Courses .................................................................................................................................................... 28
F. Online Delivery .................................................................................................................................... 28
   Interaction Between Faculty and Students Beyond Direct Instruction .................................................. 28
   Interaction Among Students ................................................................................................................... 28
   Access to Information and Instructional Resources ................................................................................. 29
   Access to Suitable Academic Advising and Support Services ................................................................. 30
Introduction

The Smeal College of Business is proposing a Master of Professional Studies program in Corporate Innovation and Entrepreneurship. This program, designed to be offered entirely online and will target industry professionals intent on adding or developing a knowledge base, and skill set, focused on innovation and entrepreneurship in the business sector. The knowledge and skills associated with innovation and entrepreneurship are of tremendous value in many different contexts and industries, including the areas of product development, customer relationship management, leadership, strategic planning, project management, business model development, managing or launching new ventures, improving services and business processes, technology commercialization and technology transfer initiatives, customer development, and starting a new business. This degree will specifically target individuals in the corporate sector where innovation and continuous improvement are imperative, however, students interested in launching startup companies will also find this program beneficial. In general, those students who have a technical background, are in management roles involving innovation and product management, are engaged in research and development roles in an organization, desire to launch new venture in or outside a given organization, or have job responsibilities involving innovation and creativity, will find this degree helpful. This degree is designed to provide deep background on corporate innovation and entrepreneurship concepts and practices, while also giving students the opportunity to obtain a foundational education in business fundamentals, and explore a concentration in specific fields related to corporate innovation, such as supply chain management. The following program design leverages a partnership with the College of Engineering to foster a rich, flexible, and unique interdisciplinary learning experience that is relevant to the field and appeals to a broad audience.

This 33 credit MPS program will provide students a solid foundation in corporate innovation and entrepreneurship necessary to advance in their chosen career fields. It also offers the opportunity to obtain both general and/or specialized business training, where students may have a gap, and acquire an applied education in a broad spectrum of business and industry domains. The program is specifically designed to give students the opportunity to earn their master’s degree in discrete phases. The following design principles, keeping student interests and needs fully in mind, were followed in the design of this program:

- Offer interdisciplinary concentration areas related to the field that a student can explore while completing the MPS
- Provide students the maximum degree of flexibility to customize their MPS program.
- Seek to align the MPS program with existing and future courses, programs, and content, related to this topic.

The proposed program is well researched and has been validated with a formal market study conducted by Penn State World Campus and interviews with industry experts. The results of the market study were very favorable, and the World Campus has provided funding for the hiring of the lead faculty person responsible for building this program. This proposal defines the motivation, target audience, approach, and viability of developing a new master’s program in corporate innovation and entrepreneurship.
A. Program Justification

The domain of corporate innovation and entrepreneurship is robust and expanding. It is estimated that established companies will spend more than $330 billion this year on research and development (R&D), a key business function that most organizations depend on as a source of innovation and new ideas to maintain competitive advantage. In 2012, more than $302 billion was spent for business R&D performed in the United States (domestic R&D). Businesses that performed or funded R&D employed 18.3 million people in the U.S. during 2012, 1.5 million (8%) of which were R&D employees. The following table lists the R&D expenditures for 10 of the most innovative companies in 2014:

Table: 10 Most Innovative Companies, 2014

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Industry</th>
<th>R&amp;D Spend (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apple</td>
<td>Computing and Electronics</td>
<td>$4.5</td>
</tr>
<tr>
<td>2</td>
<td>Google</td>
<td>Software and Internet</td>
<td>$8.0</td>
</tr>
<tr>
<td>3</td>
<td>Amazon</td>
<td>Software and Internet</td>
<td>$6.6</td>
</tr>
<tr>
<td>4</td>
<td>Samsung</td>
<td>Computing and Electronics</td>
<td>$13.4</td>
</tr>
<tr>
<td>5</td>
<td>Tesla Motors</td>
<td>Automotive</td>
<td>$0.2</td>
</tr>
<tr>
<td>6</td>
<td>3M</td>
<td>Industrials</td>
<td>$1.7</td>
</tr>
<tr>
<td>7</td>
<td>General Electric</td>
<td>Industrials</td>
<td>$4.8</td>
</tr>
<tr>
<td>8</td>
<td>Microsoft</td>
<td>Software and Internet</td>
<td>$10.4</td>
</tr>
<tr>
<td>9</td>
<td>IBM</td>
<td>Computing and Electronics</td>
<td>$6.2</td>
</tr>
<tr>
<td>10</td>
<td>Procter &amp; Gamble</td>
<td>Consumer</td>
<td>$2.0</td>
</tr>
</tbody>
</table>

Source: Global Innovation 1000 Study 2014

R&D is especially important in manufacturing, as companies attempt to enhance the innovation capacity of traditional industries and grow emerging sectors to remain relevant and competitive. Forces that are already changing the face of manufacturing include computer processing power, data storage and collection, and software development. Industry sectors that are most likely to employ workers in the occupations related to innovation and entrepreneurship are also likely to have R&D, innovation, and entrepreneurial initiatives are manufacturing, particularly advanced manufacturing, and professional and technical services sectors. Overall, the manufacturing sector employs approximately one-third (956,940) of the workers in such occupations. Non-manufacturing industries employing high numbers of workers in occupations related to innovation and entrepreneurship include professional, scientific, and technical services, management of companies and enterprises, the federal government, and telecommunications.

Innovation and entrepreneurship go hand in hand. Companies in the U.S. are increasingly funding start-ups and are even creating their own internal start-up incubators—special spaces equipped with resources and staff in entrepreneurship, design, finance, and marketing. Thus, degrees awarded in entrepreneurship / entrepreneurial studies have increased over the last five years.

The development of the Corporate Innovation and Entrepreneurship online MPS program can be justified from multiple perspectives. To begin with, Penn State University has made innovation and entrepreneurship a strategic priority and, therefore, is rapidly developing the internal competencies and infrastructure to lead, teach, and research successfully in this area. The Pennsylvania State University’s strategic vision for 2016 to 2020 states:
“Penn State will be a leader in research, learning, and engagement that facilitates innovation, embraces diversity and sustainability, and inspires achievements that will affect the world in positive and enduring ways.”

The university, as a whole, seeks to foster innovation and entrepreneurship by driving job creation, economic development, and providing a broad portfolio of programs and educational offerings related to entrepreneurship. The Smeal College of Business, for instance, is home to the Farrell Center for Corporate Innovation and Entrepreneurship, a research center formed in 1992 through an endowment from Michael J. Farrell. The center’s mission is to contribute to and interpret the best in academic research in the fields of entrepreneurship and innovation, and to translate this into actionable best practices and educational solutions. Undergraduate students at the Smeal College of Business can major in Corporate Innovation and Entrepreneurship. Penn State also offers a successful intercollege minor in entrepreneurship. In sum, the university, its colleges, departments, research centers, programs, and faculty, have the motivation, resources, competencies, experience, and strategic vision to serve as a foundation for delivering high quality education related to innovation and entrepreneurship.

Market research also supports the development and implementation of this program. The Smeal College of Business and the Penn State World Campus conducted an in-depth marketing scan during the summer of 2015 to assist in evaluating the future potential of this program. Through this research it was determined that the content of the MPS should focus on innovation and entrepreneurship in the context of a larger organization. Key findings of the market scan are as follows:

- Most undergraduate degrees do not provide sufficient depth in the areas of innovation and entrepreneurship, creating a skill gap that the proposed program is designed to help fill.
- While there is demand for innovation and entrepreneurship programs in general, the discipline is relatively new, but expected to grow.
- Conferrals in these program areas are growing, but are still few in number at the graduate level.
- Penn State can leverage its reputation as a major research university to help promote the program. Several competitor institutions are not Research One schools, and lack the brand recognition that a Penn State caliber education brings.

Similar programs are currently offered at other institutions, but with less flexibility than the MPS program proposed here. Twenty three competitive online master’s programs were found in the market (not including MBA programs). Most programs are entrepreneurship specific. Only seven brand their programs under the banner of innovation, or both innovation and entrepreneurship. Anecdotal evidence suggests most of these programs are successful and that the trend points to these offerings growing in popularity. Five institutions offering similar online master’s programs, specializing in both innovation and entrepreneurship, were identified. They include Indiana University, Temple University, and Cogswell Polytechnical College. The closest competitor to Penn State on the list in terms of brand recognition, size, reputation, and geography, would be Indiana University. Evidence suggests a broad niche for additional innovation and entrepreneurship online programs sponsored and delivered by a top twenty public university. Students in the Penn State MPS program will gain a firm understanding of innovation, entrepreneurship, business, and at least one concentration area. This program will be taught by the same world-class professors that teach our resident masters and Ph.D. programs. The program itself will also be supported by Penn State World Campus, a leader in online education.
Penn State Master of Professional Studies in Corporate Innovation and Entrepreneurship students will come from diverse disciplines and will likely have at least five years of corporate experience. Many of these students are expected to come from STEM-related disciplines, such as engineering, where further business and innovation education is needed to foster career success and leadership in the areas of business that require innovation. Individuals directly involved in research and development are representative of this population. Other students seeking this program will enter from marketing and sales where relationships with customers and are essential. Those individuals aspiring to roles involving product management will also be good candidates, as will engineers moving into a business or leadership role. Business leaders will likely seek out this program to enhance their ability to lead organizations in the development of new strategies and business models. All such individuals will have a desire to advance into management and leadership roles involving innovation and new venture creation or to assume positions that have responsibility for such key activities.

Faculty Members

**CVs are available for all faculty**

**Program Directors** Shawn M. Clark, Ph.D. Clinical Professor of Innovation and Entrepreneurship, Director, Farrell Center for Corporate Innovation and Entrepreneurship, Smeal College of Business.

Vilmos Misangyi, Ph.D., Chair, Department of Management and Organization, Professor of Strategic Management, BNY Mellon Fellow, Smeal College of Business.

The Graduate Faculty

- **Russell R. Barton**, Ph.D. (CORNELL UNIVERSITY), Professor of Supply Chain and Information Systems, and Industrial Engineering; Co-Director, MMM Degree Program; Associate Director, CMTOC
- **Johann Baumgartner**, Ph.D. (STANFORD UNIVERSITY), Professor of Marketing
- **Lisa Bolton**, Ph.D. (UNIVERSITY OF FLORIDA), Professor of
- **Forrest S. Briscoe**, Ph.D. (MASSACHUSETTS INSTITUTE OF TECHNOLOGY), Associate Professor of Labor Studies and Industrial Relations, and Sociology
- **Jonathon Bundy**, Ph.D. (UNIVERSITY OF GEORGIA), Assistant Professor of Management and Organization
- **Daniel R. Cahoy**, J.D. (FRANKLIN UNIVERSITY), Associate Professor of Business Law
- **Brian H Cameron**, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Associate Dean for Professional Masters, Clinical Professor of Management Information Systems, Smeal College of Business; Affiliate Faculty of Information Sciences and Technology
- **Quanwei (Charles) Cao**, Ph.D. (UNIVERSITY OF CHICAGO), Smeal Chair Professor in Finance
- **Jennifer Coupland Chang**, Ph.D. (NORTHWESTERN UNIVERSITY), Clinical Professor in Marketing
- **Francis (Frank) L. Chelko**, M.M. (PENNSYLVANIA STATE UNIVERSITY), Instructor of Operations and Supply Chain Management
- **Dane M. Christensen**, Ph.D. (UNIVERSITY OF ARIZONA), Assistant Professor of Accounting
- **Scott Collins**, Ph.D. (CLAREMONT GRADUATE SCHOOL AND UNIVERSITY), Clinical Assistant Professor of Accounting
- **Keith J. Crocker**, Ph.D. (CARNEGIE-MELLON UNIVERSITY), The William Elliott Professor of Insurance and Risk Management
- **Robert P. Crum**, D.B.A. (UNIVERSITY OF KENTUCKY), Associate Professor of Accounting
- **Wayne S. DeSarbo**, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Smeal Distinguished Chaired Professor of Marketing
• Min Ding, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Smeal Professor of Marketing & Innovation
• Kai Du, Ph.D. (YALE UNIVERSITY), Assistant Professor of Accounting
• D. Lance Ferris, Ph.D. (UNIVERSITY OF WATERLOO), Associate Professor of Management and Organization
• Duncan K. Fong H., Ph.D. (PURDUE UNIVERSITY WEST LAFAYETTE), Calvin E. and Pamala T. Zimmerman Endowed Fellow & Professor of Marketing
• Raghu Garud, Ph.D. (UNIVERSITY OF MINNESOTA MINNEAPOLIS), Alvin H. Clemens Professor of Entrepreneurial Studies
• Fariborz Ghadar, D.B.A. (HARVARD UNIVERSITY), Director, Center for Global Business Studies; William A. Schreyer Professor of Global Management, Policies, and Planning
• Dennis A. Gioia, Ph.D. (FLORIDA STATE UNIVERSITY), Chair, Department of Management and Organization; Robert & Judith Auritt Klein Professor of Management
• Dan Givoly, Ph.D. (NEW YORK UNIVERSITY), Ernst & Young Professor of Accounting
• Guojin Gong, Ph.D. (UNIVERSITY OF IOWA), Assistant Professor of Accounting
• Jeremiah Green, Ph.D. (UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL), Assistant Professor of Accounting
• V. Daniel Guide Jr., Ph.D. (UNIVERSITY OF GEORGIA), Professor of Operations and Supply Chain Management; Charles & Lillien Binder Faculty Fellow
• Matthew Gustafson, Ph.D. (UNIVERSITY OF ROCHESTER), Assistant Professor of Finance
• Donald C. Hambrick, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Smeal Chaired Professor of Management
• Terry Paul Harrison, Ph.D. (UNIVERSITY OF TENNESSEE AT KNOXVILLE), Professor of Supply Chain and Information Systems; Earl P. Strong Executive Education Professor in Business
• David Haushalter, Ph.D. (PURDUE UNIVERSITY WEST LAFAYETTE), Associate Professor of Finance; Academic Director Smeal Trading Room
• John Howell, Ph.D. (OHIO STATE UNIVERSITY), Assistant Professor of Marketing
• Jingzhi (Jay) Huang, Ph.D. (NORTHWESTERN UNIVERSITY), Professor of Finance; David H. McKinley Professor of Business
• Zan Huang, Ph.D. (UNIVERSITY OF ARIZONA), Assistant Professor of Supply Chain and Information Systems
• Steven J. Huddart, Ph.D. (YALE UNIVERSITY), Smeal Chair Professor of Accounting
• David J. Huff, Ph.D., Clinical Assistant Professor of Supply Chain Managements
• Stephen E. Humphrey, Ph.D. (MICHIGAN STATE UNIVERSITY), Professor of Management
• Peter Iliev, Ph.D. (BROWN UNIVERSITY), Assistant Professor of Finance
• Austin J. Jaffe, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Chair, Department of Insurance and Real Estate; Philip H. Sieg Professor of Business Administration; Director, International Programs; Associate Director, Institute for Real Estate Studies
• Edward Jenkins, M.S. (VILLANOVA UNIVERSITY), Instructor in Accounting
• Pranav Jindal, Ph.D., Assistant Professor of Marketing
• Aparna Joshi, Ph.D. (RUTGERS, STATE UNIVERSITY OF NEW JERSEY), Professor of Management and Organization
• Eelco Kappe, Ph.D. (ERASMUS UNIVERSITEIT ROTTERDAM), Assistant Professor of Marketing
• J. Edward Ketz, Ph.D. (VIRGINIA POLYTECHNIC INSTITUTE AND STATE), Associate Professor of Accounting
• Eunice Kim, Ph.D. (YALE UNIVERSITY), Assistant Professor of Marketing
• Jason Kotter, Ph.D. (UNIVERSITY OF MICHIGAN AT ANN ARBOR), Assistant Professor of Finance
• William A. Kracaw, Ph.D. (UNIVERSITY OF UTAH), Chair, Department of Finance; Sykes Professor of Finance
• Glen E. Kreiner, Ph.D. (ARIZONA STATE UNIVERSITY), Associate Professor of Management
• Akhil Kumar, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Professor of Information Systems
• Anthony M. Kwasnica, Ph.D. (CALIFORNIA INSTITUTE OF TECHNOLOGY), Associate Professor of Business Economics; Laboratory for Economic Management and Auctions
• Rick Laux, Ph.D. (ARIZONA STATE UNIVERSITY), Assistant Professor of Accounting
• Anh Le, Ph.D. (NEW YORK UNIVERSITY), Assistant Professor of Finance
• Stephen Lenkey, Ph.D. (CARNEGIE-MELLON UNIVERSITY), Assistant Professor of Finance
• Flynt Leverett, Ph.D. (PRINCETON UNIVERSITY), Professor of International Affairs
• John Liechty, Ph.D. (CAMBRIDGE UNIVERSITY), Professor of Marketing and Statistics
• Gary L. Lilien, D.E.S. (COLUMBIA UNIVERSITY), Distinguished Research Professor of Management Science; Research Director, Institute for the Study of Business Markets
• Dennis K. Lin J., Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), University Distinguished Professor of Statistics and Supply Chain Management
• Henock Louis, Ph.D. (OHIO STATE UNIVERSITY), Associate Professor of Accounting
• Razvan Lungeanu, Ph.D. (NORTHWESTERN UNIVERSITY), Assistant Professor in Management and Organization
• Vidya Mani, Ph.D. (UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL), Assistant Professor of Supply Chain Management
• Meg Meloy, Ph.D. (CORNELL UNIVERSITY), Professor of Marketing
• James A. Miles, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Professor of Finance; Joseph F. Bradley Fellow of Finance
• Vilmos F. Misangyi, Ph.D. (UNIVERSITY OF FLORIDA), Professor of Management, Chair of the Management and Organization Department
• Karl A. Muller, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Associate Professor of Accounting and Robert and Sandra Poole Faculty Fellow in Accounting
• Chris J. Muscarella, Ph.D. (PURDUE UNIVERSITY WEST LAFAYETTE), Professor of Finance; L.W. "Roy" and Mary Lois Clark Teaching Fellow
• Suresh Muthulingam, Ph.D. (UNIVERSITY OF CALIFORNIA LOS ANGELES), Assistant Professor of Supply Chain Management
• Giang Nguyen, Ph.D. (UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL), Assistant Professor of Finance
• Robert A. Novack, Ph.D. (UNIVERSITY OF TENNESSEE AT KNOXVILLE), Associate Professor of Supply Chain Management and Information Systems
• Ralph A. Oliva, Ph.D. (RENSSELAER POLYTECHNIC INSTITUTE), Professor of Marketing; Executive Director, Institute for the Study of Business Markets
• Christopher D. Parker, Ph.D. (LONDON BUSINESS SCHOOL), Assistant Professor of Supply Chain Management
• Srikanth Paruchuri, Ph.D. (COLUMBIA UNIVERSITY), Associate Professor of Management and Organization
• J. Andrew Petersen, Ph.D. (UNIVERSITY OF CONNECTICUT), Associate Professor of Marketing
• Nicholas C. Petruzzi, Ph.D. (PURDUE UNIVERSITY FORT WAYNE), Professor of Supply Chain Management
• Timothy Pollock, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Farrell Professor of Entrepreneurship
• Lisa L. Posey, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Associate Professor of Business Administration
• Hong Qu, Ph.D. (CARNEGIE-MELLON UNIVERSITY), Assistant Professor of Accounting
• Arvind Rangaswamy, Ph.D. (NORTHWESTERN UNIVERSITY), Jonas H. Anschel Professor of Marketing
• Sajay Samuel, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Clinical Professor of Accounting
• Jeffery M. Sharp, J.D. (UNIVERSITY OF OKLAHOMA), Associate Professor of Business Law
• Dennis P. Sheehan, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), The Virginia and Louis Benzik Professor of Finance; Associate Dean of M.B.A. Programs
B. Program Objectives

The Master of Professional Studies in Corporate Innovation and Entrepreneurship program will prepare graduates to stand out in the workplace and/or in a competitive job market by studying at a highly-reputed university with some of the world’s leading academic thinkers and industry experts. This program will provide students with the business, leadership, innovation, and entrepreneurial skills needed for effective leadership, product and service development, and managing high-performance organizations and teams. Students will develop the skills needed to succeed in today’s dynamic work environments, gain a firm understanding of how to manage corporate innovation, and be prepared to become successful leaders of innovation. The program will be primarily taught by the same world-class professors who teach business, corporate innovation, and entrepreneurship-related courses within the Smeal College of Business. Additionally, a handful of corporate innovation and entrepreneurship courses focused on product innovation will be taught by experienced, exceptionally trained professors in the College of Engineering. A solid foundation in the fundamentals of creative thinking, innovation, business planning, business model development, strategy, decision making, product development, intellectual property management, marketing, operations, and finance will make the target audience more successful in their careers, enable graduates to advance more rapidly into management and leadership positions, and contribute to their ability to invent the future through new products, services, and business models.
Key features of the Master of Professional Studies in Corporate Innovation and Entrepreneurship include:

- **The potential for students to explore multiple concentration areas in route to completing a master’s degree**: The MPS course list is organized in a way that allows students to explore concentration areas that are relevant to the field.
- **The ability to explore business fundamentals, corporate innovation and entrepreneurship concepts and skills, and a wide selection of knowledge concentrations to create a flexible program**: The program is highly customizable to suit the interests and needs of individual students. The program facilitates the application of the concepts and principles of innovation and entrepreneurship to other disciplines.
- **Learn from peers in diverse disciplines online**: Online programs become hotbed of social network activity as students with diverse business backgrounds, yet sharing common interests, gather to learn, work as teams, and share insights.
- **Understand how to launch a new venture in a company or as a startup**: New venture creation, whether in or outside a company, share a common set of issues, patterns, and best practices. The program explores how to effectively launch and manage new ventures in a variety of contexts.
- **Learn the “language of corporate innovation and entrepreneurship”**: Students will develop a solid background to open up advancement opportunities within their field of interest. The Master of Professional Studies in Corporate Innovation and Entrepreneurship opens career opportunities in business which would be unavailable without a graduate degree.
- **Experiential learning**: The program delivers core business knowledge through high-impact experiential learning, small-group interaction in class, and team-based projects focused on real-world application.
- **World class online learning environment**: Students engage in challenging course work that will prepare them to successfully deal with on-the-job demands in a wide range of organization environments.
- **Creativity and innovation**: Students gain expertise in the techniques and strategies for creating and innovating with a wide variety of organization domains. Students will develop the skill of creativity and leading innovative teams.
- **Team-based learning**: Companies use high-functioning, innovative teams to solve today’s complex business problems. To prepare for this environment, students will participate in small teams in many of their online classes, and learn how to grow and excel together.
- **World-class faculty**: Students in the program will take classes from Smeal’s world-class faculty, especially those involved in research centers whose mission it is to research and understand the best practices of the fields of innovation and entrepreneurship (e.g., Farrell Center for Corporate Innovation and Entrepreneurship). Our professors are respected experts in their fields, renowned for their cutting-edge research and passion for teaching.

**Learning Goals and Objectives**

The Master of Professional Studies in Corporate Innovation and Entrepreneurship Learning Goals and Objectives:
1. Creativity and New Thinking
Master of Corporate Innovation and Entrepreneurship graduates will master a broad core of foundational knowledge related to corporate innovation and creativity, and be able to integrate and apply this knowledge to new ventures, but in startups and mature organizations.
Learning Objectives:
   o Graduates will be able to demonstrate competency in the underlying concepts, theory, and tools related to innovation and creativity.
   o Graduates will demonstrate the techniques involved in thinking creatively, innovatively, and strategically.
   o Graduates will demonstrate understanding of the benefits and purpose of invention and innovation in multiple business domains.
   o Graduates will demonstrate the analytical and critical thinking skills needed to identify, analyze, generate, and evaluate alternative solutions to business problems.
   o Graduates will be able to articulate and defend their ideas, concepts, and analyses, and recommended solutions to a variety of business audiences.

2. Corporate Innovation Domains
Master of Corporate Innovation and Entrepreneurship graduates will master a broad core of foundational knowledge related to innovation, and be able to integrate and apply this knowledge to a wide variety of business domains.
Learning Objectives:
   o Graduates will be able to demonstrate competency in understanding how to perform product, service, technology, process, policy, and strategy innovation.
   o Graduates will be able to demonstrate competency in analyzing, developing, and implementing new business models.

3. New Venture Creation
Master of Corporate Innovation and Entrepreneurship graduates will master a broad core of knowledge related to new venture creation, and be able to integrate and apply this knowledge in different organizational contexts.
Learning Objectives:
   o Graduates will be able to demonstrate competency in the methods, practices, and activities associated with launching a new venture or startup and turning it into a viable business initiative.
   o Graduates will be able to demonstrate understanding of and manage the issues, barriers, and enablers associated with launching a successful new venture.
   o Graduates will be able to demonstrate understanding of the best approaches new venture business planning and strategy implementation.
   o Graduates will be able to demonstrate understanding of the implications and best practices associate with protecting and managing intellectual property

4. Corporate Innovation, Entrepreneurship, and Organization
Master of Corporate Innovation and Entrepreneurship graduates will master a broad core of foundational knowledge related to leading and managing organizations in a manner that encourages innovation.
Learning Objectives:
   o Graduates will be able to demonstrate competency in how to make an organization more innovative leveraging business strategy and corporate culture.
   o Graduates will be able to demonstrate competency in applying the principles of innovation to human resource policy, reward systems, business processes, marketing, and strategic decision making.
Graduates will be able to demonstrate competency in understanding how to establish, develop, and manage innovative teams.

5. **Core Business Knowledge**
   Master of Corporate Innovation and Entrepreneurship graduates will master a broad core of foundational business knowledge and be able to integrate and apply this knowledge to business situations requiring innovation, and interdisciplinary perspectives.
   
   **Learning Objectives:**
   - Graduates will be able to demonstrate competency in the underlying concepts, theory, and tools of general business.
   - Graduates will be able to use their knowledge of different business disciplines to identify, analyze, and recommend solutions to complex business problems, blending functional expertise and multi-disciplinary perspectives.

6. **Leadership and Communication Skills**
   Graduates will demonstrate the interpersonal skills needed to be effective managers and leaders of innovation.
   
   **Learning Objectives:**
   - Graduates will increase their skills in leadership, team building, interpersonal influence, and the management of innovation and change.
   - Graduates will be able to communicate and work effectively with others in an increasingly diverse workplace. These learning outcomes will be achieved by a combination of lectures by faculty, invited guest speakers, reading of key literature, case method, individual and team projects, and practical involvement in a leadership immersion capstone experience.

**Target Market**

The Penn State Smeal Master of Professional Studies in Corporate Innovation and Entrepreneurship will target students from diverse disciplines and backgrounds. Conferrals of bachelor’s degrees in entrepreneurial and innovation studies in 2013 was 2,764, while master’s level programs tended to be low, with a total of 956, suggesting a viable target market for related master’s programs.

The proposed MPS program in Corporate Innovation and Entrepreneurship targets companies seeking to enhance, and obtain the most out of, their research and development efforts, as well as those organizations fostering entrepreneurship and innovation among their employees, and those seeking to educate potential leaders in corporate innovation. This program is specifically designed to educate and prepare those individuals seeking to lead and/or support innovation at the upper management levels of an organization, particularly those positions requiring advanced business and innovation leadership skills. Increased competition, globalization, tighter budgets, and the rapid emergence of new technologies, has elevated the importance of innovation as a legitimate and vital business role. This trend is placing a growing emphasis on those leadership roles responsible for ensuring and encouraging innovation to deliver results. The role of Chief Innovation Officer (CINO), a person integral to leading innovation and bridging the gap between the other C-level executives, is an example of a top management job title gaining in popularity. The CINO is becoming a distinct role in many major businesses, a position that is now seen as key to an organizations future success. IBM appointed its first Federal Chief Innovation Officer in May of 2013. CINOs are now found in companies all over the world. The rise of the CINO is backed up by survey evidence. A 2012 Cap Gemini study found that 43% of large companies have a formally accountable innovation executive in place (up from 33% in 2011) (Wade,
Another survey administered by Accenture in 2012 found that 60% of respondents employed a CINO (or similar position), up 6% from 2009 (Hill, 2013). In sum, the CINO role is increasing in popularity and scope, with more industries and companies taking on this new role the potential it brings. The proposed MPS will prepare leaders and future leaders to fulfill CINO and similar roles responsible for managing the transformational and strategic innovation that span the enterprise. Such organizational roles typically require an in-depth understanding of business, corporate innovation, and entrepreneurship (or intrapreneurship), and, in many cases, at least a basic level understanding of science, technology, and engineering.

The program will not only support and help educate future CINOs, directors, and managers of innovation, it will also benefit those individuals and teams associated with this critical leadership role, and those involved in innovation in general. Many firms have dispersed innovation responsibility to multiple executives and managers. All such individuals aspiring to leadership roles involving innovation and entrepreneurship, in a corporate context, will become a target market for the MPS program.

Another viable market segment for this program will be employees and leaders in the technology sector who aspire to manage innovation teams, business units, and/or business processes, or wish to enhance their ability to do so. The pace of business in technology firms, the speed of technology and industry change, and the intense nature of competition within this sector, are driving a greater need for invention, reengineering, and new product improvement. Many CIOs, CTOs, and other technology management roles are moving beyond basic service delivery and are now required to assist with business and technology innovation. These individuals would also be prime candidates for the new MPS degree.

Penn State graduates large numbers of students in the fields of engineering and science who, after having obtained several years of work experience, may benefit from the proposed program to enhance their business competencies and prepare to lead innovation-related initiatives of strategic importance. The generation and implementation of new ideas is critical to business success as companies must respond to trends and competition. Innovation is not only about designing new products and services, it also focuses on enhancing existing business processes and practice to improve efficiency, find new customers, and cut waste. As such, innovation becomes relevant to many fields of endeavor involving engineering, science, technology, and beyond.

Lastly, this program offers employees with business experience the opportunity to learn about and manage innovation more effectively, enhance business competencies, learn new business skills, and, most importantly, become educated about the role of technology and engineering in the domain of corporate innovation and entrepreneurship. This MPS program integrates multiple business and engineering disciplines to provide a curriculum that is well suited to prepare the next generation of innovation leaders.

In summary, the proposed MPS program’s structure provides target individuals with two concentration options dependent upon their career goals. The following list includes examples of roles that can benefit from this program design. Those that aspire to a more business-facing role would pursue the business administration concentration and those that aspire to a more technical leadership role would pursue the engineering leadership concentration or similar tracks representing a more technical focus (e.g., supply chain management).
Projected Size of the Program

Initially, the size of the first class will be limited to approximately 30 students to ensure that teaching, advising, and supervising are appropriately matched with faculty resources. In subsequent years, multiple sections of 30 or more students are expected. Classes taught in the Master of Professional Studies in Corporate Innovation and Entrepreneurship program can be considered part of the faculty member’s teaching load or as an overload with extra compensation (on a voluntary basis) and will not impact the college’s ability to staff other curricular programs in the college. The program may be
expanded to offer additional cohorts depending on market needs and availability of faculty resources. It is highly likely that Penn State could contract with major companies to enroll student cohorts by division, industry, geography, or product area.

Impact on Existing Programs

The MPS in Corporate Innovation and Entrepreneurship will leverage online courses and online versions of existing relevant resident courses, programs, and graduate certificates developed at Penn State’s Smeal College of Business. The proposed MPS also uses courses from a new online graduate certificate program in Engineering Leadership and Innovation Management as electives (forming an Engineering Innovation Foundations concentration within the program).

Two existing 500-level MBA courses, MBADM 531 – Corporate Innovation and Entrepreneurship, and ENTR 502 – Business Modeling and New Venture Creation, will be utilized in the MPS curriculum core (to be moved into an online format), thus, meeting the policy requirement that all Penn State master’s programs include at least two 500-level courses. Three new courses will be created to support the new MPS program including Corporate Innovation Strategies and Entrepreneurial Methods; ENTR 810 - Emerging Trends, Technology and Innovation; and ENTR 830 - Entrepreneurial Business Planning and Strategy Execution. Taken together, these five courses, along with several electives, will form an effective Corporate Innovation and Entrepreneurship MPS program.

The proposed MPS will also require students to select 9 credits of business related elective courses, and other relevant courses soon to be offered by Penn State’s College of Engineering. Students will be required to select three courses from the two concentration areas grounded in business and engineering. Or students may elect to pursue a single concentration by following a course sequence that focuses on either business or engineering). The list of elective courses may change over time based on feedback from students and industry. This aspect of the design will allow for continual improvement of the MPS program as the field of innovation and entrepreneurship evolves:

<table>
<thead>
<tr>
<th>Business Administration concentration electives (approved by the Online MBA Executive Committee). Additional courses may be added based on student demand: Select 9 credits from the following</th>
<th>Engineering Innovation Foundations concentration electives (these courses have been approved by the Graduate Council for online delivery):</th>
</tr>
</thead>
</table>
| • MBADM 816: Managing and leading people in organizations (3 credits)  
• MBADM 571: Global strategic management (3 credits)  
• MBADM 820: Financial management (3 credits)  
• MBADM 811: Financial accounting (3 credits) | • ENGR 501: Engineering leadership for corporate innovation (3 credits)  
• ENGR 802: Engineering across cultures and nations (3 credits)  
• ENGR 804: Engineering product innovation (3 credits) |

• Additionally, MPS students will be required to select a 9 credit concentration area, based on their interests and career goals. These concentration areas will enable students to drill down into a variety of specialty areas related to the corporate innovation and entrepreneurship field.
to consider how the principles they learned may be applied. A sample list of concentration areas is provided below (additional concentration areas may be added based on student demand):

- **Supply Chain Management Concentration (9 credits)**
  - SCM 800 - Supply chain management (4 credits, required)
  - Pick at least 5 credits from the following list:
    - SCM 801 - Supply Chain Performance Metrics and Financial Analysis (1 credit)
    - SCM 812 - Demand Fulfillment (2 credits)
    - SCM 822 - Supply Management (2 credits)
    - SCM 842 - Manufacturing and Service Operations Planning (2 credits)

- **Accounting Concentration (9 credits)**
  - MBA DM 811 - Financial Accounting (3 credits)
  - ACCTG 812 - Taxation (3 credits)
  - ACCTG 813 - Auditing (3 credits)

- **Business Analytics Concentration (9 credits)**
  - BAN 530 - Business Strategies of Data Analytics (3 credits)
  - BAN 540 - Marketing Analytics (3 credits)
  - BAN 550 - Prescriptive Analytics for Business (3 credits)

- **Engineering Innovation Foundations (9 credits - if not previously taken as elective courses earlier in the program.)**
  - ENGR 501 - Engineering leadership for corporate innovation (3 credits)
  - ENGR 802 - Engineering across cultures and nations (3 credits)
  - ENGR 804 - Engineering product innovation (3 credits)

The list of concentration areas may be adjusted over time based on customer demand, feedback from future MPS students, and industry partners. The program linkages and alignments outlined above provide students with considerable freedom to tailor their education to accommodate career goals, needs, and interests.

The Smeal College of Business currently offers and collaborates on multiple online programs somewhat related to the proposed MPS in Corporate Innovation and Entrepreneurship. Online master’s programs offered through Penn State World Campus include Business Administration and Supply Chain Management. No significant impact on these or any other existing online program at Penn State is anticipated. This is confirmed in the market analysis performed by the World Campus.

**Ability to Offer a Quality Master of Corporate Innovation and Entrepreneurship Program**

The Smeal College of Business is home to the Farrell Center for Corporate Innovation and Entrepreneurship. The faculty associated with this center are experts in the field, especially in terms of teaching, research, consulting, and community service. These faculty members, and others, also lead, teach, and administer the highly successful Corporate Innovation and Entrepreneurship undergraduate major. The Smeal College of Business faculty are also deeply embedded in the entrepreneurial activities of the university, including joint research projects, and by serving in key roles related to the cross-college Entrepreneurship Minor, Happy Valley LaunchBox, Lion Launchpad, and other such entrepreneurial bodies.

The Smeal College of Business currently offers highly-ranked resident and executive M.B.A. programs, as well as a leading Master of Professional Studies in Supply Chain Management and Master of Accounting
programs. The College has 68 tenured, 29 tenure-track, and 37 fixed-term faculty with Ph.D. degrees. The Smeal faculty are respected experts in their fields, renowned for their cutting-edge research and passion for teaching.

The College has thoroughly considered workload issues within the context of existing programs and is confident that there will be no impact on existing programs. The Master of Professional Studies in Corporate Innovation and Entrepreneurship will create synergies with the existing online programs, both in and outside Smeal. There will be no need for additional faculty resources for the Master of Professional Studies in Corporate Innovation and Entrepreneurship program. The program will require a minimal number of new courses, as many of the needed core graduate business courses already exist.

C. New and Redesigned Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>New – ENTR 810: Emerging Trends, Technology, and Corporate Innovation</td>
<td>3</td>
<td>Required course</td>
</tr>
<tr>
<td>New – ENTR 820: Corporate Innovation Strategies and Entrepreneurial Methods</td>
<td>3</td>
<td>Required course</td>
</tr>
<tr>
<td>New – ENTR 830: Entrepreneurial Business Planning and Strategy Execution</td>
<td>3</td>
<td>Required course</td>
</tr>
<tr>
<td>Redesigned – ENTR 502: Business Modeling and New Venture Creation</td>
<td>2-3</td>
<td>Required Course</td>
</tr>
</tbody>
</table>

The course descriptions of these new and redesigned courses are provided below.

**ENTR 810: Emerging Trends, Technology, and Corporate Innovation (New)**
This course explores emerging trends, and disruptors, in technology and industry, that create new markets and influence decision making, product development, business models, and business practices associated with innovation. This course covers the major areas of concern that affect disruptive innovation. Specific examples of disruptive innovation will be analyzed. Students will gain insight into how breakthroughs in technology, science, and business modeling, play out in establishing new products and markets. Students will be exposed to the best practices of key industries (e.g., healthcare, manufacturing, banking, retail, etc.) and organization functions (e.g., marketing, finance, research and development, sales, etc.) as they relate to fostering and supporting innovation and entrepreneurship. Students will learn the importance of taking an interdisciplinary approach to thinking about and planning innovation projects and programs.
ENTR 820: Corporate Innovation Strategies and Entrepreneurial Methods (New)
This course is designed to survey and explore the methods used to foster innovation and entrepreneurship in a corporate setting. Emphasis will be placed on the methods used in organizations to foster creativity, innovation, and new venture creation. This course covers both tactical and strategic approaches to innovation and entrepreneurship, and examines these in multiple contexts, including technology, business process, product, and strategy. Furthermore, the course will expand on widely accepted frameworks and perspectives for managing innovation, such as agile product development, and the lean startup approach. Students will also delve into the more abstract notion of how to create and enable an organizational culture of innovation, manage conflict, and negotiate agreements effectively. Lastly, a final objective of the class is to ensure students understand how to protect and manage intellectual property.

ENTR 830: Entrepreneurial Business Planning and Strategy Execution (New)
This course is designed to allow students to integrate, synthesize, and apply what they have learned in prior courses, and gain further insight into two major drivers of business success, innovation and entrepreneurship. As such, this course will serve as a capstone course for the new Corporate Innovation and Entrepreneurship online MPS program. The strategic implications of innovation are examined, including an emphasis on how to be critically aware of factors which may inhibit or facilitate innovation in an organization or team. Students will gain insight into how to write a business case to clearly and effectively outline the pros and cons of taking a specific course of action. Business case development will also rely on how to perform cost-benefit analysis. The course will also teach students the key issues, elements, and approaches associated with translating a sound business model into a compelling business plan (preferably for a new venture). The key elements of a formal business plan will be explored in-depth, including how to write an executive summary, product description, market assessment, team formation plan, pricing models, sales forecasting, financial planning, and implementation planning. The course will emphasize the context and issues associated with developing a formal business plan, developing and understanding business models, and using the planning process to formulate and execute implementation strategies. Various implementation approaches will be compared and contrasted. The course will also enable students to construct business models and plans that present key points in a direct, clear, and appealing way.

ENTR 502: Business Modeling and New Venture Creation Redesigned)
This course focuses on the process of launching a new venture, in a corporate setting or as a new startup, including identifying a problem or market opportunity, developing business models, forming a team, financing, analyzing markets, assessing the competitive environment, and planning to acquire leadership talent. A business model canvas framework is used as the primary tool for describing, analyzing, and designing business models. In essence, this course identifies and defines the key components necessary to develop a formal business plan. Concepts and techniques are introduced for exploring new venture creation business strategies, including different approaches for business model development. Students will gain insight into how to translate new ideas into viable projects and business ventures. Students will learn the importance of understanding markets and customers segments, the competitive landscape, as well as how to obtain funding for new ventures. Lastly, the issue of how to acquire leadership and human resource talent to make a new venture viable over time is investigated.
D. Program Statement

Program Statement (to be included in the graduate student handbook):

Program Description

The Master of Professional Studies in Corporate Innovation and Entrepreneurship program requires a minimum of 33 credits. At least 18 credits must be courses at the 500 or 800 level (with at least 6 credits of 500-level). The courses will be delivered in an online format through World Campus.

The program design is organized into four key components.

1. The first component of the program consists of a 12 credit Corporate Innovation and Entrepreneurship core.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBADM 531 - Corporate Innovation and Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 810 - Emerging Trends, Technology, and Innovation</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 502 - Business Modeling and New Venture Creation</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 820 - Corporate Innovation Strategies and Entrepreneurial Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

2. The second component of the program allows students to select 9 credits of Business and Engineering electives. Students may select these from one or both lists.

<table>
<thead>
<tr>
<th>Business electives</th>
<th>Engineering electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBADM 816 - Managing and leading people in organizations (3 credits)</td>
<td>ENGR 501 - Engineering leadership for corporate innovation (3 credits)</td>
</tr>
<tr>
<td>MBADM 571 - Global strategic management (3 credits)</td>
<td>ENGR 802 - Engineering across cultures and nations (3 credits)</td>
</tr>
<tr>
<td>MBADM 820 - Financial management (3 credits) Prerequisite: MBADM 811</td>
<td>ENGR 804 - Engineering product innovation (3 credits)</td>
</tr>
<tr>
<td>MBADM 811 - Financial accounting (3 credits)</td>
<td></td>
</tr>
</tbody>
</table>

3. The third component of the program invites students to select one concentration track consisting of 9 credits from a set of domains related to business and innovation. Corporate innovation and entrepreneurship is of concern in multiple contexts and fields. This portfolio of concentration tracks is provided to diversify students business and engineering knowledge and
skills, permit students to explore specific areas of concern related to innovation and business, and tie what they have learned directly to key functional areas.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Chain</td>
<td>9</td>
</tr>
<tr>
<td>Accounting</td>
<td>9</td>
</tr>
<tr>
<td>Business Analytics</td>
<td>9</td>
</tr>
<tr>
<td>Marketing Analytics</td>
<td>9</td>
</tr>
<tr>
<td>Engineering Innovation Foundations</td>
<td>9</td>
</tr>
</tbody>
</table>

4. The final component of the MPS program is a 3 credit capstone course designed to help students integrate, synthesize, and apply their past learning. This course will explore the integration and alignment of innovation and organization. It will also require a capstone project entailing the application of concepts and principles, learned in the program, to a real world setting. The core courses mentioned in Component one must be completed before the capstone course may be taken.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 830 - Entrepreneurial Business Planning and Strategy Execution (Capstone)</td>
<td>3</td>
<td>Required course</td>
</tr>
</tbody>
</table>

Pattern of Course Scheduling for the Master of Professional Studies in Corporate Innovation and Entrepreneurship Program

The following is a sample schedule of classes required for completion of the MPS degree. The degree will require at least five semesters of study with a recommended starting point in the Fall semester. Each semester will consist of at least two courses.

**Fall Semester**

2 courses / 6 credits: Complete required courses MBADM 531 and ENTR 810.

**Spring Semester**

3 courses / 9 credits: Complete the new ENTR 820 course and two courses from the list of electives offered in business and engineering.

**Summer Semester**

1 course / 3 credits: Complete the ENTR 502 course.

**Fall Semester**
3 courses / 9 credits: Complete three courses from electives and concentration lists mentioned above.

**Spring Semester**

2 courses / 6 credits: Complete one course chosen from electives and concentration track lists. Complete the ENTR 830 Entrepreneurial Business Planning and Strategy Execution capstone course.
E. Graduate Bulletin Copy

Corporate Innovation and Entrepreneurship

Dr. Shawn Clark, Clinical Professor for Innovation and Entrepreneurship
The Smeal College of Business
451C Business Building
814-865-4449

Degree Conferred:
MPS

The Graduate Faculty

- **Russell R. Barton**, Ph.D. (CORNELL UNIVERSITY), Professor of Supply Chain and Information Systems, and Industrial Engineering; Co-Director, MMM Degree Program; Associate Director, CMTOC
- **Johann Baumgartner**, Ph.D. (STANFORD UNIVERSITY), Professor of Marketing
- **Lisa Bolton**, Ph.D. (UNIVERSITY OF FLORIDA), Professor of Marketing
- **Forrest S. Briscoe**, Ph.D. (MASSACHUSETTS INSTITUTE OF TECHNOLOGY), Associate Professor of Labor Studies and Industrial Relations, and Sociology
- **Jonathon Bundy**, Ph.D. (UNIVERSITY OF GEORGIA), Assistant Professor of Management and Organization
- **Daniel R. Cahoy**, J.D. (FRANKLIN UNIVERSITY), Associate Professor of Business Law
- **Brian H Cameron**, Ph.D. (PENNYSYLVANIA STATE UNIVERSITY), Associate Dean for Professional Masters, Clinical Professor of Management Information Systems, Smeal College of Business; Affiliate Faculty of Information Sciences and Technology
- **Quanwei (Charles) Cao**, Ph.D. (UNIVERSITY OF CHICAGO), Smeal Chair Professor in Finance
- **Jennifer Coupland Chang**, Ph.D. (NORTHWESTERN UNIVERSITY), Clinical Professor in Marketing
- **Francis (Frank) L. Chelko**, M.M. (PENNYSYLVANIA STATE UNIVERSITY), Instructor of Operations and Supply Chain Management
- **Dane M. Christensen**, Ph.D. (UNIVERSITY OF ARIZONA), Assistant Professor of Accounting
- **Scott Collins**, Ph.D. (CLAREMONT GRADUATE SCHOOL AND UNIVERSITY), Clinical Assistant Professor of Accounting
- **Keith J. Crocker**, Ph.D. (CARNEGIE-MELLON UNIVERSITY), The William Elliott Professor of Insurance and Risk Management
- **Robert P. Crum**, D.B.A. (UNIVERSITY OF KENTUCKY), Associate Professor of Accounting
- **Wayne S. DeSarbo**, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Smeal Distinguished Chaired Professor of Marketing
- **Min Ding**, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Smeal Professor of Marketing & Innovation
- **Kai Du**, Ph.D. (YALE UNIVERSITY), Assistant Professor of Accounting
- **D. Lance Ferris**, Ph.D. (UNIVERSITY OF WATERLOO), Associate Professor of Management and Organization
- **Duncan K. Fong H.**, Ph.D. (PURDUE UNIVERSITY WEST LAFAYETTE), Calvin E. and Pamala T. Zimmerman Endowed Fellow & Professor of Marketing
- **Raghu Garud**, Ph.D. (UNIVERSITY OF MINNESOTA MINNEAPOLIS), Alvin H. Clemens Professor of Entrepreneurial Studies
- **Fariborz Ghadar**, D.B.A. (HARVARD UNIVERSITY), Director, Center for Global Business Studies; William A. Schreyer Professor of Global Management, Policies, and Planning
• Dennis K. Lin J., Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), University Distinguished Professor of Statistics and Supply Chain Management
• Henock Louis, Ph.D. (OHIO STATE UNIVERSITY), Associate Professor of Accounting
• Razvan Lungeanu, Ph.D. (NORTHWESTERN UNIVERSITY), Assistant Professor in Management and Organization
• Vidya Mani, Ph.D. (UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL), Assistant Professor of Supply Chain Management
• Meg Meloy, Ph.D. (CORNELL UNIVERSITY), Professor of Marketing
• James A. Miles, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Professor of Finance; Joseph F. Bradley Fellow of Finance
• Vilmos F. Misangyi, Ph.D. (UNIVERSITY OF FLORIDA), Professor of Management, Chair of the Management and Organization Department
• Karl A. Muller, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Associate Professor of Accounting and Robert and Sandra Poole Faculty Fellow in Accounting
• Chris J. Muscarella, Ph.D. (PURDUE UNIVERSITY WEST LAFAYETTE), Professor of Finance; L.W. "Roy" and Mary Lois Clark Teaching Fellow
• Suresh Muthulingam, Ph.D. (UNIVERSITY OF CALIFORNIA LOS ANGELES), Assistant Professor of Supply Chain Management
• Giang Nguyen, Ph.D. (UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL), Assistant Professor of Finance
• Robert A. Novack, Ph.D. (UNIVERSITY OF TENNESSEE AT KNOXVILLE), Associate Professor of Supply Chain Management and Information Systems
• Ralph A. Oliva, Ph.D. (RENSSELAER POLYTECHNIC INSTITUTE), Professor of Marketing; Executive Director, Institute for the Study of Business Markets
• Christopher D. Parker, Ph.D. (LONDON BUSINESS SCHOOL), Assistant Professor of Supply Chain Management
• Srikanth Paruchuri, Ph.D. (COLUMBIA UNIVERSITY), Associate Professor of Management and Organization
• J. Andrew Petersen, Ph.D. (UNIVERSITY OF CONNECTICUT), Associate Professor of Marketing
• Nicholas C. Petruzzi, Ph.D. (PURDUE UNIVERSITY FORT WAYNE), Professor of Supply Chain Management
• Timothy Pollock, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Farrell Professor of Entrepreneurship
• Lisa L. Posey, Ph.D. (UNIVERSITY OF PENNSYLVANIA), Associate Professor of Business Administration
• Hong Qu, Ph.D. (CARNEGIE-MELLON UNIVERSITY), Assistant Professor of Accounting
• Arvind Rangaswamy, Ph.D. (NORTHWESTERN UNIVERSITY), Jonas H. Anche Professor of Marketing
• Sajay Samuel, Ph.D. (PENNSYLVANIA STATE UNIVERSITY), Clinical Professor of Accounting
• Jeffery M. Sharp, J.D. (UNIVERSITY OF OKLAHOMA), Associate Professor of Business Law
• Dennis P. Sheehan, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), The Virginia and Louis Benzak Professor of Finance; Associate Dean of M.B.A. Programs
• Timothy T. Simin, Ph.D. (UNIVERSITY OF WASHINGTON), Associate Professor of Finance
• Johanna Slot, Ph.D. (UNIVERSITEIT VAN TILBURG), Assistant Professor of Marketing
• Fenghua Song, Ph.D. (WASHINGTON UNIVERSITY), Associate Professor of Finance
• Amy Xue Sun, Ph.D. (CARNEGIE-MELLON UNIVERSITY), Assistant Professor of Accounting
• Douglas J. Thomas, Ph.D. (GEORGIA INSTITUTE OF TECHNOLOGY), Associate Professor of Supply Chain and Information Systems
• James B. Thomas, Ph.D. (UNIVERSITY OF TEXAS AT AUSTIN), Professor of Information Sciences and Management
• Evelyn A. Thomchick, Ph.D. (CLEMSON UNIVERSITY), Associate Professor of Supply Chain Management
The Master of Professional Studies in Corporate Innovation and Entrepreneurship program prepares graduates to stand out in the workplace and/or a competitive job market by studying at a highly-reputed business school with some of the world’s leading academic thinkers and industry experts. This program provides students with the business, leadership, and organizational skills needed to lead and facilitate corporate innovation in its many forms, new venture creation, effective change management, and entrepreneurial business planning. Students will acquire the skills needed to succeed in today’s dynamic work environments, gain a firm understanding of business issues and problems, and be prepared to become leaders of innovation. The two primary concentration areas provided through this program, involving business and engineering, will give students the opportunity to develop competencies tailored to their needs in a corporate setting. The program is taught by the same world-class professors who teach our M.B.A., executive education, and engineering students. A solid foundation in strategy, decision analysis, management, accounting, marketing, operations, and finance will make graduates more attractive to hiring managers and enable them to advance more rapidly into management and leadership positions. These learning outcomes are achieved by a combination of lectures by faculty, invited guest lecturers, reading of key literature, individual and team projects, and capstone experience that synthesizes and integrates past learning.

Admission Requirements

Educational Background
Admission requirements listed here are in addition to requirements stated in the General Information section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

Applicants will be required to:
• Have completed at least five years of post-undergraduate work history involving some form of managerial or team leadership experience. Less experienced candidates will be considered at the discretion of the program if an appropriate sponsorship letter from the employer is provided.
• Submit two strong letters of recommendation.
• Submit official transcripts from all post-secondary institutions attended.
• Submit a statement of purpose (a 600 word essay articulating career and education goals) and a current resume.

Language of Instruction

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

Applicants to the Penn State Smeal Master of Professional Studies in Corporate Innovation and Entrepreneurship program must have a minimum TOEFL score of 600 on the paper-based test, or a total score of 100 with a 20 on the speaking section for the Internet-based test (iBT). The minimum acceptable composite score for the IELTS for applicants is 7.0.

Degree Requirements

Requirements listed here are in addition to requirements stated in the Degree Requirements section of the Graduate Bulletin.

A minimum of 33 credits is required for the Master of Professional Studies in Corporate Innovation and Entrepreneurship program. At least 18 credits must be at the 500 or 800 level, with at least 6 at the 500 level. In addition to the 15 required core credits listed below, a list of approved electives for the degree is maintained by the program office.

REQUIRED COURSES: (15 credits, including the 3-credit capstone course described below)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBADM 531 - Corporate Innovation and Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 810 - Emerging Trends, Technology, and Innovation</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 502 - Business Modeling and New Venture Creation</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 820 - Corporate Innovation Strategies and Entrepreneurial Methods</td>
<td>3</td>
</tr>
<tr>
<td>ENTR 830 - Entrepreneurial Business Planning and Strategy Execution</td>
<td>3</td>
</tr>
</tbody>
</table>

CULMINATING EXPERIENCE

• ENTR 830 Entrepreneurial Business Planning and Strategy Execution (capstone)

The capstone course, ENTR 830, serves a critical role in helping students synthesize and integrate past learning in the MPS program, providing additional education on how to write a form business case or business plan, implement plans and new venture strategies, and scale new ventures to become mature business organizations. Additionally, this class requires students to write a robust, in-depth research paper on a topic related to innovation and entrepreneurship.
Student Aid

Refer to the Student Aid section of the Graduate Bulletin. Students in this program are not eligible for graduate assistantships.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

F. Online Delivery

Residency According to Graduate Council’s “Residency and Related Policies for Off-Campus Graduate Degree Programs” promulgated by the Graduate School, “Professional master’s degree programs that fall under the definition of ‘off-campus degree programs’ must incorporate as many of the essential elements of residency as possible, including faculty-student and student-student interaction, access to instructional and other resources, exposure to and socialization in the field of study, and suitable academic advising.” The following sections address issues related to the special needs of the online program/options.

Interaction between Faculty and Students beyond Direct Instruction

The Program Director works with the Professional Graduate Programs Office on all administrative matters associated with the degree program and conducts entry interviews with newly admitted students, semi-annual reviews of student progress mediated by a mutually agreeable combination of e-mail, Web/audio conferencing, telephone, in-person meetings, and exit interviews with graduates. Additionally, the Program Director writes letters of recommendation when requested.

A bulletin board accessible to all students will be setup for each course through Canvas. Each student is required to post at least one message during each session, either asking a new question or responding to another student’s question in a meaningful way. The course instructor will monitor the bulletin board discussions, answer the questions and if needed bring essential questions up for class discussion. The interaction will be counted as no less than 10% of the class participation grade.”

Video conference through Internet (e.g., Skype) will be provided for faculty to interact with students beyond the classroom instruction. Video conference capabilities over the internet will provide opportunities for program faculty to interact with students beyond the instructional content.

Interaction among Students

A key challenge in an Internet-mediated course offering is to create and sustain an interactive learning environment among students. As offered through the World Campus, each course will incorporate threaded student discussion forums in which students are required to post responses to instructor-provided discussion questions. These interactive sessions will typically count from 15 to 20% of a student’s final course grade. As demonstrated in other online programs (e.g. MPS/IS), it is the norm for students to post beyond the minimum number of responses. Most students will have at least a
moderate level of professional experience in business or the military. Through the threaded discussion questions, students are encouraged to share relevant personal experiences with one another.

Course instructors are responsible for creating and sustaining a learning environment that breeds valuable and respectful interactions among students.

Group Projects

In addition to the threaded discussion forums, courses will incorporate two to four small group projects. These will be based on business case studies or real-world problems, and typically account for 30 to 40% of an individual’s final grade. Students will collaborate in three to four person teams to complete group projects. Private virtual team electronic collaborative spaces will be created for each project and team to facilitate interaction; groups are encouraged to collaborate by any means they feel are most effective.

Access to Information and Instructional Resources

Distinguished Speakers

The program provides access to content experts other than the program’s instructors, distinguished speakers will be brought in virtually to speak to classes and present the opportunity for students to interact with the speakers. The speakers for these programs are largely private industry and government executives or distinguished researchers and their presentations/discussions will be captured and for later playback. These resources will be available for students in the MPS/ program.

Libraries

Penn State’s University Libraries provides an extraordinary array of services to Penn State students who participate in classes through the World Campus. Master’s degree students enrolled in the World Campus program can use library resources to identify and locate articles and books needed for their study and research just as graduate students enrolled in residence at Penn State University Park currently do. In addition to the Library’s hard copy holdings and growing number of electronic resources, University Libraries provides access to interlibrary loan and document delivery materials in PDF format. Students can request assistance from reference librarians via ASK!, the Libraries’ virtual reference service that provides access to live chat, and e-mail reference.

Through the University Libraries homepage, students have access to the CAT, the Libraries’ online catalog and, with their Penn State Access account, over 375 online citation databases and full-text resources. Among these resources are Compendex, Inspec, IEEE, Safari, and the ACM Digital Library. Electronic reserve facilities enable faculty members to make library resources available to online students. Once registered with the University Libraries, online students may request mail delivery of books and journal articles owned by any Penn State library location, as well as materials from other libraries through the Interlibrary Loan link on the homepage. A postage-paid and pre-addressed return envelope is provided for return of books to University Libraries. Students may also obtain articles not found in the Penn State Libraries by using unmediated document delivery provided by the Libraries. Special arrangements are made for international students whose access to mail services is limited.

The Libraries’ participation in the Pennsylvania Academic Consortium, Inc. (PALCI) and Access Pennsylvania permits students to access materials from academic and public libraries throughout the Commonwealth of Pennsylvania. Through other consortia memberships held by University Libraries,
Students have access to the resources of research libraries throughout the world. University Libraries has developed on-line instruction in the use of its resources that is available from the LIAS instruction page. The Gartner and Forrester research subscriptions available through LIAS will be of particular use to the MPS/EA program. These services provide leading edge research in the field of enterprise architecture and will be used heavily in the program. Students who need reference assistance may call any Penn State Library to ask questions. The Library staff is currently investigating the adoption of software that allows for real-time reference assistance over the Web.

Exposure to and Socialization in the Field of Study, including but not limited to seminar series, workshops, research exhibitions, discussions with professional peers, informal departmental activities, and other shared experiences

Students gain exposure to the field of study through their professional work and memberships in professional organizations such as the International Association of Innovation Professionals (IAOIP), the Association for Managers of Innovation (AMI), the Product Development and Management Association (PDMA), and the International Society of Service Innovation Professionals (ISSIP). Students in the program will be encouraged to join and participate in these organizations. Participation in the annual conferences and professional working groups of these, and related, professional organizations will help students gain further exposure to the field, develop their network of professionals, and provide valuable opportunities to socialize with the program faculty who attend the meetings.

Access to Suitable Academic Advising and Support Services

Academic Advising

The Program Director and Professional Graduate Programs staff work with students on all administrative matters associated with the degree program and conducts entry interviews with newly admitted students, semi-annual reviews of student progress mediated by a mutually agreeable combination of e-mail, Web/audio conferencing, telephone, or in-person meetings, and exit interviews with graduates. Additionally, the Program Director writes letters of recommendation when requested.

Student Services

The Office of Professional Graduate Programs will provide services to students. In addition, World Campus Student Services is typically the first point of contact with prospective students inquiring about Penn State courses and academic programs delivered online. This team fields questions from prospective students, processes enrollments, and collects and accounts for tuition and fees. A World Campus technical support group provides timely help to students having difficulties with their system or network configurations or who need tutoring on basic computing skills. Additionally, World Campus maintains the on-line course and program catalog and schedule.

Students’ Contribution to the Program, College and University

Students completing the program online via the World Campus often share experiences from their work, which provide valuable insight to the other class members as well as to faculty. This shared knowledge is a valuable contribution to the program.
New students entering the first course in the program introduce themselves to the rest of the class by posting the following types of information: contact information; primary professional interests (topic areas, issues, problems); employer, job title, and primary job responsibilities; and family and personal interests outside of work and studies as appropriate. Entering students prepare and maintain home pages containing this type of information and make these pages readily available in an electronic location that is not tied to a particular course.

Identification with Penn State

Students completing the program online will be considered identical to all other students within the College in that they will receive the same notices of College events and activities. In addition, activities, such as the Seminar Series and Distinguished Lecture Series, will be available as a live or archived webcast for online students to participate in or view.

A listserv to announce new professional Master degree graduates, new course offerings, employment opportunities and alumni news facilitates this objective. Current students and graduates also receive the College’s newsletter. College-sponsored receptions at major professional conferences provide further opportunities for students, alumni and faculty to sustain their professional supply chain community. The Associate Dean for Professional Graduate Programs and the Program Director will develop network opportunities through outreach efforts to alumni with an interest recruiting students for positions their organizations.

G. Program Operation and Maintenance

Program Coordination

Dr. Shawn Clark, Director, Clinical Professor of Innovation and Entrepreneurship and his office will administrate, coordinate, and provide supports to program development, admission, and evaluation.

Ms. Carmen Herschell, World Campus Program Manager, is the liaison with the Office of Professional Graduate Programs on this program.

Academic Support to Students

The academic support for online students will be provided by the Office of Professional Graduate Programs and the World Campus. Student scheduling, registration, and billing will be handled by the LionPATH system. Faculty will submit grades through World Campus. The World Campus Technical Help Desk provides student technical support by telephone and/or e-mail.

Instructional Design Support and Available Facilities

Revisions to existing course content as well as the creation of new course content delivered through Canvas will be done by the Office of Professional Graduate Programs.

Program courses are conducted within Canvas, the University’s Web-based course management system, which is maintained by Information Technology Services. Canvas supports content delivery (e.g., text, graphics, animations, digital audio and video, and interactive simulations), communications (including e-
mail, asynchronous threaded discussions, and synchronous chat), automated quizzing with immediate feedback, and grade management and reporting which is done via LionPATH.

The World Campus offers an online teaching and learning professional development course for faculty/instructors titled Online (OL) 2000. This three-week course is offered a month prior to the beginning of each semester, plus two additional offerings are available -- mid-fall and mid-spring semesters. It is available completely online at no cost to instructors of programs offered via the World Campus. The faculty for the program will be required to participate in OL 2000 prior to teaching their first online course in this program. They also will be encouraged to complete other professional development workshops offered by the World Campus and Webinars offered by distance education organizations such as Sloan-C and WCET.

Technological Resources Needed by Students

Computing Hardware and Related Software

Students in the on-line Program are expected to possess or have access to personal computers and a broadband Internet connection. Minimum system and software specifications and required software are outlined at http://www.worldcampus.psu.edu/general-technical-requirements. These specifications are reasonable given the technology intensive nature of individuals working in the information science discipline.

H. Program Quality

Off-campus programs must incorporate a mechanism for assessing program quality through student surveys for feedback at critical milestones in the program as well as a student exit questionnaires at the time of graduation. The Program Director is responsible for the proposed program’s quality assurance plan in cooperation with the World Campus Evaluation Team. The on-line SRTE development by a University-wide committee and piloted by the World Campus will be used as an evaluation instrument. Additionally, the Office of Professional Graduate Programs and Program Director will initiate one or more peer evaluations of instructors each year and will preview, as well as regularly review, course content to assure that it is current and represents an appropriate level for graduate study. Access to the on-line courses will be gained through the course instructor, with the full knowledge of the respective students, so course content can be reviewed, and instructor-to-student and student-to-student interactions can be observed.

Course Evaluation Surveys

Following completion of each on-line course, World Campus administers an on-line End-of-Course Survey for student feedback on the course offering. The survey includes questions that specifically address characteristics of the on-line learning experience. The Program Director conducts exit interviews.

Upon each student’s completion of the on-line degree, the Program Director conducts an exit interview for the purpose of preparing a summary evaluation of the student’s experience in the on-line program.
Similar interviews are conducted with on-line students who begin but then withdraw from the program prior to completing the degree requirements.

I. Degree Title Justification

The degree conferred by the Master of Professional Studies in Corporate Innovation and Entrepreneurship program will be a Master of Professional Studies. This type of professional degree was chosen for the following reasons:

- The title will attract, and is clearly targeted to, those individuals embedded in a corporate setting or desiring to achieve standards of practice that meet corporate and professional standards.
- The program is intended to blend the best and most cutting-edge knowledge and practices associated with the fields of both innovation and entrepreneurship and, thus, will attract audiences seeking to encourage, manage, or launch new ventures in a corporate setting, or those desiring to launch an independent startup.
- Rather than training students to conduct research to generate new knowledge, the Master of Professional Studies in Corporate Innovation and Entrepreneurship program trains students to apply existing knowledge to practical problems.
- The Master of Professional Studies in Corporate Innovation and Entrepreneurship program contains no research requirement; instead, there is a capstone course and capstone paper.
- The Master of Professional Studies in Corporate Innovation and Entrepreneurship program has a strong focus on innovation, entrepreneurship, and business management foundations.
- The Master of Professional Studies in Corporate Innovation and Entrepreneurship program focuses on professional development for advancement in the student’s specific career.

Examples of Existing Online Programs Focused on Innovation and Entrepreneurship:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cogswell Polytechnical College</td>
<td>Master of Arts in Entrepreneurship and Innovation</td>
</tr>
<tr>
<td>Indiana University</td>
<td>Master of Science in Entrepreneurship and Innovation</td>
</tr>
<tr>
<td>Temple University</td>
<td>Master of Science in Innovation Management and Entrepreneurship</td>
</tr>
<tr>
<td></td>
<td>Concentration in Innovation Strategy, Technology and Innovation Management, or Entrepreneurship</td>
</tr>
<tr>
<td>University of the Rockies</td>
<td>Master of Arts in Organizational Development and Leadership: Specialization in Innovation and Entrepreneurship</td>
</tr>
</tbody>
</table>

Examples of Existing Similar Online Programs Focused on Entrepreneurship:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Public University</td>
<td>Master of Arts in Entrepreneurship</td>
</tr>
<tr>
<td>Anaheim University</td>
<td>Master of Entrepreneurship</td>
</tr>
<tr>
<td>Everglades University</td>
<td>Master's Degree in Entrepreneurship</td>
</tr>
<tr>
<td>Oklahoma State University-Stillwater</td>
<td>Master of Science in Entrepreneurship</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Stratford University</td>
<td>Master of Science in Entrepreneurial Management</td>
</tr>
<tr>
<td>University of Florida</td>
<td>Master of Science in Entrepreneurship</td>
</tr>
<tr>
<td>University of Houston-Victoria</td>
<td>Master of Science in Economic Development and Entrepreneurship</td>
</tr>
<tr>
<td>Western Carolina University</td>
<td>Master of Entrepreneurship</td>
</tr>
</tbody>
</table>

J. Accreditation

The MPS in Corporate Innovation and Entrepreneurship will be reviewed as part of the Association to Advance Collegiate Schools of Business Smeal College accreditation process.

K. Other Relevant Information

All graduate students must receive Scholarship and Research Integrity (SARI) training during the program and prior to taking the capstone course. The Penn State Smeal Master of Professional Studies in Corporate Innovation and Entrepreneurship program will fulfill this requirement by ensuring training modules are incorporated into the four required, core courses in the first component of the program. For example, ENTR 810, a methods course, will become an appropriate home for relevant SARI training modules.

L. Consultation Responses

**Penn State Harrisburg:**

From: Steve Schappe <sxs28@psu.edu>

Sent: Tuesday, September 20, 2016 11:34 AM

To: Brian Cameron

Subject: Re: New MPS Proposal

Brian,

I appreciate having had the opportunity to review Smeal’s proposal for a new online Master of Professional Studies in Corporate Innovation and Entrepreneurship delivered via the World Campus.

This will be a timely offering for students; we have no objections and support your efforts to launch this new program.
Regards,
Steve

Stephen P. Schappe, Ph.D.
Director, School of Business Administration
777 W. Harrisburg Pike
Middletown, PA 17057
717-948-6141
http://hbg.psu.edu/sba

Penn State Great Valley:
From: JAMES A NEMES <jan16@psu.edu>
Sent: Friday, September 23, 2016 11:13 AM
To: Brian Cameron
Cc: Bridget Hall
Subject: RE: New MPS Proposal

Brian,

We have no objections to the proposed M.P.S in Corporate Innovation and Entrepreneurship to be delivered by World Campus. The list of consulted units was not included, but I would obviously expect consultation from the College of Engineering.

Best of luck.

Jim
James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

Penn State Erie, the Behrend College
From: Greg Filbeck <mgf11@psu.edu>
Sent: Thursday, September 15, 2016 1:57 PM
To: Brian Cameron
Cc: Bridget Hall
Subject: Re: New MPS Proposal

Brian,

After consultation with our interdisciplinary program chair and the School of Engineering, Behrend is happy to support this proposal.

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business  
Penn State Erie, the Behrend College  
286 Burke  
Erie, PA 16563  

**College of Engineering:**  
From: Andrew M. Erdman <ame17@ engr.psu.edu>  
Sent: Monday, September 19, 2016 3:16 PM  
To: Brian Cameron  
Cc: Meg H. Handley; TERESA LANG; Sven Bilen  
Subject: Concurrence  

Brian,  

We have reviewed the latest version of the proposal for the CIENT MPS, and are in agreement with the document as you changed it. One minor thing is that on page 9, where it mentions MPS, I’d prefer you remove that reference to MPS and have it read simply “…innovation and entrepreneurship courses...”.  

We appreciate your working with us to maintain a collaborative relationship.  

Mike Erdman  
Andrew M. (Mike) Erdman  
Walter L. Robb Director of Engineering Leadership Development  
School of Engineering Design, Technology and Professional Programs  
Instructor, Engineering Science and Mechanics  
213E Hammond Building  
University Park, PA 16802  
Office: 814-863-9074  
Cell: 814-404-3588
Hi Bridget,

I think that your program is exempt from the CITI online training so the only part of SARI that is applicable to you is the five hours of discussion based activities that are incorporated into your methods course.

I think it looks fine.

Thanks for checking.

Deb

Debrah A. Poveromo
Research Protections Education Coordinator
Office of Research Protections
The 330 Building, Suite 205
The Pennsylvania State University
University Park, Pa. 16802

dap192@psu.edu

(814) 863-1441
Support for use of additional sections of MBADM courses from the new online MBA program

Penn State Harrisburg

From:  Mukund S. Kulkarni <msk5@psu.edu>
Sent: Thursday, September 22, 2016 3:45 PM
To:  Charles H. Whiteman
Cc:  RALPH FORD; JAMES A NEMES; REGINA VASILATOS-YOUNKEN; RHONDA J STEG; svb5@psu.edu; LINDA JEAN BEAVERS; Roxanne Patton Zoschg; Brian Cameron

Subject:Re: Request for approval of additional sections of iMBA courses

Chuck,

I am in support of this.

---Mukund

Mukund S. Kulkarni, Ph.D.
Chancellor,
Penn State Harrisburg

msk5@psu.edu | 717-948-6105 | http://hbg.psu.edu/

From: "Charles H. Whiteman" <cwhiteman@psu.edu>
To: "RALPH FORD" <rmf7@psu.edu>, "MUKUND SHIVRAM KULKARNI" <msk5@psu.edu>, "JAMES A NEMES" <jan16@psu.edu>, "REGINA VASILATOS-YOUNKEN" <rxv@psu.edu>
Cc: "RHONDA J STEG" <rjv3@psu.edu>, svb5@psu.edu, "LINDA JEAN BEAVERS"
Dear Members of the Online MBA Executive Committee,

Recently we approved the attached process for allowing any of the partners in the online MBA program to create a section of any of the core online MBA courses for use in other programs. I am requesting the approval for an additional section of the following courses for use in planned graduate certificates and MPS programs within the Smeal College of Business. We will be responsible for staffing these additional sections.

MBADM 811 Financial Accounting – the new section of this course will be used in a new online accounting foundations graduate certificate. This 12-credit graduate certificate is approved and after several discussions with the graduate school and World Campus, it was determined that the best manner to satisfy a requirement for an online financial accounting course would be to use an additional section of MBADM 811.

New sections of the following courses are requested for use in a new online MPS in Corporate Innovation and Entrepreneurship (please see attached summary document). The development of this program is being funded by the World Campus and we are in the program proposal development phase. Brian Cameron has recently discussed this new program with your program directors.

MBADM 531- Corporate Innovation and Entrepreneurship – this course is one of the core courses in the proposed program and is being developed by the Smeal faculty member that is leading the MPS development.

The following three courses are part of a set of business electives in the program:
MBADM 816 Managing and Leading People in Organizations
MBADM 820 Financial Management
MBADM 571 – Global Strategic Management

MBADM 811 Financial Accounting will also be part of this set of business electives and we will initially mix students from the accounting foundations graduate certificate with students from the corporate innovation and entrepreneurship MPS program. If both programs grow as hoped, we may need a section of MBADM 811 for each program in the future.

Please let me know if you have any questions.

Regards,
Chuck

________________________________________
Charles H. Whiteman
John and Becky Surma Dean
Smeal College of Business
The Pennsylvania State University
210 Business Building
University Park, PA 16802-3603
814-863-0448
814-865-7064 (fax)
cwhiteman@smeal.psu.edu
Penn State Erie, the Behrend College & Penn State Great Valley

From: RALPH FORD <rmf7@psu.edu>
Sent: Monday, September 26, 2016 9:07 AM
To: JAMES A NEMES; Charles H. Whiteman
Cc: MUKUND SHIVRAM KULKARNI; REGINA VASILATOS-YOUNKEN; RHONDA J STEG; svb5@psu.edu; LINDA JEAN BEAVERS; Roxanne Patton Zoschg; Brian Cameron; MICHAEL FILBECK
Subject: RE: Request for approval of additional sections of iMBA courses

I approve this request as well.

Ralph
--

From: JAMES A NEMES [mailto:jan16@psu.edu]
Sent: Monday, September 26, 2016 8:47 AM
To: Charles H. Whiteman <cwhiteman@psu.edu>
Cc: RALPH FORD <rmf7@psu.edu>; MUKUND SHIVRAM KULKARNI <msk5@psu.edu>; REGINA VASILATOS-YOUNKEN <rxv@psu.edu>; RHONDA J STEG <rjv3@psu.edu>; svb5@psu.edu; LINDA JEAN BEAVERS <ljb4@psu.edu>; Roxanne Patton Zoschg <rmp5001@psu.edu>; Brian Cameron <bcameron@smeal.psu.edu>
Subject: Re: Request for approval of additional sections of iMBA courses

I approve this request.
From: "Charles H. Whiteman" <cwhiteman@psu.edu>
To: "RALPH FORD" <rmf7@psu.edu>, "MUKUND SHIVRAM KULKARNI" <msk5@psu.edu>,
"JAMES A NEMES" <jan16@psu.edu>, "REGINA VASILATOS-YOUNKEN" <rxv@psu.edu>
Cc: "RHONDA J STEG" <rjv3@psu.edu>, svb5@psu.edu, "LINDA JEAN BEAVERS"
<ljb4@psu.edu>, "Roxanne Patton Zoschg" <rmp5001@psu.edu>, "Charles H. Whiteman"
<cwhiteman@psu.edu>, "Brian Cameron" <bcameron@smeal.psu.edu>
Sent: Tuesday, September 13, 2016 4:54:57 PM
Subject: Request for approval of additional sections of iMBA courses

Dear Members of the Online MBA Executive Committee,

Recently we approved the attached process for allowing any of the partners in the online MBA program
to create a section of any of the core online MBA courses for use in other programs. I am requesting
the approval for an additional section of the following courses for use in planned graduate certificates and MPS programs within the Smeal College of Business. We will be responsible for staffing these additional sections.

MBADM 811 Financial Accounting – the new section of this course will be used in a new online accounting foundations graduate certificate. This 12-credit graduate certificate is approved and after several discussions with the graduate school and World Campus, it was determined that the best manner to satisfy a requirement for an online financial accounting course would be to use an additional section of MBADM 811.

New sections of the following courses are requested for use in a new online MPS in Corporate Innovation and Entrepreneurship (please see attached summary document). The development of this program is being funded by the World Campus and we are in the program proposal development phase. Brian Cameron has recently discussed this new program with your program directors.

MBADM 531- Corporate Innovation and Entrepreneurship – this course is one of the core courses in the proposed program and is being developed by the Smeal faculty member that is leading the MPS development.

The following three courses are part of a set of business electives in the program:

MBADM 816 Managing and Leading People in Organizations
MBADM 820 Financial Management
MBADM 571 – Global Strategic Management

MBADM 811 Financial Accounting will also be part of this set of business electives and we will initially mix students from the accounting foundations graduate certificate with students from the corporate innovation and entrepreneurship MPS program. If both programs grow as hoped, we may need a section of MBADM 811 for each program in the future.
Please let me know if you have any questions.

Regards,
Chuck

___________________________
Charles H. Whiteman
John and Becky Surma Dean
Smeal College of Business
The Pennsylvania State University
210 Business Building
University Park, PA 16802-3603
814-863-0448
814-865-7064 (fax)
cwhiteman@smeal.psu.edu

World Campus
From: Craig Weidemann <cdw12@psu.edu>
Sent: Thursday, September 22, 2016 8:24 AM
To: Charles H. Whiteman
Cc: Lorraine Reitz; Brian Cameron
Subject: Re: Request for approval of additional sections of iMBA courses

Chuck:

Per our conversation outside Old Main, I am very supportive of your request.
Craig

Sent from my iPad
References


http://www.bls.gov/news.release/cewbd.nr0.htm

Business USA https://business.usa.gov/


EMSI Complete Employment 2014.4 Class of Worker http://www.economicmodeling.com

http://www.strategyand.pwc.com/global/home/what-we-think/innovation1000/top-innovators-spenders


Indeed.com http://www.indeed.com


Occupational Information Network (O*NET) http://www.onetcenter.org


The Integrated Postsecondary Education Data System http://nces.ed.gov/ipeds/datacenter/

U.S. Chamber of Commerce Small Business Nation www.uschambersmallbusinessnation.com/

U.S. Small Business Administration https://www.sba.gov/


Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Graduate School
Department or Instructional Area: IGDPs

New Graduate Program, Option, or Minor: □ Add
Designation of new graduate program: NEW JOINT DEGREE PROGRAM: BG MD/PHD JOINT DEGREE PROGRAM
Classification of Instructional Programs (CIP) Code: 26.1103
Designation of new graduate option: ________________________________
Designation of new graduate minor: ________________________________

Indicate effective semester:
☐ First semester following approval
☐ Second semester following approval

Existing Graduate Program Option, or Minor: ✓ Change  □ Drop
Current designation of graduate program: ________________________________
Current designation of graduate option: ________________________________
Current designation of graduate minor: ________________________________

New designation of existing graduate program (if changing): ________________________________
New designation of existing graduate option (if changing): ________________________________
New designation of existing graduate minor (if changing): ________________________________

Brief description of the change (if not noted above): ________________________________
Indicate effective semester:
☐ First semester following approval
☐ Second semester following approval

Submitted by Graduate Program Head
C. Shashikant, J. Broach
C. Shashikant: [Signature]
Date: Feb 23, 2016

Printed name
Signature

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
[V. Vede van]  [Signature]
Date: 11/30/16

Printed name
Signature

Approved by College/School Dean/Chancellor (or Designee):
[V. Vede van]  [Signature]
Date: 11/30/16

Printed name
Signature
<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Graduate Council Subcommittee on New</td>
<td>John Challis</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>and Revised Programs and Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Behalf of John Challis</td>
<td>Volker Kneipp</td>
<td></td>
</tr>
<tr>
<td>Printed name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chair, Graduate Council Committee on Programs</td>
<td>M. Kathleen Heid</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>and Courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td>Volker Kneipp</td>
<td></td>
</tr>
<tr>
<td>Printed name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dean of the Graduate School:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
<td>Volker Kneipp</td>
<td>4/4/2017</td>
</tr>
<tr>
<td>Printed name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BG Joint Degree Proposal with the MD/PhD Program

A. The objectives of the program: an explanation of how the proposal meets the new educational objectives and/or strengthens existing programs of the college(s) and the University; what students may expect to accomplish through the new program; and a statement of how the new offering does not duplicate other degree programs within the department/college/University.

The National Institutes of Health (NIH) has long recognized the need for dually trained physician-scientists to translate the discoveries of basic science laboratories into effective clinical treatments. Scientists with doctoral level training in both the practice of clinical medicine and research are among the most important practitioners of this critical step in the discovery of new medical treatments. The College of Medicine has had a formal MD/PhD training program in support of this goal since 1988.

The NIH supports the training of such scientists through its Medical Scientist Training Program (MSTP) grant awards. The College of Medicine has recently obtained this award and continues to build its MD/PhD program to remain competitive (for example, the College of Medicine MD/PhD program has been actively implementing recommendations of its external advisory board, and has established joint degree programs with Engineering Science and Mechanics and the Biomedical Sciences (BMS) graduate programs). Recently the NIH and others have recognized the need to give this training area more attention; the NIH’s Clinical and Translational Science Awards (CTSA) have a stated intent to further build this critical research capacity. The objective of the MD/PhD program is to establish a nationally recognized training program that combines the medical training at Hershey with the strength in research throughout Penn State, including at University Park.

As part of the effort to partner medical training and life science research in the most productive manner at Penn State, MD/PhD students accepted to the MD/PhD program at the College of Medicine have always been encouraged to fully explore all options for their PhD training at both Hershey and University Park. This open access to research at both campuses allows the program to attract the best students, and also to match students with labs that fit their interests and motivation as closely as possible. The proposed joint degree program with Bioinformatics and Genomics (BG) will allow MD/PhD students access to over 60 life sciences labs at University Park.

B. New courses to be established as a part of the new offering

None.

C. Program Statement.

Admissions

Students interested in simultaneously pursuing an MD and PhD degree must apply to the College of Medicine MD program using the national American Medical College Application Service. College of Medicine MD/PhD Admissions Committee, which includes experienced graduate faculty members, reviews applications and evaluates candidates for acceptance into both the MD and PhD program. The BG Co-Chair, or designated representative, will be a part of this admissions committee. Students accepted into the MD/PhD program will be approved for the BG program. Students not accepted into the joint degree program can be referred to either the MD or PhD program, depending on their qualifications.
Medical School Years 1 and 2 (MS1, MS 2)

During the first two years of medical school, the student conducts at least three research rotations in addition to the standard medical school curriculum. A Pass grade must be earned for all required courses (medical school courses are graded Pass/Fail).

Entry into Graduate Program

After successful completion of the first two years of medical school and identification of a research mentor the candidate enters the BG Graduate Program.

BG Candidacy Examination

For MD/PhD students the requirement for the candidacy exam will be fulfilled by successful completion of the following before they enter the BG program. During the summer after the second year of medical school MD/PhD students take Step 1 of the United States Medical Licensing Examination (USMLE). The content of the first two years of medical school is focused on the biological foundations underlying our understanding of health and disease, including extensive integrated coursework in biochemistry, physiology, pharmacology and related fields. This coursework provides the MD/PhD student with a strong foundation that will support both their advanced graduate coursework and their intellectual development as a clinician scientist. Step 1 extensively assesses the student’s understanding of this material and is extremely rigorous. Thus, passing Step 1 of the USMLE is required for progress in medical school, and provides evidence that the student has mastered the material. Therefore, a student who has passed Step 1 of the USMLE has also fulfilled the requirements of the BG candidacy examination and the results of the USMLE will be reported to the Graduate School in lieu of any separate BG candidacy examination. In addition to mastery of background material, the BG candidacy exam assesses critical thinking and ability to understand and present research papers. These skills are developed and assessed in a yearlong course, BMS 506 A and B, which is taken in the second year of medical school. Successful completion of this course, with a grade of B or higher, meets the critical thinking and paper analysis requirement of the candidacy exam.

BG Program-Specific Requirements

The doctoral committee of an MD/PhD student in the BG program is formed upon entry into the dissertation laboratory. The committee must include a minimum of four faculty members, i.e., the chair and at least three additional members, all of whom must be members of the Graduate Faculty. The committee must include at least two members of the BG program graduate faculty and one MD/PhD steering committee member. In addition, an official “outside member” must be appointed as one of the four members. The outside member may not have a budgetary connection or other conflict with the dissertation advisor, but can also be a member of BG. They must, however, have a different departmental appointment than the advisor.

Comprehensive Examination

The MD/PhD candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee; the exam will be the same for the MD/PhD students and all other students in the BG program.
Doctoral Dissertation

It is expected that the Ph.D. candidate will have at least one paper submitted for publication in a major peer-reviewed scientific journal prior to the doctoral examination. A dissertation must be prepared and defended by each Ph.D. candidate.

Students must present their dissertation in accordance with Graduate Council and Graduate School guidelines as described in the THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations.

Final Doctoral Examination

This requirement is the same as that for BG PhD candidates: The final examination of the doctoral candidate is an oral examination administered and evaluated by the entire doctoral committee. It consists of an oral presentation of the dissertation by the candidate and a period of questions and responses. These will relate in large part to the dissertation, but may cover the candidate's entire program of study, because a major purpose of the examination is also to assess the general scholarly attainments of the candidate. The portion of the examination in which the dissertation is presented is open to the University community and the public; therefore, it is expected that the examination will take place at University Park or the Hershey campus.

Information regarding Graduate Council requirements for the Ph.D., including the establishment of a doctoral committee; candidacy, comprehensive, and final oral examinations; and submission of a dissertation of original research in the field can be found in the Graduate Degree Programs Bulletin.

Return to Medical School

Before returning to medical school years 3 and 4 the doctoral thesis must be accepted by the graduate school.

Dual Counting of Courses

The Graduate School's policy on Joint Degree programs expects "that there will be some reciprocity on the part of both programs involved in the Joint offering...".

The BG program will accept SPM 711 Scientific Principles of Medicine (8 credits) in lieu of 8 credits from BG core and elective courses (Table 1).

Table 1 BG courses replaced by SPM 711

| BMB 400 Molecular Biology of the Gene (3) |
| BMB 484 Functional Genomics (3) |
| MCIBS 596 Independent Studies (2) |

SPM 711 covers foundational science that underlies both medical practice and research in molecular and cellular biology, including cell biology, biochemistry, molecular genetics, histology, microbiology, immunology, cancer biology, and pharmacology. Since BG core course requirements are unique and mostly non-overlapping with SPM 711, no substitutions will be made against core-required courses, with the exception of MCIBS 596 Independent Studies (2). Students in MD/PhD program will be encouraged to consider BG program curriculum with 'no option' to keep the course requirements reasonable. All required courses will be made available/accessible on both campuses via independent offerings or participation through video...
Because students in the MD/PhD program are trained to combine research and medicine, most likely in medical schools, the BG requirement for exposure to undergraduate teaching is waived and registration for MCIBS 602 will not be required. The College of Medicine will accept 8 credits of MCIBS 600/601 Thesis Research/Ph.D. Dissertation conducted over the four years of the graduate portion of the training program in lieu of two months of elective rotations (MED 797). In addition, the College of Medicine requires all MD students to complete a Medical Student Research project; this requirement is waived for all MD/PhD students. A comparison of PhD and MD/PhD program requirements is shown below.

<table>
<thead>
<tr>
<th>REQUIREMENTS</th>
<th>BG PROGRAM WITH NO OPTIONS</th>
<th>MD/PH.D PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>MCIBS 541 Critical Analysis of Bioinformatics Research Topics (1 X 2)</td>
<td>MCIBS 541 Critical Analysis of Bioinformatics Research Topics (1 X 2)</td>
</tr>
<tr>
<td>Core</td>
<td>MCIBS 551 Genomics (3)</td>
<td>MCIBS 551 Genomics (3)</td>
</tr>
<tr>
<td>Core</td>
<td>MCIBS 554 Foundations in Data Driven Life Sciences (3)</td>
<td>MCIBS 554 Foundations in Data Driven Life Sciences (3)</td>
</tr>
<tr>
<td>Core</td>
<td>MCIBS 591 Ethics in Life Sciences (1)</td>
<td>MCIBS 591 Ethics in Life Sciences (1)</td>
</tr>
<tr>
<td>Core</td>
<td>MCIBS 589 Colloquium in Bioinformatics and Genomics (2 + 1)</td>
<td>MCIBS 589 Colloquium in Bioinformatics and Genomics (2 + 1)</td>
</tr>
<tr>
<td>Core</td>
<td>STAT 555 Statistical Analysis of Genomic Data (3)</td>
<td>STAT 555 Statistical Analysis of Genomic Data (3)</td>
</tr>
</tbody>
</table>

**Program Specific Requirements**

<table>
<thead>
<tr>
<th>Program specific</th>
<th>Electives (18)</th>
<th>Electives (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCIBS 596 Independent Studies (1 X 2)</td>
<td>SPM 711 Scientific Principles of Medicine (6)</td>
<td></td>
</tr>
</tbody>
</table>

D. Admission requirements.

In addition to the basic college level premedical school requirements for the Penn State College of Medicine (one each year of biology, chemistry, physics, math, and organic chemistry), the MD/PhD program has the following requirements:

- **Academic Achievement** Applicants to our program generally have very strong grades and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.

- **Research Experience** We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively in-depth research experience as an undergraduate can suffice.

- **Recommendations** We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.

- **Goals** Applicants must be able to clearly articulate the reasons for pursuing the joint degree.

- **International Students** All qualified students are eligible to apply regardless of citizenship.
E. Program Justification.

All medical schools at research-intensive universities offer an MD/PhD joint degree program, as Penn State has since 1988. This proposal extends that program to the PhD program in Bioinformatics and Genomics (BG), which has faculty membership on both Hershey and University Park campuses. Currently, two MD/PhD students are associated with the BG option in the MCIIBS program. We expect a steady stream of MD/PhD students to join the BG program given the current emphasis on electronic health record, big data analytic and precision medicine. MD/PhD students along with entering BG cohort will enhance interactions with already collaborative and interdisciplinary faculty members in addressing key areas of biomedical research. Students on both campuses will meet on a regular basis to attend seminars, retreats and workshops. When necessary, videoconference technology will be used to enhance interactions between faculty and students on both campuses in courses and other activities.

The existing MD/PhD program is regularly reviewed by an external advisory board (EAB) composed of directors of highly successful MD/PhD programs at other institutions. Maintaining access and connections with labs at University Park is an important part of the strategy for being competitive.

F. Accreditation:

There is no specific accrediting body for MD/PhD joint degree programs. The Liaison Committee on Medical Education (LCME) accredits MD programs (evaluation of MD/PhD programs are reviewed as part of that accreditation if they exist). The College of Medicine MD program was reviewed by the LCME in 2010 and was fully accredited for 7 years (the maximum allowed) with recognition of the many strengths of the program.
Bioinformatics and Genomics

Program Home Page: (http://www.huck.psu.edu/content/graduate-programs/bioinformatics-and-genomics)

Contact Information:

Cooduvalli Shashikant  
Program Co-chair  
Css13@psu.edu  
814-863-0658

James Broach  
Program Co-chair  
Jrb62@psu.edu  
717-531-5470

Jean Pierce  
Records Specialist  
101 Life Science Building  
The Pennsylvania State University  
University Park PA 16802  
Jep32@psu.edu  
814-867-0371

Degrees conferred:

Ph.D., M.D./Ph.D., M.S.

THE GRADUATE FACULTY

- **Istvan Albert**, Ph.D. (UNIVERSITY OF NOTRE DAME), Associate Professor of Bioinformatics
- **Reka Albert**, Ph.D. (UNIVERSITY OF NOTRE DAME), Professor of Physics and Biology
- **Naomi Altman**, Ph.D. (STANFORD UNIVERSITY), Professor of Statistics
- **Raquel Assis**, Ph.D. (UNIVERSITY OF MICHIGAN AT ANN ARBOR), Assistant Professor of Biology
- **Sarah M. Assmann**, Ph.D. (STANFORD UNIVERSITY), Waller Professor of Biology; Director, Plant Sciences Institute
- **Michael J. Axtell**, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Associate Professor of Biology
- **Le Bao**, Ph.D. (UNIVERSITY OF WASHINGTON), Assistant Professor of Statistics
- **Colin J. Barnstable**, Ph.D. (UNIVERSITY OF OXFORD), Professor and Chair, Neural and Behavioral Sciences
- **Arthur S. Berg**, Ph.D. (UNIVERSITY OF CALIFORNIA SAN DIEGO), Associate Professor of Public Health Sciences and Statistics
- **Philip Bevilacqua**, Ph.D. (UNIVERSITY OF ROCHESTER), Professor of Chemistry and Biochemistry and Molecular Biology
- **James Broach**, Ph.D. (UNIVERSITY OF CALIFORNIA BERKELEY), Professor and Chair
- **John E. Carlson**, Ph.D. (UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN), Professor of Molecular Genetics; Director, Schatz Center for Tree Molecular Genetics
The IGDP in BG is an interdepartmental program that engages faculty members from six colleges on two campuses. This broad-reaching Program provides students a wide range of understanding of multiple disciplines with specific expertise in a chosen area, and encourages interdisciplinary research that is truly changing biological research as well as health and lifestyles.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

1. Fully completed, official online Penn State Graduate Application.
2. Paid, nonrefundable application fee (see Requirements for Graduate Admission for current fee).
3. Official transcripts from all post-secondary institutions attended.
4. Completed BG-specific questions on the Graduate Application.
5. Application for a U.S. visa (international applicants only).
6. Officially submitted Graduate Record Examination (GRE) General Test scores. Successful applicants generally have scores above the 75th percentile for each of the verbal, quantitative, and analytical writing section.
7. Names and contact information, including business email addresses, for three references.
8. Statement of goals that pertain to the life sciences including motivation for pursuing a research degree; research experience and interests; and professional experience. The statement should include problems that are of interest to the applicant and how the applicant’s past experiences have prepared him or her to pursue this research.
9. International applicants are required to submit English proficiency test scores, unless they are from one of the countries listed as exempt in the Graduate Bulletin. English proficiency test scores must meet or exceed the minimum acceptable scores listed in the Bulletin. Applicants to the BG program must have a minimum TOEFL score of 575 for the paper-based test, or a total score of 90 with a 19 on the speaking section for the Internet-based test (iBT). Successful applicants generally have a minimum score of 100 (including 23 on the speaking component) on the Internet-based test.
10. Successful applicants generally will have a minimum 3.5 on a 4.0 scale junior/senior undergraduate grade point average, and will have completed course work in both quantitative and life science subjects.

**DEGREE REQUIREMENTS**

**M.S. Degree**

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

For master’s degree, a minimum of 30 graduate credits and a 3.0 overall GPA are required. At least 18 credits in the 500 and 600 series combined must be included in the program. Required courses for master’s degree are: MCIBS 551 Genomics (3), MCIBS 554 Foundations in Data Driven Life Sciences (3), STAT 555, Statistical Analysis of Genomics Data (3), BMMB 852 Applied Bioinformatics (2), BIOL 405 Molecular Evolution (3), MCIBS 541 Critical Analysis of Bioinformatics and Genomics Research Topics (1 credit per semester, maximum of 2 credits), MCIBS 589 Colloquium in Bioinformatics and Genomics (3), MCIBS 591 Ethics in Life Sciences (1), MCIBS 596 Individual Studies (2), and MCIBS 600 Thesis Research (6). No more than 6 credits of Thesis Research may be counted toward 30 credit minimum. MCIBS 595 Internship and electives also count towards the minimum 30 credit requirement. Options are not offered for the M.S. degree.

Students must complete original laboratory research and internship that culminates in a thesis. The thesis must be accepted by the advisers and/or committee members, the head of the graduate program, and the Graduate School, and the student must pass a thesis defense.

**Ph.D. Degree**

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.
For the Ph.D., a minimum of 35 credits is required. During the first year of study, Ph.D. candidates are required to take 17 credits of core required courses: MCIBS 551 Genomics (3), MCIBS 554 Foundations in Data Driven Life Sciences (3), STAT 555, Statistical Analysis of Genomics Data (3), MCIBS 541 Critical Analysis of Bioinformatics and Genomics Research Topics (1 credit per semester, maximum of 2 credits), MCIBS 589 Colloquium in Bioinformatics and Genomics (3 credits total) MCIBS 591 Ethics in Life Sciences (1), and MCIBS 596, Individual Studies (2 credits total), representing three Research Rotations. Each candidate for the Ph.D. degree must fulfill written and spoken English communication requirements that are satisfied by preparing written and oral reports describing the laboratory rotations during the first year.

At the end of the first year, admission to Ph.D. candidacy is determined by performance in coursework, laboratory rotations, and the BG Graduate Program Candidacy Examination. Students join their research laboratory by the end of the second semester of the first year.

The doctoral committee of a Ph.D. student is formed upon entry into the dissertation laboratory, and must comply with all Graduate Council requirements. Students are strongly encouraged to consider joint co-advisers, each representing a different area of expertise within the field of bioinformatics and genomics.

During the second year, students may take additional courses in consultation with the doctoral committee. Students may select an option area in which they conduct research and take additional courses specified by the Option (see below). Students are not required to choose an Option. Additionally, students will complete one semester of Teaching Assistantship in a graduate or undergraduate course and complete required training to perform duties of Teaching Assistantship.

Ph.D. candidates must pass a comprehensive examination prior to the end of the fifth semester of enrollment, the written portion of which is in the format of a grant application. As part of this examination, the candidate also gives an oral presentation of this proposal to their doctoral committee.

A dissertation must be prepared and defended by each Ph.D. candidate. Students must present their dissertation in accordance with Graduate Council and Graduate School guidelines as described in the THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations. To earn the Ph.D. degree, the dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School and the student must pass a final oral examination (the dissertation defense).

The final examination of the doctoral candidate is an oral examination administered and evaluated by the entire doctoral committee. It consists of an oral presentation of the dissertation by the candidate and a period of questions and responses. These will relate in large part to the dissertation, but may cover the candidate's entire program of study, because a major purpose of the examination is also to assess the general scholarly attainments of the candidate. The portion of the examination in which the dissertation is presented is open to the University community and the public; therefore, it is expected that the examination will take place at University Park or the Hershey campus. It is expected that the Ph.D. candidate will have at least one paper submitted for publication in a major peer-reviewed scientific journal prior to the final oral examination.

Ph.D. students in Bioinformatics and Genomics may enroll in one of two options, but are not required to do so.

Option in Algorithms and Computation
Students are admitted to the Option in Algorithms and Computation after successfully completing: (1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be with faculty affiliated with the Algorithms and Computation Option; and (3) the candidacy examination. During the second year, Ph.D. candidates choosing this option will be required to take (1) CSE/BMMB 566 Algorithms and Data Structures in Bioinformatics (3); (2) one of the two courses CMPSC 465 Data Structures and Algorithms (3) or CSE 565 Algorithm Design and Analysis (4); and (3) two courses from a list of prescribed electives which includes, but is not limited to the following: CMPSC 431W Database Management Systems (3), CMPSC 450 Concurrent Scientific Programming (3), CSE 557 Concurrent Matrix Computations (3), CMPSC 464 Introduction to the Theory of Computation (3), CSE 583 Pattern Recognition – Principles and Applications (3), CSE 562 Probabilistic Algorithms (3), CMPEN 455 Digital Image Processing (3), and CMPEN 454 Fundamentals of Computer Vision (3) and CHE 512 Optimization in Biological Networks (3).

Option in Statistical Genomics

Students are admitted to the Option in Statistical Genomics, after successfully completing: (1) the first year of the IGDP in BG; (2) three research rotations, of which at least two must be with faculty affiliated with the Statistical Genomics Option; and (3) the candidacy examination. During the second year, Ph.D. candidates choosing this option will be required to take: (1) one of the two courses STAT 501 Regression Methods (3) or STAT 511 Regression Analysis and Modeling (3); (2) STAT 557 Data Mining I (3); and (3) two courses from a list of prescribed electives which includes, but is not limited to the following: STAT 414 Introduction to Probability Theory (3), STAT 415 Introduction to Mathematical Statistics (3), STAT 416 Stochastic Modeling (3), STAT 502 Analysis of Variance (3), STAT 504 Analysis of Discrete Data (3), STAT 505 Applied Multivariate Analysis (3), and STAT 540 Statistical Computing (3).

M.D./Ph.D. JOINT DEGREE PROGRAM

M.D./Ph.D. Admissions Requirements

Students interested in simultaneously pursuing an M.D. and Ph.D. degree must apply to the College of Medicine M.D. program using the national American Medical College Application Service (AMCAS) application system and indicate their intent to pursue the joint degree program. The College of Medicine M.D./Ph.D. Admissions Committee reviews applications and evaluates candidates for acceptance into both the M.D. and Ph.D. program. Students not accepted into the joint degree program can be referred to either the M.D. or Ph.D. program, depending on their qualifications.

The general admission requirements for the Ph.D. degree are listed above. Additional requirements for the joint degree are listed below. Admissions requirements and applications for admission for Penn State College of Medicine are available at the M.D. Program section of the Penn State College of Medicine website. After the review committee has accepted an applicant to the joint degree program, s/he must apply to the Graduate School for admission to the graduate program. Students must be admitted to the joint degree program prior to taking the first course they intend to count towards the graduate degree.

In addition to the basic college level premedical school requirements for the Penn State College of Medicine (one each year of biology, chemistry, physics, math, and organic chemistry), the M.D./Ph.D. program has the following requirements:

- **Academic Achievement** Applicants to our program generally have very strong grades
and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.

- **Research Experience** We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively in-depth research experience as an undergraduate can suffice.

- **Recommendations** We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.

- **Goals** Applicants must be able to clearly articulate the reasons for pursuing the joint degree.

- **International Students** All qualified students are eligible to apply regardless of citizenship.

**M.D./Ph.D. Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the M.D. program are listed on the [Penn State College of Medicine](https://www.psu.edu) website. Degree requirements for the Ph.D. degree are listed in the Ph.D. Degree Requirements section above.

During the first two years of medical school, the student conducts at least three research rotations. After successful completion of the first two years of medical school the candidate enters the MCIBS Graduate Program.

During the summer after the second year of medical school M.D./Ph.D. students take Step 1 of the United States Medical Licensing Examination (USMLE), which serves in lieu of the knowledge based part of the candidacy examination for the BG program. Successful completion of BMS 506 A and B, which is taken in the second year of medical school, with a grade of B or higher meets the critical thinking and paper analysis requirement of the candidacy exam.

**BG Program Requirements**

The doctoral committee of an M.D./Ph.D. student in the BG program is formed upon entry into the dissertation laboratory, and must comply with all [Graduate Council requirements](https://www.psu.edu). The committee must include at least two members of the BG program graduate faculty and one M.D./Ph.D. steering committee member.

The required courses: MCIBS 589, Colloquium, MCIBS 591, Ethics in the Life Sciences, MCIBS 551 Genomics, MCIBS 554 Foundations in Data Driven Life Sciences, MCIBS 541, Critical Analysis in BG Research Topics, STAT 555, Statistical Analysis of Genomics Data. In addition, based on the background and needs of the student the following elective courses will also be taken: BIOL 405, Molecular Evolution, STAT 500, Applied Statistics, BMMB 852, Applied Bioinformatics (2).

The BG program will accept SPM 711 Scientific Principles of Medicine (8 credits) in lieu of 6 credits of elective courses and 2 credits of MCBIS 596. If students accepted into the joint degree program are unable to complete the M.D. degree, they are still eligible to receive the Ph.D. degree if all Ph.D. degree requirements have been satisfied.

The M.D./Ph.D. candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee.
M.D./Ph.D. candidates are required to have at least one paper submitted for publication in a major peer-reviewed scientific journal prior to the final doctoral examination, and this must be accepted before they return to the third year of medical school. A dissertation must be prepared and defended by each M.D./Ph.D. candidate.

STUDENT AID

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin. Students on graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

COURSES

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

1. Fully completed, official online Penn State Graduate Application.
2. Paid, nonrefundable application fee (see Requirements for Graduate Admission for current fee).
3. Official transcripts from all post-secondary institutions attended.
4. Completed BG-specific questions on the Graduate Application.
5. Application for a U.S. visa (international applicants only).
6. Officially submitted Graduate Record Examination (GRE) General Test scores. Successful applicants generally have scores above the 75th percentile for each of the verbal, quantitative, and analytical writing section.
7. Names and contact information, including business email addresses, for three references.
8. Statement of goals that pertain to the life sciences including motivation for pursuing a research degree; research experience and interests; and professional experience. The statement should include problems that are of interest to the applicant and how the applicant’s past experiences have prepared him or her to pursue this research.
9. International applicants are required to submit English proficiency test scores, unless they are from one of the countries listed as exempt in the Graduate Bulletin. English proficiency test scores must meet or exceed the minimum acceptable scores listed in the Bulletin. Applicants to the BG program must have a minimum TOEFL score of 575 for the paper-based test, or a total score of 90 with a 19 on the speaking section for the Internet-based test (iBT). Successful applicants generally have a minimum score of 100 (including 23 on the speaking component) on the Internet-based test. Applicants with iBT speaking scores between 15 and 18 may be considered for provisional admission, which requires completion of specified remedial English courses ESL 114G (American Oral English for Academic Purposes) and/or ESL 116G (ESL/Composition for Academic Disciplines) and attainment of a grade of B or higher.
10. Successful applicants generally will have a minimum 3.5 on a 4.0 scale junior/senior undergraduate grade point average, and will have completed course work in both quantitative and life science subjects.
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

| College/School: | Penn State Harrisburg |
| Department or Instructional Area: | School of Business Administration |

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:

Designation of new graduate option:

Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor

| Change | Drop |

Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing): B.S. in Accounting and M.B.A. IUG Degree Program
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:

\[ \checkmark \] First semester following approval

\[ \] Second semester following approval

Submitted by Graduate Program Head

| Dr. Stephen Schappe |
| Signature |

| Date: 12/16/16 |

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

| Dr. Janet Duck |
| Signature |

| Date: 12/21/16 |

Approved by College/School Dean/Chancellor (or Designee):

| Dr. Peter Idowu |
| Signature |

<p>| Date: Dec. 12, 2016 |</p>
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Printed Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of John Challis</td>
<td>Udstewitt</td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td>Udstewitt</td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
<td>Udstewitt</td>
<td></td>
<td>4/4/2017</td>
</tr>
</tbody>
</table>
Bachelor of Science in Accounting and Master of Business Administration
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

School of Business Administration
Penn State Harrisburg
February 11, 2017
B.S. in Accounting and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

Executive Summary

A. Objectives of the Proposed IUG Program
   The objectives of the Integrated Undergraduate Graduate Program are to:
   1. Offer qualified students the opportunity to earn both bachelor and master degrees in five years. In particular, IUG students may count up to 12 credits toward their B.S. in Accounting and M.B.A. degree requirements.
   2. Permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
   3. Introduce students earlier to the rigors of the graduate program and research of graduate faculty.
   4. Make the resources of the Graduate School available to IUG students.
   5. Allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.
   6. Allow students to coordinate as well as concurrently pursue the two degree programs, which enables them to achieve greater depth and comprehension than if the degrees are pursued sequentially.

B. Summary of Changes
   1. Undergraduate Bulletin description of Accounting program is revised to include the proposed IUG program.
   2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG program.
   3. No course changes are part of this proposal.
# Table of Contents

I. Introduction ............................................................................................................................. 1  
II. Application Process ................................................................................................................. 1  
III. IUG Degree Requirements ...................................................................................................... 3  

Appendix A: Bachelor of Science in Accounting Degree Requirements ........................................ 5  
Appendix B: Bachelor of Science in Accounting Typical Schedule ........................................... 8  
Appendix C: Master of Business Administration Degree Requirements .................................... 9  
Appendix D: External Consultation .............................................................................................. 10  
Appendix E: B.S. in Accounting and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook .................................................................................................................................................. 20  

1. Introduction ................................................................................................................ 21  
2. Application Process ........................................................................................................... 21  
3. IUG Degree Requirements ................................................................................................. 23  

Appendix A: Bachelor of Science in Accounting Degree Requirements ........................................ 25  
Appendix B: Bachelor of Science in Accounting Typical Schedule ........................................... 28  
Appendix C: Master of Business Administration Degree Requirements .................................... 29  

M.B.A. Bulletin Changes .............................................................................................................. 30  

1. Brief summary of proposed changes and justification for changes ........................................ 30  
2. Current bulletin description ............................................................................................... 30  
3. Revised bulletin description ............................................................................................... 42  
4. List of courses to be added, modified or dropped in the proposed curriculum ................. 58
B.S. in Accounting and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal
School of Business Administration
Penn State Harrisburg

I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of M PAC Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
• ECON 102 [3] Introductory Microeconomic Analysis and Policy
• ENGL 015 or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
• FIN 301 [3] Corporation Finance
• MGMT 301 [3] Basic Management Concepts
• MKTG 301 [3] Principles of Marketing

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 340 Cost Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCTG 471 Intermediate Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>Business elective</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 572* Financial Reporting I</td>
<td>3</td>
</tr>
<tr>
<td>500-level ACCT elective*</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester IX</th>
<th>Semester X</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510 Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515 Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540 Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

* Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Accounting degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

**III. IUG Degree Requirements**

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Accounting and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take six additional credits in their third year, and six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Accounting Degree Requirements

General Education Requirements (47 credits)

- Writing/Speaking (GWS)
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  - CAS 100 [3]  Effective Speech

- Quantitative (GQ)
  - MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry I\(^a\)
  - STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\(^a\)

- Natural Sciences (GN)
  - 9 credits of any courses with a GN suffix

- Arts (GA)
  - 6 credits of any courses with a GA suffix\(^b\)

- Humanities (GH)
  - 6 credits of any courses with a GH suffix\(^b\)

- Social & Behavioral Sciences (GS)
  - ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  - 3 credits of any courses with a GS suffix\(^b\)

- Health & Physical Activities (GHA)
  - 3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

General Electives (8 credits)

- 8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)

  o Business Courses
    B A 364Y [3; US/IL]  International Business and Society
    ECON 102 [3; GS]  Introductory Microeconomic Analysis and Policy
    ECON 104 [3]  Introductory Macroeconomic Analysis and Policy
    ENGL 202D [3; GWS]  Effective Writing: Business Writing
    FIN 301 [3]  Corporation Finance
    MGMT 301 [3]  Basic Management Concepts
    MIS 204 [3]  Introductory to Business Information Systems
    MKTG 301 [3]  Principles of Marketing
    SCM 301 [3]  Supply Chain Management

  o Accounting Courses (18 credits)
    ACCTG 403 [3]  Auditing

- Additional Courses (21 credits)

  o Math, Statistics and Law (12 credits)
    Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    B A 243 [4]  Social, Legal, and Ethical Environment for Business

  o Accounting Electives (6 credits)
    Select 6 credits from the following list or other accounting courses approved by the Program:
ACCTG 440 [3]  Advanced Management Accounting
ACCTG 461 [3]  International Accounting
ACCTG 462 [3]  Governmental and Not-for-Profit Accounting

- **Supporting Courses and Related Areas (6 credits)**
  Select 6 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

**Additional Requirements**

- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
## Appendix B: Bachelor of Science in Accounting Typical Schedule

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 015S or 030 Composition GWS</td>
<td>CAS 100 Effective Speech GWS</td>
</tr>
<tr>
<td>*MATH 110 or MATH 140 Calculus GQ</td>
<td>*STAT 200 or SCM 200 Statistics GQ</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>*MGMT 301 Basic Management concepts</td>
</tr>
<tr>
<td>*ECON 102 Introductory Microeconomic Analysis GS</td>
<td>Arts GA</td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td>Health and Physical Activity GHA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>16</td>
<td>14.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACCTG 211 Financial and Managerial Accounting</td>
<td>*FIN 301 Corporation Finance</td>
</tr>
<tr>
<td>*MKTG 301 Principles of Marketing</td>
<td>ENGL 202D Business Writing GWS</td>
</tr>
<tr>
<td>Arts GA</td>
<td>Natural Sciences GN</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>MIS 204 Business Information Systems</td>
</tr>
<tr>
<td>Social and Behavior Sciences GS</td>
<td>Non-Business elective</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 340 Cost Auditing</td>
<td>ACCTG 310 Federal Taxation I</td>
</tr>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>B A 242 Social and Ethical Environment of Business</td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business</td>
<td>ECON 104 Introductory Macroeconomic Analysis</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>Health and Physical Activity GHA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>14.5</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 473 Advanced Financial Accounting</td>
<td>ACCTG 403 Auditing</td>
</tr>
<tr>
<td>ACCTG Elective</td>
<td>ACCTG Elective</td>
</tr>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>B A 462 Business Strategy</td>
</tr>
<tr>
<td>Select 3 credits from 200-400 level business courses from ACCTG, B A, FIN, MGMT, MIS, MKTG or SCM</td>
<td>Select 3 credits from 200-400 level business courses from ACCTG, B A, FIN, MGMT, MIS, MKTG or SCM</td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td>SCM 301 Supply Chain Management</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3]  Corporate Finance or Corporate Finance II
- MRKT 514 [3]  Strategic Marketing

Electives (9 credits)

- 9 credits of 500- or 800-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3]  Organizational Behavior
Appendix D: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA 16563

-----------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven't got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We're ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.

---------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "BALAJI RAJAGOPALAN" <bur14@psu.edu>
Sent: Friday, April 1, 2016 11:37:28 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear School Director Rajagopalan,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456

---------------------------------------
From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Saturday, April 9, 2016 8:10:53 AM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee, sorry for the delay here. Thank you for the information: i had to look over other IUGs to see how things work and I agree this looks like a good addition to your program. I concur with the idea. Good luck!
Al

---------------------------------------

On Fri, Apr 1, 2016 at 12:44 PM Oranee Tawatnuntachai <oxt4@psu.edu> wrote:

Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their graduate degree.

Hope this helps.

Regards,
Oranee

---------------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner  
Associate Professor  
Academic Director, MBA Program  
Black School of Business  
Penn State Erie  
agw2@psu.edu  
814-898-6509

---------------------------------------

On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regard,
Oranee

---------------------------------------
From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------
From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,
Oranee

---------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>
Sent: Monday, August 8, 2016 9:09:53 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

---

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal's accounting IUG is that most students in the program complete at least one internship. Provision is made for this student's academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart
Department Chair and Smeal Chair Professor in Accounting
Smeal College of Business
Penn State
354B Business Building
University Park, PA 16802-3603
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <cwhiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petrucci <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mig11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff

Jeffery M. Sharp | Associate Dean for Undergraduate Education
Smeal College of Business | The Pennsylvania State University | 202 Business Building | University Park, PA 16802
814 863-1947 (Office) | JeffSharp@psu.edu

---------------------------------------
Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix E: B.S. in Accounting and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook
B. S. in Accounting and M.B.A.
Integrated Undergraduate-Graduate (IUG) Degree Program
School of Business Administration
Penn State Harrisburg, the Capital College

1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
Semester V

- ACCTG 340 Cost Auditing: 3 credits
- ACCTG 471 Intermediate Financial Accounting I: 3 credits
- B A 241 Legal Environment of Business: 2 credits
- B A 242 Social and Ethical Environment of Business: 2 credits
- ECON 104 Introductory Macroeconomic Analysis: 3 credits
- Non-Business elective: 3 credits
- Health and Physical Activity GHA: 1.5 credits

Semester VI

- ACCTG 310 Federal Taxation I: 3 credits
- ACCTG 472 Intermediate Financial Acct II: 3 credits
- MIS 390 Information Systems Management and App: 3 credits
- SCM 301 Supply Chain Management: 3 credits
- Non-Business Elective: 3 credits
- Natural Sciences GN: 3 credits

Semester VII

- B A 364Y International Business and Society US; IL: 3 credits
- Business elective: 3 credits
- ACCT 572* Financial Reporting I: 3 credits
- 500-level ACCT elective*: 3 credits

Semester VIII

- ACCTG 403 Auditing: 3 credits
- B A 462 Business Strategy: 3 credits
- FINAN 521 or 530*: 3 credits
- 500-level ACCT elective*: 3 credits

Semester IX

- BUS 510 Business Analytics and Decision Modeling: 3 credits
- BUS 515 Business Ethics, Governance and Law: 3 credits
- INFSY 540 Information Resources Management: 3 credits

Semester X

- MRKT 514 Strategic Marketing: 3 credits
- BUS 588 Strategic Management: 3 credits
- 500- or 800-level Elective: 3 credits

* Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Accounting degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

3. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Accounting and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take six additional credits in their third year, and six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Accounting Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  - CAS 100 [3]   Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4]   Techniques of Calculus I or Calculus with Analytic Geometry \(^a\)
  - STAT 200 or SCM 200 [4]   Elementary Statistics or Introduction to Statistics for Business\(^a\)

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix\(^b\)

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix\(^b\)

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3]   Introductory Microeconomic Analysis and Policy\(^a\)
  - 3 credits of any courses with a GS suffix\(^b\)

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

**General Electives (8 credits)**

8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  - Business Courses
    B A 364Y [3; US/IL] International Business and Society
    ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    ENGL 202D [3; GWS] Effective Writing: Business Writing
    FIN 301 [3] Corporation Finance
    MGMT 301 [3] Basic Management Concepts
    MIS 204 [3] Introductory to Business Information Systems
    MKTG 301 [3] Principles of Marketing
    SCM 301 [3] Supply Chain Management
  - Accounting Courses (18 credits)
    ACCTG 403 [3] Auditing

- Additional Courses (21 credits)
  - Math, Statistics and Law (12 credits)
    Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    B A 243 [4] Social, Legal, and Ethical Environment for Business
  - Accounting Electives (6 credits)
    Select 6 credits from the following list or other accounting courses approved by the Program:
ACCTG 440 [3]  Advanced Management Accounting
ACCTG 461 [3]  International Accounting
ACCTG 462 [3]  Governmental and Not-for-Profit Accounting

- Supporting Courses and Related Areas (6 credits)
  Select 6 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

**Additional Requirements**

- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
Appendix B: Bachelor of Science in Accounting Typical Schedule

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ENGL 015S or 030 Composition GWS</td>
<td>CAS 100 Effective Speech GWS</td>
</tr>
<tr>
<td>*MATH 110 or MATH 140 Calculus GQ</td>
<td>*STAT 200 or SCM 200 Statistics GQ</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>*MGMT 301 Basic Management concepts</td>
</tr>
<tr>
<td>*ECON 102 Introductory Microeconomic Analysis GS</td>
<td>Arts GA</td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td>Health and Physical Activity GHA</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>16</td>
<td>14.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACCTG 211 Financial and Managerial Accounting</td>
<td>*FIN 301 Corporation Finance</td>
</tr>
<tr>
<td>*MKTG 301 Principles of Marketing</td>
<td>ENGL 202D Business Writing GWS</td>
</tr>
<tr>
<td>Arts GA</td>
<td>Natural Sciences GN</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>MIS 204 Business Information Systems</td>
</tr>
<tr>
<td>Social and Behavior Sciences GS</td>
<td>Non-Business elective</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 340 Cost Auditing</td>
<td>ACCTG 310 Federal Taxation I</td>
</tr>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>MIS 390 Information Systems Management and App</td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business</td>
<td>Non-Business Elective</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomic Analysis</td>
<td>Natural Sciences GN</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>1.5</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1.5</td>
<td>15</td>
</tr>
<tr>
<td>14.5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 473 Advanced Financial Accounting</td>
<td>ACCTG 403 Auditing</td>
</tr>
<tr>
<td>ACCTG Elective</td>
<td>ACCTG Elective</td>
</tr>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>B A 462 Business Strategy</td>
</tr>
<tr>
<td>Select 3 credits from 200-400 level business</td>
<td>Select 3 credits from 200-400 level business</td>
</tr>
<tr>
<td>courses from ACCTG, B A, FIN, MGMT, MIS, Mktg or SCM</td>
<td>courses from ACCTG, B A, FIN, MGMT, MIS, MKTG or SCM</td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td>SCM 301 Supply Chain Management</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement*
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

**Prescribed Courses (21 credits)**

- FINAN 521 or 530 [3]  Corporate Finance or Corporate Finance II
- MRKT 514 [3]  Strategic Marketing

**Electives (9 credits)**

- 9 credits of 500-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

**Foundation Courses (up to 18 credits)**

- MNGMT 511 [3]  Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

We propose an Integrated Undergraduate Graduate (IUG) program in Accounting at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.

The Graduate Faculty

The Program

The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit www.mba.com for more information about the GMAT or www.ets.org/gre for information about the GRE).

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at www.hbg.psu.edu/.

International Students

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- **Fall Semester** - July 18
- **Spring Semester** - November 18
- **Summer Session** - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- **Fall Semester** -- May 31
- **Spring Semester** -- September 30
- **Summer Session** -- February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

*Analytic Skills Requirement:* Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

*Computer Skills Requirement:* Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

*Communications Skills Requirement:* Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session.
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

**Degree Requirements**
Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

**Prescribed Courses:** 21 credits. ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFYS 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

**Elective Courses/Tracks:** 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

**Tracks:**

**Accounting:** The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 504 Auditing Theory and Practice (3)
- ACCT 510 Business Tax Planning: Theory and Practice (3)
- ACCT 532 Accounting Information and Decision Systems (3)
- ACCT 545 Strategic Cost Management (3)
- ACCT 561 Financial Statement Analysis II (3)
- ACCT 572 Financial Reporting I (3)
- ACCT 573 Financial Reporting II (3)
- ACCT 590 or 890 Colloquium (1-3)
- ACCT 596 or 896 Individual Studies (1-9)
- ACCT 597 or 897 Special Topics (1-9)
- BUS 554 Master's Project (3)*

**Business Analytics:** The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

- BUS554 Master's Project (3)*
- INFSY 535 Object-Oriented Design and Program Development in Business (3)
- INFSY 555 Data Management Systems (3)
- INFSY 565 Intelligent Systems in Business (3)
- INFSY 566 Data Mining and Knowledge Discovery (3)
- INFSY 896 Individual Studies (1-9)*
- MRKT 572 Marketing Research (3)
- SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
- BUS 554 Master's Project (3)*
- FINAN 518 Financial Markets and the Economy (3)
- FINAN 522 Investment and Portfolio Management (3)
- FINAN 523 Risk Management of Modern Financial Institutions (3)
- FINAN 526 International Finance (3)
- FINAN 527 Derivative Securities (3)
- FINAN 530 Advanced Corporate Finance (3)**
- FINAN 531 Managing Financial Operations (3)
- FINAN 590 or 890 Colloquium (1-3)
- FINAN 596 or 896 Individual Studies (1-9)
- FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

- INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits from the following:

- BUS 554 Master's Project (3)*
- INFSY 547 WEB Enabled Technologies (3)
- INFSY 555 Data Management Systems (3)
- INFSY 560 Data Communications Systems and Networks (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and knowledge Discovery (3)
INFSY 570 Software Engineering in the Analysis and Design of Information Systems (3)
INFSY 590 or 890 Colloquium (1-3)
INFSY 596 or 896 Individual Studies (1-9)
INFSY 597 or 897 Special Topics (1-9)

Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
SC&IS 596 Individual Studies (1-9)
SC&IS 597 Special Topics (1-9)

General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits. With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

Grade-point Average and Time Limit

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

Financial aid

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the Graduate Bulletin.

The following are required for applicants:

*The Dickinson School of Law:* Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
**M.B.A. Program:** Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
**Additional Information**

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:

[Law.psu.edu](http://Law.psu.edu)/

[Harrisburg.psu.edu/mba](http://Harrisburg.psu.edu/mba)

**Concurrent Degree Offering with the Penn State College of Medicine Biomedical Sciences Graduate Program**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferred:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

**Concurrent Degree Programs**

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

**Admission Requirements:**
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

*Biomedical Sciences Graduate Program*: Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
**M.B.A. Program:** Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

**Advising of Students**

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at:
http://www2.med.psu.edu/
Harrisburg.psu.edu/mba

ACCOUNTING (ACCT) course list
BUSINESS (BUS) course list
FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list
MANAGEMENT (MNGMT) course list
MARKETING (MRKT) course list
SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty

The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- official transcripts from all post-secondary institutions attended
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the Penn State Harrisburg website.

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

Foundation Courses:
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the [J.D. Admissions](#) section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the [Penn State Dickinson Law website](#). Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.
Advising of Students

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

Tuition

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

Additional Information

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

Integrated B.S. in Accounting/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 571, ACCT 572, ACCT 573, and FINAN 521.

**Integrated B.S. in Finance/M.B.A. Program**
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Information Systems are listed in the *Undergraduate Bulletin*. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560, INFSY 565, INFSY 566, and INFSY 570.

**Integrated B.S. in Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](https://www.gsb.psu.edu/apply), and must meet the [admission requirements of the Graduate School](https://www.gsb.psu.edu/apply), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](https://www.gsb.psu.edu/apply) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

**Integrated B.S. in Marketing/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the admission requirements of the [Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

**Integrated B.S. in Project and Supply Chain Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Penn State Harrisburg
Department or Instructional Area: School of Business Administration

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:

Classification of Instructional Programs (CIP) Code:

Designation of new graduate option:

Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor

Current designation of graduate program:

Current designation of graduate option:

Current designation of graduate minor:

New designation of existing graduate program (if changing): B.S. in Finance and M.B.A. IUG Degree Program

New designation of existing graduate option (if changing):

New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
[/ ] First semester following approval
[/ ] Second semester following approval

Submitted by Graduate Program Head

Dr. Stephen Schappe
Printed name
Signature
Date: 12/4/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Dr. Janet Duck
Printed name
Signature
Date: 12/12/16

Approved by College/School Dean/Chancellor (or Designee):

Dr. Peter Idowu
Printed name
Signature
Date: Dec. 12, 2016
<table>
<thead>
<tr>
<th>Role</th>
<th>Printed name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of John Challis</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>Recommended by Chair, Graduate Council Committee on Programs and Courses:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>Noted by Dean of the Graduate School:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
</tbody>
</table>
Bachelor of Science in Finance and Master of Business Administration

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Business Administration

Penn State Harrisburg

February 11, 2017
B.S. in Finance and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

Executive Summary

A. Objectives of the Proposed IUG Program
   The objectives of the Integrated Undergraduate Graduate Program are to:
   1. Offer qualified students the opportunity to earn both bachelor and master degrees in five years. In particular, IUG students may count up to 12 credits toward their B.S. in Finance and M.B.A. degree requirements.
   2. Permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
   3. Introduce students earlier to the rigors of the graduate program and research of graduate faculty.
   4. Make the resources of the Graduate School available to IUG students.
   5. Allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.
   6. Allow students to coordinate as well as concurrently pursue the two degree programs, which enables them to achieve greater depth and comprehension than if the degrees are pursued sequentially.

B. Summary of Changes
   1. Undergraduate Bulletin description of Finance program is revised to include the proposed IUG program.
   2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG program.
   3. No course changes are part of this proposal.
Table of Contents

I. Introduction ..................................................................................................................................... 1
II. Application Process .................................................................................................................... 1
III. IUG Degree Requirements ...................................................................................................... 3
Appendix A: Bachelor of Science in Finance Degree Requirements .............................................. 5
Appendix B: Bachelor of Science in Finance Typical Schedule ...................................................... 8
Appendix C: Master of Business Administration Degree Requirements ......................................... 9
Appendix D: External Consultation ................................................................................................. 10
Appendix E: B.S. in Finance and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook .......................................................... 20
1. Introduction........................................................................................................................ 21
2. Application Process ........................................................................................................... 21
3. IUG Degree Requirements ................................................................................................. 23
Appendix A: Bachelor of Science in Finance Degree Requirements .............................................. 25
Appendix B: Bachelor of Science in Finance Typical Schedule ...................................................... 28
Appendix C: Master of Business Administration Degree Requirements ......................................... 29
M.B.A. Bulletin Changes .............................................................................................................. 30
1. Brief summary of proposed changes and justification for changes ........................................ 30
2. Current bulletin description ............................................................................................... 30
3. Revised bulletin description ............................................................................................... 42
4. List of courses to be added, modified or dropped in the proposed curriculum ................. 58
B.S. in Finance and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal
School of Business Administration
Penn State Harrisburg

I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Reduced Course Load**
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
### IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Finance and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take four additional credits in their third year, and four fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

---

**Semester V**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FIN 302</td>
<td>Introductory Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>MIS 204</td>
<td>Introduction of Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

**Semester VI**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 351</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 420</td>
<td>Investment and Portfolio Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MIS 390</td>
<td>Information Systems Management and App Business support</td>
<td>3</td>
</tr>
<tr>
<td>Finance elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Semester VII**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 540*</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 530*</td>
<td>Corporate Finance II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester VIII**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>FIN 475</td>
<td>Financial Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>500-level FINAN elective*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester IX**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester X**  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKT 514</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

* Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**  
Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Finance degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.
Student performance will be monitored on an ongoing basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Finance Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  - CAS 100 [3]  Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry I\(^a\)
  - STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\(^a\)

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix\(^b\)

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix\(^b\)

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  - 3 credits of any courses with a GS suffix\(^b\)

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

**General Electives (8 credits)**

8 credits of non-business courses
**Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)**

- **Prescribed Courses (49 credits)**
  - **Business Courses**
    - B A 364Y [3; US/IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  - **Finance Courses (12 credits)**
    - ECON 351 [3] Money and Banking
    - FIN 420 [3] Investment and Portfolio Analysis

- **Additional Courses (21 credits)**
  - **Math, Statistics and Law (12 credits)**
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business
  - **Finance Electives (9 credits)**
    - Select 9 credits from the following list or other finance courses approved by the Program:
      - FIN 306W [3] Investment Valuation
FIN 409 [3] Real Estate Finance and Investment
FIN 461 [3] Portfolio Management and Analysis
FIN 489 [3] Seminar in Finance
FIN 496 [3] Independent Studies

- Supporting Courses and Related Areas (9 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

**Additional Requirements**
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
### Appendix B: Bachelor of Science in Finance Typical Schedule

#### Semester I
- **ENGL 015** or 030 Composition GWS 3
- **MATH 110 or 140** Calculus GQ 4
- Humanities GH 3
- **ECON 102** Introductory Microeconomic Analysis GS 3

Health and Physical Activity GHA 1.5

**Total:** 14.5

#### Semester II
- **CAS 100** Effective Speech GWS 3
- **STAT 200 or SCM 200** Statistics GQ 4
- **MGMT 301** Basic Management concepts 3
- Arts GA 3

Sciences GN 3

**Total:** 16

#### Semester III
- **ACCTG 211** Financial and Managerial Accounting 4
- **MKTG 301** Principles of Marketing 3
- Arts GA 3
- Humanities GH 3
- Sciences GN 3

**Total:** 16

#### Semester IV
- **FIN 301** Corporation Finance 3
- **ENGL 202D** Business Writing 3
- Social and Behavioral Science GS 3
- Sciences GN 3

Non-Business elective 4

**Total:** 16

#### Semester V
- **B A 241** Legal Environment of Business 2
- **B A 242** Social and Ethical of Business 2
- **ECON 104** Introductory Macroeconomics Analysis 3
- **FIN 302** Introductory Financial Modeling 3
- **MIS 204** Introduction of Business Information Systems 3

Health and Physical Activity GHA 1.5

**Total:** 14.5

#### Semester VI
- **ECON 351** Money and Banking 3
- **MIS 390** Information Systems Management and App 3
- **FIN 420** Investment and Portfolio Analysis 3

**Total:** 15

#### Semester VII
- **B A 241** Legal Environment of Business 2
- **SCM 301** Supply Chain Management 3
- Business supporta 3
- Finance electivesb 6

**Total:** 15

#### Semester VIII
- **B A 462** Business Strategy 3
- **FIN 475** Financial Decision Making 3

**Total:** 13

**Bold type** requires a grade of C or better.

*Entry to major requirement

*aBusiness support – select from 200-400 level Business courses from: ACCTG, B A, FIN, MGMT, MIS, MKTG or SCM in consultation with an academic adviser and in support of the student’s interests

Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3] Corporate Finance or Corporate Finance II
- MRKT 514 [3] Strategic Marketing

Electives (9 credits)

- 9 credits of 500- or 800-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3] Organizational Behavior
Appendix D: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA  16563

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven't got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We're ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.

---------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "BALAJI RAJAGOPALAN" <bur14@psu.edu>
Sent: Friday, April 1, 2016 11:37:28 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear School Director Rajagopalan,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456

---------------------------------------
From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Saturday, April 9, 2016 8:10:53 AM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee, sorry for the delay here. Thank you for the information: i had to look over other IUGs to see how things work and I agree this looks like a good addition to your program. I concur with the idea. Good luck!
Al

---------------------------------------

On Fri, Apr 1, 2016 at 12:44 PM Oranee Tawatnuntachai <oxt4@psu.edu> wrote:

Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their graduate degree.

Hope this helps.

Regards,
Oranee

---------------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner
Associate Professor
Academic Director, MBA Program
Black School of Business
Penn State Erie
agw2@psu.edu
814-898-6509

---------------------------------------

On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regards,
Oranee

---------------------------------------

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,

Oranee

-------------------------------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>
Sent: Monday, August 8, 2016 9:09:53 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

Brian H. Cameron | Associate Dean for Professional Graduate Programs | Smeal College of Business | The Pennsylvania State University | University Park, PA 16802 | Phone: 814-863-1460 |
Email: bcameron@smeal.psu.edu

---------------------------------------

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal's accounting IUG is that most students in the program complete at least one internship. Provision is made for this student's academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart  
Department Chair and Smeal Chair Professor in Accounting  
Smeal College of Business  
Penn State  
354B Business Building  
University Park, PA 16802-3603  
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <cwhiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petruzzi <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mig11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff

Jeffery M. Sharp | Associate Dean for Undergraduate Education  
Smeal College of Business | The Pennsylvania State University | 202 Business Building | University Park, PA 16802  
814 863-1947 (Office) | JeffSharp@psu.edu

---------------------------------------
Page 202
Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix E: B.S. in Finance and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook
1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.

2. Earned a minimum of cumulative grade point average of 3.5.

3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Reduced Course Load**

As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
**Semester V**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FIN 302</td>
<td>Introductory Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>MIS 204</td>
<td>Introduction of Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Semester VI**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 351</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>FIN 420</td>
<td>Investment and Portfolio Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MIS 390</td>
<td>Information Systems Management and App Business support</td>
<td>3</td>
</tr>
<tr>
<td>Finance elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16.5</strong></td>
</tr>
</tbody>
</table>

**Semester VII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 540*</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 530*</td>
<td>Corporate Finance II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Semester VIII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>FIN 475</td>
<td>Financial Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>500-level FINAN elective*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Semester IX**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**Semester X**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKT 514</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Finance degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

### 3. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Finance and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take four additional credits in their third year, and four fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Finance Degree Requirements

General Education Requirements (47 credits)

- Writing/Speaking (GWS)
  ENGL 015S or 030 [3] Rhetoric and Composition or Honors Freshmen Composition<sup>a</sup>
  CAS 100 [3] Effective Speech

- Quantitative (GQ)
  MATH 110 or 140 [4] Techniques of Calculus I or Calculus with Analytic Geometry I<sup>a</sup>
  STAT 200 or SCM 200 [4] Elementary Statistics or Introduction to Statistics for Business<sup>a</sup>

- Natural Sciences (GN)
  9 credits of any courses with a GN suffix

- Arts (GA)
  6 credits of any courses with a GA suffix<sup>b</sup>

- Humanities (GH)
  6 credits of any courses with a GH suffix<sup>b</sup>

- Social & Behavioral Sciences (GS)
  ECON 102 [3] Introductory Microeconomic Analysis and Policy<sup>a</sup>
  3 credits of any courses with a GS suffix<sup>b</sup>

- Health & Physical Activities (GHA)
  3 credits of any courses with a GHA suffix

<sup>a</sup>Entry to Major requirements
<sup>b</sup>Students may apply 9-6-3 rule.

General Electives (8 credits)

8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  - Business Courses
    - B A 364Y [3; IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  - Finance Courses (12 credits)
    - ECON 351 [3] Money and Banking
    - FIN 420 [3] Investment and Portfolio Analysis

- Additional Courses (21 credits)
  - Math, Statistics and Law (12 credits)
    Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business
  - Finance Electives (9 credits)
    Select 9 credits from the following list or other finance courses approved by the Program:
    - FIN 306W [3] Investment Valuation
FIN 409 [3]  Real Estate Finance and Investment
FIN 461 [3]  Portfolio Management and Analysis
FIN 489 [3]  Seminar in Finance
FIN 496 [3]  Independent Studies

- Supporting Courses and Related Areas (9 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

Additional Requirements
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
Appendix B: Bachelor of Science in Finance Typical Schedule

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGL 015S or 030 Composition GWS</strong></td>
<td>CAS 100 Effective Speech GWS</td>
</tr>
<tr>
<td><strong>MATH 110 or 140 Calculus GQ</strong></td>
<td><strong>STAT 200 or SCM 200 Statistics GQ</strong></td>
</tr>
<tr>
<td>Humanities GH</td>
<td><strong>MGMT 301 Basic Management concepts</strong></td>
</tr>
<tr>
<td><strong>ECON 102 Introductory Microeconomic Analysis</strong></td>
<td>Arts GA</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>Sciences GN</td>
</tr>
<tr>
<td><strong>14.5</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCTG 211 Financial and Managerial Accounting</strong></td>
<td><strong>FIN 301 Corporation Finance</strong></td>
</tr>
<tr>
<td><strong>MKTG 301 Principles of Marketing</strong></td>
<td>ENGL 202D Business Writing</td>
</tr>
<tr>
<td>Arts GA</td>
<td>Social and Behavioral Science GQ</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>Sciences GN</td>
</tr>
<tr>
<td>Sciences GN</td>
<td>Non-Business elective</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>ECON 351 Money and Banking</td>
</tr>
<tr>
<td>B A 242 Social and Ethical of Business</td>
<td>FIN 420 Investment and Portfolio Analysis</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomics Analysis</td>
<td>MIS 390 Information Systems Management and App</td>
</tr>
<tr>
<td>FIN 302 Introductory Financial Modeling</td>
<td>Business support&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>MIS 204 Introduction of Business Information Systems</td>
<td>Finance elective&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>B A 462 Business Strategy</td>
</tr>
<tr>
<td>SCM 301 Supply Chain Management</td>
<td>FIN 475 Financial Decision Making</td>
</tr>
<tr>
<td>Business support&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Business support&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Finance electives&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Non-Business elective</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

<sup>a</sup>Business support – select from 200–400 level Business courses from: ACCTG, B A, FIN, MGMT, MIS, MKTG or SCM in consultation with an academic adviser and in support of the student’s interests

Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

**Prescribed Courses (21 credits)**

- FINAN 521 or 530 [3]  Corporate Finance or Corporate Finance II
- MRKT 514 [3]    Strategic Marketing

**Electives (9 credits)**

- 9 credits of 500-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

**Foundation Courses (up to 18 credits)**

- MNGMT 511 [3]    Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

We propose an Integrated Undergraduate Graduate (IUG) program in Finance at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.

The Graduate Faculty

The Program

The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
**Admission Requirements**

Admission requirements listed here are in addition to requirements stated in the *GENERAL INFORMATION* section of the *Graduate Bulletin*.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit [www.mba.com](http://www.mba.com) for more information about the GMAT or [www.ets.org/gre](http://www.ets.org/gre) for information about the GRE.

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at [www.hbg.psu.edu](http://www.hbg.psu.edu/).

**International Students**

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
Application Dates

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Preparation for the Program

Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session.
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

Foundation Courses:
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

Degree Requirements

Requirements listed here are in addition to requirements stated in the Degree Requirements section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INF SY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling mangers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

**Tracks:**

**Accounting:** The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 504 Auditing Theory and Practice (3)
- ACCT 510 Business Tax Planning: Theory and Practice (3)
- ACCT 532 Accounting Information and Decision Systems (3)
- ACCT 545 Strategic Cost Management (3)
- ACCT 561 Financial Statement Analysis II (3)
- ACCT 572 Financial Reporting I (3)
- ACCT 573 Financial Reporting II (3)
- ACCT 590 or 890 Colloquium (1-3)
- ACCT 596 or 896 Individual Studies (1-9)
- BUS 554 Master's Project (3)*
- ACCT 597 or 897 Special Topics (1-9)

Business Analytics: The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

- BUS554 Master's Project (3)*
- INFSY 535 Object-Oriented Design and Program Development in Business (3)
- INFSY 555 Data Management Systems (3)
- INFSY 565 Intelligent Systems in Business (3)
- INFSY 566 Data Mining and Knowledge Discovery (3)
- INFSY 896 Individual Studies (1-9)*
- MRKT 572 Marketing Research (3)
- SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
- BUS 554 Master's Project (3)*
- FINAN 518 Financial Markets and the Economy (3)
- FINAN 522 Investment and Portfolio Management (3)
- FINAN 523 Risk Management of Modern Financial Institutions (3)
- FINAN 526 International Finance (3)
- FINAN 527 Derivative Securities (3)
- FINAN 530 Advanced Corporate Finance (3)**
- FINAN 531 Managing Financial Operations (3)
- FINAN 590 or 890 Colloquium (1-3)
- FINAN 596 or 896 Individual Studies (1-9)
- FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

- INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits from the following:

- BUS 554 Master's Project (3)*
- INFSY 547 WEB Enabled Technologies (3)
- INFSY 555 Data Management Systems (3)
- INFSY 560 Data Communications Systems and Networks (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and knowledge Discovery (3)
INFSY 570 Software Engineering in the Analysis and Design of Information Systems (3)
INFSY 590 or 890 Colloquium (1-3)
INFSY 596 or 896 Individual Studies (1-9)
INFSY 597 or 897 Special Topics (1-9)

Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits. With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

Grade-point Average and Time Limit

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

Financial aid

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is *recommended for* and *applies for* admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The following are required for applicants:

*The Dickinson School of Law:* Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
**M.B.A. Program:** Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
**Additional Information**

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:

Law.psu.edu/
Harrisburg.psu.edu/mba

**Concurrent Degree Offering with the Penn State College of Medicine Biomedical Sciences Graduate Program**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferred:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

**Concurrent Degree Programs**

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

**Admission Requirements:**
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

*Biomedical Sciences Graduate Program:* Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
**M.B.A. Program:** Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

**Advising of Students**

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at:
http://www2.med.psu.edu/
Harrisburg.psu.edu/mba

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list

INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty

The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- official transcripts from all post-secondary institutions attended
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the Penn State Harrisburg website.

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of “4” or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

Foundation Courses:  
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

Joint Degree Offering with the Penn State Dickinson School of Law

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

Joint Degree Programs

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

Admission Requirements

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the J.D. Admissions section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the Penn State Dickinson Law website. Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.
Advising of Students

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

Tuition

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

Additional Information

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

Integrated B.S. in Accounting/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 571, ACCT 572, ACCT 573, and FINAN 521.

Integrated B.S. in Finance/M.B.A. Program
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Information Systems are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560, INFSY 565, INFSY 566, and INFSY 570.

**Integrated B.S. in Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

Integrated B.S. in Marketing/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

Integrated B.S. in Project and Supply Chain Management/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

<table>
<thead>
<tr>
<th>College/School:</th>
<th>Penn State Harrisburg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department or Instructional Area:</td>
<td>School of Business Administration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Graduate Program, Option, or Minor:</th>
<th>Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation of new graduate program:</td>
<td></td>
</tr>
<tr>
<td>Classification of Instructional Programs (CIP) Code:</td>
<td></td>
</tr>
<tr>
<td>Designation of new graduate option:</td>
<td></td>
</tr>
<tr>
<td>Designation of new graduate minor:</td>
<td></td>
</tr>
</tbody>
</table>

Indicate effective semester:
- [ ] First semester following approval
- [ ] Second semester following approval

<table>
<thead>
<tr>
<th>Existing Graduate Program Option, or Minor:</th>
<th>Change</th>
<th>Drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current designation of graduate program:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current designation of graduate option:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current designation of graduate minor:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New designation of existing graduate program (if changing): B.S. in Information Systems and M.B.A. IUG Degree Program
New designation of existing graduate option (if changing): |
New designation of existing graduate minor (if changing): |

Brief description of the change (if not noted above):

Indicate effective semester:
- [ ] First semester following approval
- [ ] Second semester following approval

Submitted by Graduate Program Head

[Signature]

Date: 12/6/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Dr. Janet Duck
[Signature]

Date: 12/12/14

Approved by College/School Dean/Chancellor (or Designee):

Dr. Peter Idowu
[Signature]

Date: Dec. 12, 2016
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

<table>
<thead>
<tr>
<th>On Behalf of John Challis</th>
<th>Volunteer</th>
<th>Date: 4/4/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

Recommended by Chair, Graduate Council Committee on Programs and Courses:

<table>
<thead>
<tr>
<th>On Behalf of M. Kathleen Heid</th>
<th>Volunteer</th>
<th>Date: 4/4/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

Noted by Dean of the Graduate School:

<table>
<thead>
<tr>
<th>On Behalf of Regina Vasilatos-Younken</th>
<th>Volunteer</th>
<th>Date: 4/4/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>
Bachelor of Science in Information Systems and Master of Business Administration

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Business Administration

Penn State Harrisburg

February 11, 2017
B.S. in Information Systems and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

Executive Summary

A. Objectives of the Proposed IUG Program
The objectives of the Integrated Undergraduate Graduate Program are to:
1. Offer qualified students the opportunity to earn both bachelor and master degrees in five years. In particular, IUG students may count up to 12 credits toward their B.S. in Information Systems and M.B.A. degree requirements.
2. Permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. Introduce students earlier to the rigors of the graduate program and research of graduate faculty.
4. Make the resources of the Graduate School available to IUG students.
5. Allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.
6. Allow students to coordinate as well as concurrently pursue the two degree programs, which enables them to achieve greater depth and comprehension than if the degrees are pursued sequentially.

B. Summary of Changes
1. Undergraduate Bulletin description of Information Systems program is revised to include the proposed IUG program.
2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG program.
3. No course changes are part of this proposal.
Table of Contents

I. Introduction .................................................................................................................................. 1
II. Application Process ................................................................................................................ 1
III. IUG Degree Requirements ........................................................................................................ 3
Appendix A: Bachelor of Science in Information Systems Degree Requirements .................... 5
Appendix B: Bachelor of Science in Information Systems Typical Schedule ................................. 8
Appendix C: Master of Business Administration Degree Requirements ..................................... 9
Appendix D: External Consultation ................................................................................................. 10
Appendix E: B.S. in Information Systems and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook .................................................................................................................... 20
  1. Introduction .......................................................................................................................... 21
  2. Application Process .............................................................................................................. 21
  3. IUG Degree Requirements ................................................................................................. 23
Appendix A: Bachelor of Science in Information Systems Degree Requirements .................... 25
Appendix B: Bachelor of Science in Information Systems Typical Schedule ................................. 28
Appendix C: Master of Business Administration Degree Requirements ..................................... 29
M.B.A. Bulletin Changes.................................................................................................................. 30
  1. Brief summary of proposed changes and justification for changes ...................................... 30
  2. Current bulletin description .................................................................................................. 30
  3. Revised bulletin description ............................................................................................... 42
  4. List of courses to be added, modified or dropped in the proposed curriculum ................. 58
I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load

As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.

- ECON 102 [3] Introductory Microeconomic Analysis and Policy
- ENGL 015 or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
- FIN 301 [3] Corporation Finance
- MKTG 301 [3] Principles of Marketing
### Semester V

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MIS 307</td>
<td>Algorithmic Concepts</td>
<td>3</td>
</tr>
<tr>
<td>MIS 465</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>17.5</strong></td>
</tr>
</tbody>
</table>

### Semester VI

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INFSY elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MIS 448</td>
<td>Business Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Semester VII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 530*</td>
<td>Corporate Finance II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester VIII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MIS 450</td>
<td>System Design Project</td>
<td>3</td>
</tr>
<tr>
<td>500-level INFSY elective*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>500-level INFSY elective*</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester IX

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 540</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

### Semester X

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKT 514</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Information Systems degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

### III. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Information Systems and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the *Reduced Course Load* section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take five additional credits in their third year, and five fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Information Systems Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
  - CAS 100 [3] Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4] Techniques of Calculus I or Calculus with Analytic Geometry I
  - STAT 200 or SCM 200 [4] Elementary Statistics or Introduction to Statistics for Business

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3] Introductory Microeconomic Analysis and Policy
  - 3 credits of any courses with a GS suffix

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

*aEntry to Major requirements
*bStudents may apply 9-6-3 rule.

**General Electives (8 credits)**

- 8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  - Business Courses (37 credits)
    - BA 364Y [3; US/IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  - Information Systems Courses (12 credits)
    - MIS 448 [3] Business Data Communications

- Additional Courses (24 credits)
  - Math, Statistics and Law (12 credits)
    - Select 3 credits from CMPSC 101 [3; GQ] or CMPSC 121 [3; GQ] or IST 140 [3]
    - CMPSC 101 [3] Introduction to C++ Programming
    - CMPSC 121 [3] Introduction to Programming Techniques
    - IST 140 [3] Introduction to Application Development
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - BA 243 [4] Social, Legal, and Ethical Environment for Business
  - Information Systems Electives (9 credits)
    - Select 9 credits from one of the following three areas of concentration A, B, or C:
      - A. Application Development Concentration
MIS 413 [3] Interface Design for Information Systems
Applications
MIS 489 [3] Seminar in Information Systems

B. Network Security Concentration
MIS 489 [3] Seminar in Information Systems

C. Individualized Concentration
MIS 413 [3] Interface Design for Information Systems
Applications
MIS 446 [3] Information Technology and Business Strategy
MIS 489 [3] Seminar in Information Systems

- Supporting Courses and Related Areas (9 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

Additional Requirements
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
# Appendix B: Bachelor of Science in Information Systems Typical Schedule

## Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 015 or 030 Composition</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110 or 140 Calculus GQ</td>
<td>4</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>3</td>
</tr>
<tr>
<td>ECON 102 Introductory Microeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15.5</strong></td>
</tr>
</tbody>
</table>

## Semester II

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100 Effective Speech GWS</td>
<td>3</td>
</tr>
<tr>
<td>*STAT 200 or SCM 200 Statistics GQ</td>
<td>4</td>
</tr>
<tr>
<td>*MGMT 301 Basic Management concepts</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

## Semester III

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACCTG 211 Financial and Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>*MKTG 301 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MIS 204 Introduction of Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Humanities GH</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences GS</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

## Semester IV

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*FIN 301 Corporation Finance</td>
<td>3</td>
</tr>
<tr>
<td>IST 140 or CMPSC 101 or CMPSC 121</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Programming GQ</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 202D Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td>3</td>
</tr>
<tr>
<td>MIS 390 Information Systems Management and App</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

## Semester V

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242 Social and Ethical of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MIS 307 Algorithmic Concepts</td>
<td>3</td>
</tr>
<tr>
<td>MIS 465 Database Management</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

## Semester VI

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 301 Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INFYS elective</td>
<td>3</td>
</tr>
<tr>
<td>MIS 448 Business Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

## Semester VII

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems elective</td>
<td>3</td>
</tr>
<tr>
<td>Business support</td>
<td>6</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

## Semester VIII

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462 Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MIS 450 System Design Project</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems elective</td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

*Business support – select from 200-400 level Business courses from: B A, FIN, MIS, MGMT, MKTG, SCM or ACCTG in consultation with an academic adviser and in support of the student’s interests

*Information Systems elective – select from one of the following three areas of concentration A, B, or C:

A. Application Development Concentration - IST 302 IT Project Management; IST 413 Interface Design for Information Systems Applications; IST 466 Business Programming for the WEB; MIS 489 Seminar in Information Systems


C. Individualized Concentration - IST 302 IT Project Management; IST 451 Network Security; IST 456 Information Security Management; MIS 413 Interface Design for Information Systems Applications; MIS 446 Information Technology and Business Strategy; MIS 461 Web Technologies; MIS 466 Business Programming for the WEB; MIS 489 Seminar in Information Systems
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3] Corporate Finance or Corporate Finance II
- MRKT 514 [3] Strategic Marketing

Electives (9 credits)

- 9 credits of 500- or 800-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3] Organizational Behavior
Appendix D: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA  16563

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven't got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We're ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.

-------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "BALAJI RAJAGOPALAN" <bur14@psu.edu>
Sent: Friday, April 1, 2016 11:37:28 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear School Director Rajagopalan,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456

-------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Saturday, April 9, 2016 8:10:53 AM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee, sorry for the delay here. Thank you for the information: i had to look over other IUGs to see how things work and I agree this looks like a good addition to your program. I concur with the idea. Good luck!
On Fri, Apr 1, 2016 at 12:44 PM Oranee Tawatnuntachai <oxt4@psu.edu> wrote:

Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their graduate degree.

Hope this helps.

Regards,
Oranee

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner
Associate Professor
Academic Director, MBA Program
Black School of Business
Penn State Erie
agw2@psu.edu
814-898-6509

On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regards,
Oranee

---------------------------------------

From: "JAMES A NEMES"<jan16@psu.edu>
To: "Oranee Tawatnuntachai"<oxt4@psu.edu>
Cc: "Stephen Schappe"<sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachaimailto:oxt4@psu.edu
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe<sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,

Oranee

---------------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>  
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>  
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>  
Sent: Monday, August 8, 2016 9:09:53 AM  
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

Brian H. Cameron | Associate Dean for Professional Graduate Programs | Smeal College of Business | The Pennsylvania State University | University Park, PA 16802 | Phone: 814-863-1460 | Email: bcameron@smeal.psu.edu

---------------------------------------

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal’s accounting IUG is that most students in the program complete at least one internship. Provision is made for this student’s academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart
Department Chair and Smeal Chair Professor in Accounting
Smeal College of Business
Penn State
354B Business Building
University Park, PA 16802-3603
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <cwhiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petrucci <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mjg11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff
Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix E: B.S. in Information Systems and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook
B. S. in Information Systems and M.B.A.
Integrated Undergraduate-Graduate (IUG) Degree Program
School of Business Administration
Penn State Harrisburg, the Capital College

1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
• ECON 102 [3] Introductory Microeconomic Analysis and Policy
• ENGL 015 or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
• FIN 301 [3] Corporation Finance
• MGMT 301 [3] Basic Management Concepts
• MKTG 301 [3] Principles of Marketing

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
Eligibility for a Graduate Assistantship
Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Information Systems degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

3. IUG Degree Requirements
Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Information Systems and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take five additional credits in their third year, and five fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>SCM 301 Supply Chain Management</td>
</tr>
<tr>
<td>B A 242 Social and Ethical of Business</td>
<td>INFSY elective</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomics Analysis</td>
<td>MIS 448 Business Telecommunications</td>
</tr>
<tr>
<td>MIS 307 Algorithmic Concepts</td>
<td>Sciences GN</td>
</tr>
<tr>
<td>MIS 465 Database Management</td>
<td>Non-Business elective</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>Arts GA</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>17</td>
</tr>
</tbody>
</table>

| 17.5 |

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>B A 462 Business Strategy</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>MIS 450 System Design Project</td>
</tr>
<tr>
<td>INFSY 540* Information Resources Management</td>
<td>500-level INFSY elective*</td>
</tr>
<tr>
<td>FINAN 530* Corporate Finance II</td>
<td>500-level INFSY elective*</td>
</tr>
</tbody>
</table>

| 12 |

<table>
<thead>
<tr>
<th>Semester IX</th>
<th>Semester X</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 540 Accounting for Managerial Decisions</td>
<td>MRKT 514 Strategic Marketing</td>
</tr>
<tr>
<td>BUS 510 Business Analytics and Decision Modeling</td>
<td>BUS 588 Strategic Management</td>
</tr>
<tr>
<td>BUS 515 Business Ethics, Governance and Law</td>
<td>500- or 800-level Elective</td>
</tr>
</tbody>
</table>

| 9 |

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Information Systems Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  - CAS 100 [3]  Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry \(^a\)
  - STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\(^a\)

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix\(^b\)

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix\(^b\)

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  - 3 credits of any courses with a GS suffix\(^b\)

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

**General Electives (8 credits)**

8 credits of non-business courses
**Major Requirements** (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  - Business Courses (37 credits)
    
    B A 364Y [3; US/IL]  International Business and Society
    ECON 102 [3; GS]  Introductory Microeconomic Analysis and Policy
    ECON 104 [3]  Introductory Macroeconomic Analysis and Policy
    ENGL 202D [3; GWS]  Effective Writing: Business Writing
    FIN 301 [3]  Corporation Finance
    MGMT 301 [3]  Basic Management Concepts
    MIS 204 [3]  Introductory to Business Information Systems
    MKTG 301 [3]  Principles of Marketing
    SCM 301 [3]  Supply Chain Management
  
  - Information Systems Courses (12 credits)
    
    MIS 448 [3]  Business Data Communications

- Additional Courses (24 credits)
  - Math, Statistics and Law (12 credits)
    
    Select 3 credits from CMPSC 101 [3; GQ] or CMPSC 121 [3; GQ] or IST 140 [3]
    CMPSC 101 [3]  Introduction to C++ Programming
    CMPSC 121 [3]  Introduction to Programming Techniques
    IST 140 [3]  Introduction to Application Development
    Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    B A 243 [4]  Social, Legal, and Ethical Environment for Business

- Information Systems Electives (9 credits)
  
  Select 9 credits from one of the following three areas of concentration A, B, or C:
  
  A. Application Development Concentration
MIS 413 [3] Interface Design for Information Systems Applications
MIS 489 [3] Seminar in Information Systems

B. Network Security Concentration
MIS 489 [3] Seminar in Information Systems

C. Individualized Concentration
MIS 413 [3] Interface Design for Information Systems Applications
MIS 446 [3] Information Technology and Business Strategy
MIS 489 [3] Seminar in Information Systems

• Supporting Courses and Related Areas (9 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

Additional Requirements
• First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
• United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
• Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
• No more than 60 credits should be from business and business-related courses.
### Appendix B: Bachelor of Science in Information Systems Typical Schedule

#### Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 015</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>or 030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*MATH 110 or 140</td>
<td>Calculus GQ</td>
<td>4</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>*ECON 102</td>
<td>Introductory Microeconomic Analysis GS</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

#### Semester II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100</td>
<td>Effective Speech GWS</td>
<td>3</td>
</tr>
<tr>
<td>*STAT 200 or SCM 200</td>
<td>Statistics GQ</td>
<td>4</td>
</tr>
<tr>
<td>*MGMT 301</td>
<td>Basic Management concepts</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

#### Semester III

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACCTG 211</td>
<td>Financial and Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>*MKTG 301</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MIS 204</td>
<td>Introduction of Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences GS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

#### Semester IV

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>*FIN 301</td>
<td>Corporation Finance</td>
<td>3</td>
</tr>
<tr>
<td>IST 140 or CMPSC 101 or CMPSC 121</td>
<td>Introduction to Programming GQ</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 202D</td>
<td>Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MIS 390</td>
<td>Information Systems Management and App</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### Semester V

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomic Analysis GS</td>
<td>3</td>
</tr>
<tr>
<td>MIS 307</td>
<td>Algorithmic Concepts</td>
<td>3</td>
</tr>
<tr>
<td>MIS 465</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

#### Semester VI

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INF SY elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MIS 448</td>
<td>Business Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### Semester VII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Business support</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### Semester VIII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MIS 450</td>
<td>System Design Project</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

*Business support – select from 200–400 level Business courses from: B A, FIN, MIS, MGMT, MKTG, SCM or ACCTG in consultation with an academic adviser and in support of the student’s interests

*Information Systems elective – select from one of the following three areas of concentration A, B, or C:

A. Application Development Concentration - IST 302 IT Project Management; IST 413 Interface Design for Information Systems Applications; IST 466 Business Programming for the WEB; MIS 489 Seminar in Information Systems


C. Individualized Concentration - IST 302 IT Project Management; IST 451 Network Security; IST 456 Information Security Management; MIS 413 Interface Design for Information Systems Applications; MIS 446 Information Technology and Business Strategy; MIS 461 Web Technologies; MIS 466 Business Programming for the WEB; MIS 489 Seminar in Information Systems
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3]  Corporate Finance or Corporate Finance II
- MRKT 514 [3]    Strategic Marketing

Electives (9 credits)

- 9 credits of 500-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3]   Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

We propose an Integrated Undergraduate Graduate (IUG) program in Information Systems at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.

The Graduate Faculty

The Program

The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
**Admission Requirements**

Admission requirements listed here are in addition to requirements stated in the General Information section of the Graduate Bulletin.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit www.mba.com for more information about the GMAT or www.ets.org/gre for information about the GRE).

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at www.hbg.psu.edu/.

**International Students**

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
Application Dates

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Preparation for the Program

Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session.
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

**Degree Requirements**
Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

*Prescribed Courses:* 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INF SY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

*Elective Courses/Tracks:* 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

**Tracks:**

**Accounting:** The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 504 Auditing Theory and Practice (3)
- ACCT 510 Business Tax Planning: Theory and Practice (3)
- ACCT 532 Accounting Information and Decision Systems (3)
- ACCT 545 Strategic Cost Management (3)
- ACCT 561 Financial Statement Analysis II (3)
- ACCT 572 Financial Reporting I (3)
- ACCT 573 Financial Reporting II (3)
- ACCT 590 or 890 Colloquium (1-3)
- ACCT 596 or 896 Individual Studies (1-9)
- ACCT 597 or 897 Special Topics (1-9)
- BUS 554 Master's Project (3)*

**Business Analytics:** The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

- BUS554 Master's Project (3)*
- INFSY 535 Object-Oriented Design and Program Development in Business (3)
- INFSY 555 Data Management Systems (3)
- INFSY 565 Intelligent Systems in Business (3)
- INFSY 566 Data Mining and Knowledge Discovery (3)
- INFSY 896 Individual Studies (1-9)*
- MRKT 572 Marketing Research (3)
- SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
BUS 554 Master's Project (3)*
FINAN 518 Financial Markets and the Economy (3)
FINAN 522 Investment and Portfolio Management (3)
FINAN 523 Risk Management of Modern Financial Institutions (3)
FINAN 526 International Finance (3)
FINAN 527 Derivative Securities (3)
FINAN 530 Advanced Corporate Finance (3)**
FINAN 531 Managing Financial Operations (3)
FINAN 590 or 890 Colloquium (1-3)
FINAN 596 or 896 Individual Studies (1-9)
FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits from the following:

BUS 554 Master's Project (3)*
INFSY 547 WEB Enabled Technologies (3)
INFSY 555 Data Management Systems (3)
INFSY 560 Data Communications Systems and Networks (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and knowledge Discovery (3)
INFSY 570 Software Engineering in the Analysis and Design of Information Systems (3)
INFSY 590 or 890 Colloquium (1-3)
INFSY 596 or 896 Individual Studies (1-9)
INFSY 597 or 897 Special Topics (1-9)

Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. **Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits.** With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.*

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.**

**Transfer Credit and Course Substitutions**

*Transfer Credits:* Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

*Course substitutions:* Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Grade-point Average and Time Limit**

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

**Financial aid**

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The following are required for applicants:

*The Dickinson School of Law:* Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
**M.B.A. Program**: Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
Additional Information

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:
Law.psu.edu/
Harrisburg.psu.edu/mba

Concurrent Degree Offering with the Penn State College of Medicine
Biomedical Sciences Graduate Program

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferred:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

Concurrent Degree Programs

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

Admission Requirements:
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

Biomedical Sciences Graduate Program: Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
**M.B.A. Program:** Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

**Advising of Students**

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at: http://www2.med.psu.edu/ Harrisburg.psu.edu/mba

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list

INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty

The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- official transcripts from all post-secondary institutions attended
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the Penn State Harrisburg website.

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
**Analytic Skills Requirement:** Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

**Computer Skills Requirement:** Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

**Communications Skills Requirement:** Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of “4” or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration  
Penn State Dickinson School of Law

Degrees Conferred:  
J.D. (Dickinson Law)  
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the J.D. Admissions section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the Penn State Dickinson Law website. Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.


**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

**Additional Information**

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

**Integrated B.S. in Accounting/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 571, ACCT 572, ACCT 573, and FINAN 521.

**Integrated B.S. in Finance/M.B.A. Program**
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Information Systems are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560, INFSY 565, INFSY 566, and INFSY 570.

**Integrated B.S. in Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

Integrated B.S. in Marketing/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

**Integrated B.S. in Project and Supply Chain Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Penn State Harrisburg
Department or Instructional Area: School of Business Administration

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:

Designation of new graduate option:

Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor ✓ Change ☐ Drop

Current designation of graduate program:

Current designation of graduate option:

Current designation of graduate minor:

New designation of existing graduate program (if changing): B.S. in Management and M.B.A. IUG Degree Program

New designation of existing graduate option (if changing):

New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
 ✓ First semester following approval
☐ Second semester following approval

Submitted by Graduate Program Head

Dr. Stephen Schappe
Printed name
Signature Date: 12/4/14

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Dr. Janet Duck
Printed name
Signature Date: 12/1/16

Approved by College/School Dean/Chancellor (or Designee):

Dr. Peter Idowu
Printed name
Signature Date: Dec. 12, 2016
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of John Challis
Printed name: [Unreadable]
Signature: [Unreadable]
Date: 4/4/2017

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of M. Kathleen Heid
Printed name: [Unreadable]
Signature: [Unreadable]
Date: 4/4/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken
Printed name: [Unreadable]
Signature: [Unreadable]
Date: 4/4/2017
Bachelor of Science in Management and Master of Business Administration
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

School of Business Administration
Penn State Harrisburg
February 11, 2017
Executive Summary

A. Objectives of the Proposed IUG Program
   The objectives of the Integrated Undergraduate Graduate Program are to:
   1. Offer qualified students the opportunity to earn both bachelor and master degrees in five
      years. In particular, IUG students may count up to 12 credits toward their B.S. in
      Management and M.B.A. degree requirements.
   2. Permit coherent planning of studies through the graduate degree, with advising informed
      by not only the requirements of the baccalaureate program, but also the longer-range
      goals of the graduate degree.
   3. Introduce students earlier to the rigors of the graduate program and research of graduate
      faculty.
   4. Make the resources of the Graduate School available to IUG students.
   5. Allow students with IUG status to benefit from their association with graduate students
      whose level of work and whose intensity of interest and commitment parallel their own.
   6. Allow students to coordinate as well as concurrently pursue the two degree programs,
      which enables them to achieve greater depth and comprehension than if the degrees are
      pursued sequentially.

B. Summary of Changes
   1. Undergraduate Bulletin description of Management program is revised to include the
      proposed IUG program.
   2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG
      program.
   3. No course changes are part of this proposal.
# Table of Contents

I. Introduction ............................................................................................................................. 1  
II. Application Process ................................................................................................................. 1  
III. IUG Degree Requirements ................................................................................................. 3  
  
  Appendix A: Bachelor of Science in Management Degree Requirements .......................... 5  
  Appendix B: Bachelor of Science in Management Typical Schedule ...................................... 8  
  Appendix C: Master of Business Administration Degree Requirements ........................... 9  
  Appendix D: External Consultation ......................................................................................... 10  
  
Appendix E: B.S. in Management and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook ...................................................................................................................................... 20  
  1. Introduction.................................................................................................................. 21  
  2. Application Process .................................................................................................. 21  
  3. IUG Degree Requirements ....................................................................................... 23  
  
  Appendix A: Bachelor of Science in Management Degree Requirements .................. 25  
  Appendix B: Bachelor of Science in Management Typical Schedule ............................. 28  
  Appendix C: Master of Business Administration Degree Requirements .................... 29  
  
M.B.A. Bulletin Changes.............................................................................................................. 30  
  1. Brief summary of proposed changes and justification for changes ............................ 30  
  2. Current bulletin description ....................................................................................... 30  
  3. Revised bulletin description ....................................................................................... 42  
  4. List of courses to be added, modified or dropped in the proposed curriculum .......... 58
B.S. in Management and MBA  
Integrated Undergraduate-Graduate (IUG)  
Degree Program Proposal  
School of Business Administration  
Penn State Harrisburg

I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited and all final admission decisions are at the discretion of the School of Business Administration. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits, with a minimum of 24 credits taken at Penn State. Students who have completed fewer than 24 credits at Penn State must take GMAT and earn a score of at least 450. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.

2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
   - ECON 102 [3] Introductory Microeconomic Analysis and Policy
   - ENGL 015 or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
   - FIN 301 [3] Corporation Management
   - MKTG 301 [3] Principles of Marketing

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program unless noted above; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Reduced Course Load**
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level and be listed as Business courses. Below shows a sample sequence of coursework for the fourth and fifth year.
### IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Management and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first three years of the IUG program are identical to the first three years of the Bachelor of Science program, listed in Appendix B. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program because of the inclusion of courses that count toward the Master of Business Administration degree requirements.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be
put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Management Degree Requirements

General Education Requirements (47 credits)

- Writing/Speaking (GWS)
  ENGL 015S or 030 [3]  Rhetoric and Composition or
  Honors Freshmen Composition\(^a\)
  CAS 100 [3]  Effective Speech

- Quantitative (GQ)
  MATH 110 or 140 [4]  Techniques of Calculus I or
  Calculus with Analytic Geometry I\(^a\)
  STAT 200 or SCM 200 [4]  Elementary Statistics or
  Introduction to Statistics for Business\(^a\)

- Natural Sciences (GN)
  9 credits of any courses with a GN suffix

- Arts (GA)
  6 credits of any courses with a GA suffix\(^b\)

- Humanities (GH)
  6 credits of any courses with a GH suffix\(^b\)

- Social & Behavioral Sciences (GS)
  ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  3 credits of any courses with a GS suffix\(^b\)

- Health & Physical Activities (GHA)
  3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

General Electives (8 credits)

8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  
  o Business Courses
    - B A 364Y [3; US/IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Management
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  
  o Management Courses (9 credits)
    - MGMT 433 [3] Leadership and Teambuilding
    - MGMT 466 [3] Organizational Learning & Knowledge Management
  
- Additional Courses (21 credits)
  
  o Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business
  
  o Management Electives (9 credits)
    - Select 9 credits from one of the following three areas of concentration A, B, C:
      A. Human Resource Management Concentration
        - MGMT 440(3), MGMT 450(3)
        - Select 3 credits in MGMT at the 300-400 level from department list
      B. Entrepreneurship Concentration
        - MGMT 431(3), MGMT 453(3)
        - Select 3 credits in MGMT at the 300-400 level from department list in
C. Individualized Concentration
Select 9 credits in MGMT at the 300-400 level from department list in consultation with academic adviser

- Supporting Courses and Related Areas (9 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

Additional Requirements
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
## Appendix B: Bachelor of Science in Management Typical Schedule

### Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ENGL 015S</em> or 030 Composition GWS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>*MATH 110 or 140 Calculus GQ</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Humanities GH</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>*ECON 102 Introductory Microeconomic Analysis GS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>14.5</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100 Effective Speech GWS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>*STAT 200 or SCM 200 Statistics GQ</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>*MGMT 301 Basic Management concepts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Arts GA</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester III

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACCTG 211 Financial and Managerial Accounting</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>*MKTG 301 Principles of Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Arts GA</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities GH</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester IV

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*FIN 301 Corporation Finance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIS 204 Business Information Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENGL 202D Business Writing GWS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences GN</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester V

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ECON 104 Macroeconomic Analysis and Policy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SCM 301 Supply Chain Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>*MGMT 341 Human Resource Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>14.5</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester VI

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 433 Leadership and Team Building</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MGMT 466 Org Learning and Knowledge Mgmt</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIS 390 Information Systems Management and App</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MGMT 440 Advanced Human Resources</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or MGMT 431 Ent and Small Business Mgmt</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or select 3 credits in MGMT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester VII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MGMT 450 Labor Management Relations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or MGMT 453 Creativity and Innovation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or select 3 credits in MGMT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester VIII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462 Business Strategy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, Management, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, Management, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3]  Corporate Management or Corporate Management II
- MRKT 514 [3]   Strategic Marketing

Electives (9 credits)

- 9 credits of 500- or 800-level electives in accounting, business analytics, Management, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3]    Organizational Behavior
Appendix D: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA 16563

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven't got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We're ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.

---------------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "BALAJI RAJAGOPALAN" <bur14@psu.edu>
Sent: Friday, April 1, 2016 11:37:28 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear School Director Rajagopalan,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456

---------------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Saturday, April 9, 2016 8:10:53 AM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee, sorry for the delay here. Thank you for the information: i had to look over other IUGs to see how things work and I agree this looks like a good addition to your program. I concur with the idea. Good luck!
Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their graduate degree.

Hope this helps.

Regards,
Oranee

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner
Associate Professor
Academic Director, MBA Program
Black School of Business
Penn State Erie
agw2@psu.edu
814-898-6509

On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regard,
Oranee

---------------------------------------

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,

Oranee

---------------------------------------------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>
Sent: Monday, August 8, 2016 9:09:53 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

Brian H. Cameron | Associate Dean for Professional Graduate Programs | Smeal College of Business | The Pennsylvania State University | University Park, PA 16802 | Phone: 814-863-1460 |
Email: bcameron@smeal.psu.edu

---------------------------------------

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal’s accounting IUG is that most students in the program complete at least one internship. Provision is made for this student’s academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart  
Department Chair and Smeal Chair Professor in Accounting  
Smeal College of Business  
Penn State  
354B Business Building  
University Park, PA 16802-3603  
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <cwhiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petrucci <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mjg11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff

Jeffery M. Sharp | Associate Dean for Undergraduate Education  
Smeal College of Business | The Pennsylvania State University | 202 Business Building | University Park, PA 16802  
814 863-1947 (Office) | JeffSharp@psu.edu

---------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: jeffsharp@psu.edu
Cc: "Stephen Schappe" <sxs28@psu.edu>, "Jane Kochanov" <jxs121@psu.edu>, "GIRISH SUBRAMANIAN" <ghs2@psu.edu>, "Thomas E. Buttross" <teb11@psu.edu>
Sent: Friday, April 1, 2016 11:35:45 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix E: B.S. in Management and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook
1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited and all final admission decisions are at the discretion of the School of Business Administration. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits, with a minimum of 24 credits taken at Penn State. Students who have completed fewer than 24 credits at Penn State must take GMAT and earn a score of at least 450. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.

2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
   - ECON 102 [3]   Introductory Microeconomic Analysis and Policy
   - ENGL 015 or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition
   - FIN 301 [3]   Corporation Management
   - MKTG 301 [3]   Principles of Marketing

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program unless noted above; however, if students are interested in applying for a graduate assistants, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level and be listed as Business courses. Below shows a sample sequence of coursework for the fourth and fifth year.
**Semester VII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 450</td>
<td>Labor Management Relations (HRM Concentration)</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 453</td>
<td>Creativity and Innovation (Entrepreneurship Concentration)</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 450</td>
<td>Labor Management Relations (HRM Concentration)</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 453</td>
<td>Creativity and Innovation (Entrepreneurship Concentration)</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 credits in MGMT (Individualized Concentration)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>500- or 800-level Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Semester VIII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 credits from 300-400 level MGMT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKTG 514*</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

**Semester IX**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 521</td>
<td>Corporate Finance or Corporate Finance II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**Semester X**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 540</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Management degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

**3. IUG Degree Requirements**

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Management and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the *Reduced Course Load* section above, the total course load is reduced due to courses that can count towards both degrees. The first three years of the IUG program are identical to the first three years of the Bachelor of Science program, listed in Appendix B. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program because of the inclusion of courses that count toward the Master of Business Administration degree requirements.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be
put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Management Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  - CAS 100 [3]  Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry I\(^a\)
  - STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\(^a\)

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix\(^b\)

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix\(^b\)

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  - 3 credits of any courses with a GS suffix\(^b\)

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

**General Electives (8 credits)**

8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  
  o Business Courses
    - B A 364Y [3; US/IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Management
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management

  o Management Courses (9 credits)
    - MGMT 433 [3] Leadership and Teambuilding
    - MGMT 466 [3] Organizational Learning & Knowledge Management

- Additional Courses (21 credits)
  
  o Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business

  o Management Electives (9 credits)
    - Select 9 credits from one of the following three areas of concentration A, B, C:
      
      A. Human Resource Management Concentration
        - MGMT 440(3), MGMT 450(3)
        - Select 3 credits in MGMT at the 300-400 level from department list
      
      B. Entrepreneurship Concentration
        - MGMT 431(3), MGMT 453(3)
        - Select 3 credits in MGMT at the 300-400 level from department list

      C. Other Management Electives
        - Select 6 credits from a list of approved management electives
consultation with academic adviser

C. Individualized Concentration
Select 9 credits in MGMT at the 300-400 level from department list in consultation with academic adviser

- Supporting Courses and Related Areas (9 credits)
Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

**Additional Requirements**
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
<table>
<thead>
<tr>
<th>Appendix B: Bachelor of Science in Management Typical Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester I</strong></td>
</tr>
<tr>
<td>*ENGL 015 or 030 Composition GWS 3</td>
</tr>
<tr>
<td>*MATH 110 or 140 Calculus GQ 4</td>
</tr>
<tr>
<td>Humanities GH 3</td>
</tr>
<tr>
<td>*ECON 102 Introductory Microeconomic Analysis GS 3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA 1.5</td>
</tr>
<tr>
<td><strong>14.5</strong></td>
</tr>
<tr>
<td><strong>Semester II</strong></td>
</tr>
<tr>
<td>CAS 100 Effective Speech GWS 3</td>
</tr>
<tr>
<td>*STAT 200 or SCM 200 Statistics GQ 4</td>
</tr>
<tr>
<td>*MGMT 301 Basic Management concepts 3</td>
</tr>
<tr>
<td>Arts GA 3</td>
</tr>
<tr>
<td>Natural Sciences GN 3</td>
</tr>
<tr>
<td><strong>16</strong></td>
</tr>
<tr>
<td><strong>Semester III</strong></td>
</tr>
<tr>
<td>*ACCTG 211 Financial and Managerial Accounting 4</td>
</tr>
<tr>
<td>*MKTG 301 Principles of Marketing 3</td>
</tr>
<tr>
<td>Arts GA 3</td>
</tr>
<tr>
<td>Humanities GH 3</td>
</tr>
<tr>
<td>Natural Sciences GN 3</td>
</tr>
<tr>
<td><strong>16</strong></td>
</tr>
<tr>
<td><strong>Semester IV</strong></td>
</tr>
<tr>
<td>*FIN 301 Corporation Finance 3</td>
</tr>
<tr>
<td>MIS 204 Business Information Systems 3</td>
</tr>
<tr>
<td>ENGL 202D Business Writing GWS 3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences GN 3</td>
</tr>
<tr>
<td>Natural Sciences GN 3</td>
</tr>
<tr>
<td><strong>15</strong></td>
</tr>
<tr>
<td><strong>Semester V</strong></td>
</tr>
<tr>
<td>B A 241 Legal Environment of Business 2</td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business 2</td>
</tr>
<tr>
<td>ECON 104 Macroeconomic Analysis and Policy 3</td>
</tr>
<tr>
<td>SCM 301 Supply Change Management 3</td>
</tr>
<tr>
<td>*MGMT 341 Human Resource Management 3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA 1.5</td>
</tr>
<tr>
<td><strong>14.5</strong></td>
</tr>
<tr>
<td><strong>Semester VI</strong></td>
</tr>
<tr>
<td>MGMT 433 Leadership and Team Building 3</td>
</tr>
<tr>
<td>MGMT 466 Org Learning and Knowledge Mgmt 3</td>
</tr>
<tr>
<td>MIS 390 Information Systems Management and App 3</td>
</tr>
<tr>
<td>MGMT 440 Advanced Human Resources 3</td>
</tr>
<tr>
<td>or MGMT 431 Ent and Small Business Mgmt 3</td>
</tr>
<tr>
<td>or select 3 credits in MGMT</td>
</tr>
<tr>
<td>Non-Business Elective 3</td>
</tr>
<tr>
<td><strong>15</strong></td>
</tr>
<tr>
<td><strong>Semester VII</strong></td>
</tr>
<tr>
<td>B A 364Y International Business and Society US; IL 3</td>
</tr>
<tr>
<td>MGMT 450 Labor Management Relations 3</td>
</tr>
<tr>
<td>or MGMT 453 Creativity and Innovation</td>
</tr>
<tr>
<td>or select 3 credits in MGMT</td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
</tr>
<tr>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>Semester VIII</strong></td>
</tr>
<tr>
<td>B A 462 Business Strategy 3</td>
</tr>
<tr>
<td>Select 3 credits from 300-400 level credits in MGMT</td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
</tr>
<tr>
<td>Non-Business Elective 3</td>
</tr>
<tr>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, Management, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, Management, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3] Corporate Management or Corporate Management II
- MRKT 514 [3] Strategic Marketing

Electives (9 credits)

- 9 credits of 500-level electives in accounting, business analytics, Management, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3] Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

We propose an Integrated Undergraduate Graduate (IUG) program in Management at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.

The Graduate Faculty

The Program

The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit www.mba.com for more information about the GMAT or www.ets.org/gre for information about the GRE).

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at www.hbg.psu.edu/.

International Students

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
Application Dates

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Preparation for the Program

Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session.
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

**Degree Requirements**
Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

*Prescribed Courses:* 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

*Elective Courses/Tracks:* 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

**Tracks:**

**Accounting:** The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 504 Auditing Theory and Practice (3)
- ACCT 510 Business Tax Planning: Theory and Practice (3)
- ACCT 532 Accounting Information and Decision Systems (3)
- ACCT 545 Strategic Cost Management (3)
- ACCT 561 Financial Statement Analysis II (3)
- ACCT 572 Financial Reporting I (3)
- ACCT 573 Financial Reporting II (3)
- ACCT 590 or 890 Colloquium (1-3)
- ACCT 596 or 896 Individual Studies (1-9)
- ACCT 597 or 897 Special Topics (1-9)
- BUS 554 Master's Project (3)*

**Business Analytics:** The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

- BUS554 Master's Project (3)*
- INFSY 535 Object-Oriented Design and Program Development in Business (3)
- INFSY 555 Data Management Systems (3)
- INFSY 565 Intelligent Systems in Business (3)
- INFSY 566 Data Mining and Knowledge Discovery (3)
- INFSY 896 Individual Studies (1-9)*
- MRKT 572 Marketing Research (3)
- SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
BUS 554 Master's Project (3)*
FINAN 518 Financial Markets and the Economy (3)
FINAN 522 Investment and Portfolio Management (3)
FINAN 523 Risk Management of Modern Financial Institutions (3)
FINAN 526 International Finance (3)
FINAN 527 Derivative Securities (3)
FINAN 530 Advanced Corporate Finance (3)**
FINAN 531 Managing Financial Operations (3)
FINAN 590 or 890 Colloquium (1-3)
FINAN 596 or 896 Individual Studies (1-9)
FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits form the following:

BUS 554 Master's Project (3)*
INFSY 547 WEB Enabled Technologies (3)
INFSY 555 Data Management Systems (3)
INFSY 560 Data Communications Systems and Networks (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and Knowledge Discovery (3)
INFSY 570 Software Engineering in the Analysis and Design of Information Systems (3)
INFSY 590 or 890 Colloquium (1-3)
INFSY 596 or 896 Individual Studies (1-9)
INFSY 597 or 897 Special Topics (1-9)

Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
SC&IS 596 Individual Studies (1-9)
SC&IS 597 Special Topics (1-9)

General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits. With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course Substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

Grade-point Average and Time Limit

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

Financial aid

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

The following are required for applicants:

*The Dickinson School of Law*: Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
M.B.A. Program: Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

Degree Requirements

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

Advising of Students

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

Tuition

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
Additional Information

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:

Law.psu.edu/
Harrisburg.psu.edu/mba

Concurrent Degree Offering with the Penn State College of Medicine Biomedical Sciences Graduate Program

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferred:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

Concurrent Degree Programs

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

Admission Requirements:
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

Biomedical Sciences Graduate Program: Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
M.B.A. Program: Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

Degree Requirements

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

Advising of Students

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at:
http://www2.med.psu.edu/
Harrisburg.psu.edu/mba

ACCOUNTING (ACCT) course list
BUSINESS (BUS) course list
FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list
MANAGEMENT (MNGMT) course list
MARKETING (MRKT) course list
SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty

The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- [official transcripts from all post-secondary institutions attended](#)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the [Penn State Harrisburg website](#).

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the [Graduate Bulletin Application and Admission Procedures page](#) for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
**Analytic Skills Requirement:** Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

**Computer Skills Requirement:** Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

**Communications Skills Requirement:** Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of “4” or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
**Degree Requirements**

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

*Prescribed Courses:* 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

*Elective Courses/Tracks:* 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

**Transfer Credit and Course Substitutions**

*Transfer Credits:* Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the [Transfer Courses](#) section of the Graduate Bulletin.

*Course substitutions:* Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the [J.D. Admissions](#) section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the [Penn State Dickinson Law website](#). Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.
**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

**Additional Information**

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

**Integrated B.S. in Accounting/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their 
career goals, official transcripts of all post-secondary courses taken outside Penn State, two 
letters of recommendation, with at least one from the School of Business Administration 
faculty, and a plan of study that integrates both undergraduate and graduate requirements. 
The plan should cover the entire time period of the integrated program, and it should be 
reviewed periodically with an adviser as the student advances through the program. A 
graduate faculty adviser in collaboration with the Director of M.B.A. Program will help 
undergraduate candidates determine a sequence of courses that will prepare them for 
acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination 
(GRE) is not required for admission into the program; however, if students are interested in a 
graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth 
semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must 
have completed a minimum of 60 credits. Students must be admitted to an IUG program no 
earlier than the beginning of the third semester of undergraduate study at Penn State 
(regardless of transfer or AP credits accumulated prior to enrollment) and no later than the 
end of the second week of the semester preceding the semester of expected conferral of the 
undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade 
point average of 3.5 and complete the following Entry to Major courses or equivalent: 
ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], 

Student applications will be evaluated based on their overall portfolio, in addition to the 
above requirements. In all cases, admission to the program will be at the discretion of the 
Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, 
subject to the double-counting of credits as outlined below. Degree requirements for the B.S. 
in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. 
degree are listed above. Up to 12 credits may be double-counted towards the degree 
requirements for both the graduate and undergraduate degrees. All courses counted for both 
degrees must be at the 500- or 800-level. Credits associated with culminating experience for 
the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be 
double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 
571, ACCT 572, ACCT 573, and FINAN 521.

**Integrated B.S. in Finance/M.B.A. Program**
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Information Systems are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560, INFSY 565, INFSY 566, and INFSY 570.

**Integrated B.S. in Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

Integrated B.S. in Marketing/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent:

- ACCTG 211 [4]
- ECON 102 [3]
- ENGL 015 or 030 [3]
- FIN 301 [3]
- MATH 110 or 140 [4]
- MGMT 301 [3]
- MKTG 301 [3]

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

**Integrated B.S. in Project and Supply Chain Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Penn State Harrisburg
Department or Instructional Area: School of Business Administration

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code: 
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor: Change

Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing): B.S. in Marketing and M.B.A. IUG Degree Program
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
✓ First semester following approval
☐ Second semester following approval

Submitted by Graduate Program Head

Dr. Stephen Schappe
Printed name
Signature
Date: 12/6/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Dr. Janet Duck
Printed name
Signature
Date: 12/12/16

Approved by College/School Dean/Chancellor (or Designee):

Dr. Peter Idowu
Printed name
Signature
Date: Dec. 12, 2016
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of John Challis
Printed name
Signature
Date: 4/4/2017

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of M. Kathleen Heid
Printed name
Signature
Date: 4/4/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken
Printed name
Signature
Date: 4/4/2017
Bachelor of Science in Marketing and Master of Business Administration

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Business Administration

Penn State Harrisburg

February 11, 2017
B.S. in Marketing and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

Executive Summary

A. Objectives of the Proposed IUG Program
The objectives of the Integrated Undergraduate Graduate Program are to:
1. Offer qualified students the opportunity to earn both bachelor and master degrees in five years. In particular, IUG students may count up to 12 credits toward their B.S. in Marketing and M.B.A. degree requirements.
2. Permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. Introduce students earlier to the rigors of the graduate program and research of graduate faculty.
4. Make the resources of the Graduate School available to IUG students.
5. Allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.
6. Allow students to coordinate as well as concurrently pursue the two degree programs, which enables them to achieve greater depth and comprehension than if the degrees are pursued sequentially.

B. Summary of Changes
1. Undergraduate Bulletin description of Marketing program is revised to include the proposed IUG program.
2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG program.
3. No course changes are part of this proposal.
# Table of Contents

I. Introduction ........................................................................................................................................ 1
II. Application Process .......................................................................................................................... 1
III. IUG Degree Requirements ........................................................................................................... 3

Appendix A: Bachelor of Science in Marketing Degree Requirements ............................................... 5
Appendix B: Bachelor of Science in Marketing Typical Schedule .......................................................... 8
Appendix C: Master of Business Administration Degree Requirements ............................................. 8
Appendix D: External Consultation ....................................................................................................... 10
Appendix E: B.S. in Marketing and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook ........................................................................................................................................ 20

  1. Introduction ................................................................................................................................ 21
  2. Application Process ..................................................................................................................... 21
  3. IUG Degree Requirements ......................................................................................................... 23

Appendix A: Bachelor of Science in Marketing Degree Requirements ............................................... 25
Appendix B: Bachelor of Science in Marketing Typical Schedule .......................................................... 28
Appendix C: Master of Business Administration Degree Requirements ............................................. 29

M.B.A. Bulletin Changes ..................................................................................................................... 30

  1. Brief summary of proposed changes and justification for changes ............................................. 30
  2. Current bulletin description ........................................................................................................ 30
  3. Revised bulletin description ....................................................................................................... 42
  4. List of courses to be added, modified or dropped in the proposed curriculum ....................... 58
B.S. in Marketing and MBA
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal
School of Business Administration
Penn State Harrisburg

I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited. Applicants to the IUG program must have:

1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.

2. Earned a minimum of cumulative grade point average of 3.5.

3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
III. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Marketing and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take six additional credits in their third year, and

* Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

Eligibility for a Graduate Assistantship
Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Marketing degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.
six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Marketing Degree Requirements

General Education Requirements (47 credits)

- Writing/Speaking (GWS)
  ENGL 015S or 030 [3]  Rhetoric and Composition or
  Honors Freshmen Composition\(^a\)
  CAS 100 [3]  Effective Speech

- Quantitative (GQ)
  MATH 110 or 140 [4]  Techniques of Calculus I or
  Calculus with Analytic Geometry I\(^a\)
  STAT 200 or SCM 200 [4]  Elementary Statistics or
  Introduction to Statistics for Business\(^a\)

- Natural Sciences (GN)
  9 credits of any courses with a GN suffix

- Arts (GA)
  6 credits of any courses with a GA suffix\(^b\)

- Humanities (GH)
  6 credits of any courses with a GH suffix\(^b\)

- Social & Behavioral Sciences (GS)
  ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  3 credits of any courses with a GS suffix\(^b\)

- Health & Physical Activities (GHA)
  3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

General Electives (8 credits)
  8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (46 credits)
  - Business Courses (37 credits)
    - B A 364Y [3; US/IL]  International Business and Society
    - ECON 102 [3; GS]  Introductory Microeconomic Analysis and Policy
    - ECON 104 [3]  Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS]  Effective Writing: Business Writing
    - FIN 301 [3]  Corporation Finance
    - MIS 204 [3]  Introductory to Business Information Systems
    - MKTG 301 [3]  Principles of Marketing
    - SCM 301 [3]  Supply Chain Management
  - Marketing Courses (9 credits)

- Additional Courses (21 credits)
  - Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4]  Social, Legal, and Ethical Environment for Business
  - Marketing Electives (9 credits)
    - Select 9 credits from the following list or other Marketing courses approved by the Program:
      - ECON 342 [3]  Industrial Organization
      - MKTG 327 [3]  Retailing

- Supporting Courses and Related Areas (12 credits)
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

Additional Requirements
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
Appendix B: Bachelor of Science in Marketing Typical Schedule

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGL 015S or 030 Composition GWS</strong> 3</td>
<td><strong>CAS 100 Effective Speech GWS</strong> 3</td>
</tr>
<tr>
<td><strong>MATH 110 or 140 Calculus GQ</strong> 4</td>
<td><strong>STAT 200 or SCM 200 Statistics GQ</strong> 4</td>
</tr>
<tr>
<td>Humanities GH 3</td>
<td><strong>MGMT 301 Basic Management concepts</strong> 3</td>
</tr>
<tr>
<td><strong>ECON 102 Introductory Microeconomic Analysis GS</strong> 3</td>
<td>Arts GA 3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA 1.5</td>
<td>Natural Sciences GN 3</td>
</tr>
<tr>
<td><strong>14.5</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCTG 211 Financial and Managerial Accounting</strong> 4</td>
<td><strong>FIN 301 Corporation Finance</strong> 3</td>
</tr>
<tr>
<td><strong>MKTG 301 Principles of Marketing</strong> 3</td>
<td>MIS 204 Business Information Systems 3</td>
</tr>
<tr>
<td>Arts GA 3</td>
<td>ENGL 202D Business Writing 3</td>
</tr>
<tr>
<td>Humanities GH 3</td>
<td>Social and Behavioral Sciences GN 3</td>
</tr>
<tr>
<td>Natural Sciences GN 3</td>
<td>Natural Sciences GN 3</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BA 241 Legal Environment of Business</strong> 2</td>
<td><strong>MKTG 342 Marketing Research</strong> 3</td>
</tr>
<tr>
<td><strong>BA 242 Social and Ethical Environment of Business</strong> 2</td>
<td>MIS 390 Information Systems Management and App 3</td>
</tr>
<tr>
<td><strong>ECON 104 Macroeconomic Analysis and Policy</strong> 3</td>
<td><strong>Select 3 credits from the list</strong> 3</td>
</tr>
<tr>
<td><strong>SCM 301 Supply Chain Management</strong> 3</td>
<td>Non-Business Elective 3-4</td>
</tr>
<tr>
<td><strong>MKTG 330 Consumer Behavior</strong> 3</td>
<td><strong>12-13</strong></td>
</tr>
<tr>
<td>Health and Physical Activity GHA 1.5</td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BA 364 Y International Business and Society US, IL</strong> 3</td>
<td><strong>BA 462 Business Strategy</strong> 3</td>
</tr>
<tr>
<td><strong>Select 6 credits from the list</strong> 6</td>
<td><strong>MKTG 450W Marketing Strategy</strong> 3</td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM 6</td>
<td>Select 6 credits from 200-400 level 6</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td>Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM 3</td>
</tr>
<tr>
<td></td>
<td>Non-Business Elective <strong>15</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

*aMarketing Elective – select from MKTG 302 Marketing Techniques for Electronic Commerce, MKTG 327 Retailing, MKTG 422 Advertising and Sales Promotion Management, MKTG 445 Global Marketing (US), MKTG 476 Sales Management, MKTG 478 Services Marketing Management, MKTG 485 Business-to-Business Marketing, or ECON 342 Industrial Organization*
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

**Prescribed Courses (21 credits)**

- FINAN 521 or 530 [3] Corporate Finance or Corporate Finance II
- MRKT 514 [3] Strategic Marketing

**Electives (9 credits)**

- 9 credits of 500- or 800-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

**Foundation Courses (up to 18 credits)**

- MNGMT 511 [3] Organizational Behavior
Appendix D: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA 16563

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven't got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We're ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.

---------------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "BALAJI RAJAGOPALAN" <bur14@psu.edu>
Sent: Friday, April 1, 2016 11:37:28 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear School Director Rajagopalan,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456

---------------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Saturday, April 9, 2016 8:10:53 AM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee, sorry for the delay here. Thank you for the information: i had to look over other IUGs to see how things work and I agree this looks like a good addition to your program. I concur with the idea. Good luck!
Al

---------------------------------------
On Fri, Apr 1, 2016 at 12:44 PM Oranee Tawatnuntachai <oxt4@psu.edu> wrote:

Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their
graduate degree.

Hope this helps.

Regards,
Oranee

---------------------------------------
From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner
Associate Professor
Academic Director, MBA Program
Black School of Business
Penn State Erie
agw2@psu.edu
814-898-6509

---------------------------------------
On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

-----------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regards,
Oranee

---------------------------------------

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,

Oranee

---------------------------------------
From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>
To: "Oranee Tawatuntachai" <oxt4@psu.edu>
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>
Sent: Monday, August 8, 2016 9:09:53 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

Brian H. Cameron | Associate Dean for Professional Graduate Programs | Smeal College of Business | The Pennsylvania State University | University Park, PA 16802 | Phone: 814-863-1460 | Email: bcameron@smeal.psu.edu

----------------------------------------

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal’s accounting IUG is that most students in the program complete at least one internship. Provision is made for this student's academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart  
Department Chair and Smeal Chair Professor in Accounting  
Smeal College of Business  
Penn State  
354B Business Building  
University Park, PA 16802-3603  
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <cwhiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petruzzi <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mjg11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff

Jeffery M. Sharp | Associate Dean for Undergraduate Education  
Smeal College of Business | The Pennsylvania State University | 202 Business Building | University Park, PA 16802  
814 863-1947 (Office) | JeffSharp@psu.edu

--------------------------------------------------------------------------------------------------
Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix E: B.S. in Marketing and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook
B. S. in Marketing and M.B.A.
Integrated Undergraduate-Graduate (IUG) Degree Program
School of Business Administration
Penn State Harrisburg, the Capital College

1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements

The number of openings in the IUG program is limited. Applicants to the IUG program must have:
1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following Entry to Major courses or equivalent:
To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 241 Legal Environment of Business</td>
<td>MKTG 342 Marketing Research</td>
</tr>
<tr>
<td>BA 242 Social and Ethical Environment of Business</td>
<td>MIS 390 Information Systems Management and App</td>
</tr>
<tr>
<td>ECON 104 Macroeconomic Analysis and Policy</td>
<td>Marketing Electives</td>
</tr>
<tr>
<td>SCM 301 Supply Chain Management</td>
<td>Non-Business Elective</td>
</tr>
<tr>
<td>MKTG 330 Consumer Behavior</td>
<td></td>
</tr>
<tr>
<td>Non-Business elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>17.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y International Business and Society US; IL</td>
<td>B A 462 Business Strategy</td>
</tr>
<tr>
<td>MKTG 450W Marketing Strategy</td>
<td>Marketing Elective</td>
</tr>
<tr>
<td>INFSY 540* Information Resources Management</td>
<td>MRKT 514* Strategic Marketing</td>
</tr>
<tr>
<td>BUS 515* Business Ethics, Governance and Law*</td>
<td>500- or 800-level elective*</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester IX</th>
<th>Semester X</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 540 Accounting for Managerial Decisions</td>
<td>FINAN 521 or 530 Corporate Finance</td>
</tr>
<tr>
<td>BUS 510 Business Analytics and Decision Modeling</td>
<td>BUS 588 Strategic Management</td>
</tr>
<tr>
<td>500- or 800-level elective</td>
<td>500- or 800-level elective</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Marketing degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.
3. **IUG Degree Requirements**

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Marketing and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the *Reduced Course Load* section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take six additional credits in their third year, and six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Marketing Degree Requirements

**General Education Requirements (47 credits)**

- **Writing/Speaking (GWS)**
  - ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\textsuperscript{a}
  - CAS 100 [3]  Effective Speech

- **Quantitative (GQ)**
  - MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry \textsuperscript{I}\textsuperscript{a}
  - STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\textsuperscript{a}

- **Natural Sciences (GN)**
  - 9 credits of any courses with a GN suffix

- **Arts (GA)**
  - 6 credits of any courses with a GA suffix\textsuperscript{b}

- **Humanities (GH)**
  - 6 credits of any courses with a GH suffix\textsuperscript{b}

- **Social & Behavioral Sciences (GS)**
  - ECON 102 [3]  Introductory Microeconomic Analysis and Policy\textsuperscript{a}
  - 3 credits of any courses with a GS suffix\textsuperscript{b}

- **Health & Physical Activities (GHA)**
  - 3 credits of any courses with a GHA suffix

\textsuperscript{a}Entry to Major requirements
\textsuperscript{b}Students may apply 9-6-3 rule.

**General Electives (8 credits)**

- 8 credits of non-business courses
Major Requirements (79 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (49 credits)
  - Business Courses (37 credits)
    - B A 364Y [3; US/IL] International Business and Society
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  - Marketing Courses (9 credits)

- Additional Courses (21 credits)
  - Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business
  - Marketing Electives (9 credits)
    - Select 9 credits from the following list or other Marketing courses approved by the Program:
      - ECON 342 [3] Industrial Organization
      - MKTG 327 [3] Retailing

- **Supporting Courses and Related Areas (12 credits)**
  Select 9 credits from 200-400 level business courses from: ACCTG, B A, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student’s interests.

**Additional Requirements**
- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
### Appendix B: Bachelor of Science in Marketing Typical Schedule

#### Semester I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 015S or 030</td>
<td>Composition GWS</td>
<td>3</td>
</tr>
<tr>
<td>MATH 110 or 140</td>
<td>Calculus GQ</td>
<td>4</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ECON 102</td>
<td>Introductory Microeconomic Analysis GS</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

#### Semester II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100</td>
<td>Effective Speech GWS</td>
<td>3</td>
</tr>
<tr>
<td>STAT 200 or SCM 200</td>
<td>Statistics GQ</td>
<td>4</td>
</tr>
<tr>
<td>MIS 301</td>
<td>Basic Management concepts GQ</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

#### Semester III

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 211</td>
<td>Financial and Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>MKTG 301</td>
<td>Principles of Marketing GQ</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

#### Semester IV

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>Corporation Finance</td>
<td>3</td>
</tr>
<tr>
<td>MIS 204</td>
<td>Business Information Systems GQ</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 202D</td>
<td>Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences GN</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### Semester V

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>BA 242</td>
<td>Social and Ethical Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Macroeconomic Analysis and Policy</td>
<td>3</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management GQ</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 330</td>
<td>Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

#### Semester VI

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG 342</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MIS 390</td>
<td>Information Systems Management and App</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 credits from the list</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12-13</strong></td>
</tr>
</tbody>
</table>

#### Semester VII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364 Y</td>
<td>International Business and Society US, IL</td>
<td>3</td>
</tr>
<tr>
<td>Select 6 credits from the list</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level Business</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

#### Semester VIII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 450W</td>
<td>Marketing Strategy</td>
<td>3</td>
</tr>
<tr>
<td>Select 6 credits from 200-400 level</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Business courses from: ACCTG, B A, FIN, MIS, MGMT, MKTG or SCM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Business Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

**Prescribed Courses (21 credits)**

- FINAN 521 or 530 [3] Corporate Finance or Corporate Finance II
- MRKT 514 [3] Strategic Marketing

**Electives (9 credits)**

- 9 credits of 500-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

**Foundation Courses (up to 18 credits)**

- MNGMT 511 [3] Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

   We propose an Integrated Undergraduate Graduate (IUG) program in Marketing at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

   **Business Administration (BADMN)**

   [Program Home Page](#)

   Oranee Tawatnuntachai, Director
   Penn State Harrisburg, School of Business Administration
   777 W. Harrisburg Pike
   E-355 Olmsted Building
   Middletown, PA 17057-4898
   717-948-6140
   mbahbg@psu.edu

   **Degree Conferred:**

   M.B.A.

   **The Graduate Faculty**

   **The Program**

   The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

   **Locations**

   The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
Admission Requirements

Admission requirements listed here are in addition to requirements stated in the General Information section of the Graduate Bulletin.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit www.mba.com for more information about the GMAT or www.ets.org/gre for information about the GRE).

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at www.hbg.psu.edu/.

International Students

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
Application Dates

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Preparation for the Program

Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

Foundation Courses:
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling mangers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

Tracks:
Accounting: The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

ACCT 504 Auditing Theory and Practice (3)
ACCT 510 Business Tax Planning: Theory and Practice (3)
ACCT 532 Accounting Information and Decision Systems (3)
ACCT 545 Strategic Cost Management (3)
ACCT 561 Financial Statement Analysis II (3)
ACCT 572 Financial Reporting I (3)
ACCT 573 Financial Reporting II (3)
ACCT 590 or 890 Colloquium (1-3)
ACCT 596 or 896 Individual Studies (1-9)
ACCT 597 or 897 Special Topics (1-9)
BUS 554 Master's Project (3)*

Business Analytics: The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS554 Master's Project (3)*
INFSY 535 Object-Oriented Design and Program Development in Business (3)
INFSY 555 Data Management Systems (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and Knowledge Discovery (3)
INFSY 896 Individual Studies (1-9)*
MRKT 572 Marketing Research (3)
SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
BUS 554 Master's Project (3)*
FINAN 518 Financial Markets and the Economy (3)
FINAN 522 Investment and Portfolio Management (3)
FINAN 523 Risk Management of Modern Financial Institutions (3)
FINAN 526 International Finance (3)
FINAN 527 Derivative Securities (3)
FINAN 530 Advanced Corporate Finance (3)**
FINAN 531 Managing Financial Operations (3)
FINAN 590 or 890 Colloquium (1-3)
FINAN 596 or 896 Individual Studies (1-9)
FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits form the following:

BUS 554 Master's Project (3)*
INFSY 547 WEB Enabled Technologies (3)
INFSY 555 Data Management Systems (3)
INFSY 560 Data Communications Systems and Networks (3)
INFSY 565 Intelligent Systems in Business (3)
INFSY 566 Data Mining and knowledge Discovery (3)
INFSY 570 Software Engineering in the Analysis and Design of Information Systems (3)
INFSY 590 or 890 Colloquium (1-3)
INFSY 596 or 896 Individual Studies (1-9)
INFSY 597 or 897 Special Topics (1-9)

Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
SC&IS 596 Individual Studies (1-9)  
SC&IS 597 Special Topics (1-9)

General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. **Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits.** With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.*

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.**

**Transfer Credit and Course Substitutions**

*Transfer Credits:* Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

*Course substitutions:* Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Grade-point Average and Time Limit**

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

**Financial aid**

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The following are required for applicants:

*The Dickinson School of Law:* Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
**M.B.A. Program:** Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
**Additional Information**

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:

[Law.psu.edu](http://Law.psu.edu/)
[Harrisburg.psu.edu/mba](http://Harrisburg.psu.edu/mba)

**Concurrent Degree Offering with the Penn State College of Medicine Biomedical Sciences Graduate Program**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferred:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

**Concurrent Degree Programs**

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

**Admission Requirements:**
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

*Biomedical Sciences Graduate Program:* Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
**M.B.A. Program:** Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

**Advising of Students**

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at:
http://www2.med.psu.edu/
Harrisburg.psu.edu/mba

ACCOUNTING (ACCT) course list
BUSINESS (BUS) course list
FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list
MANAGEMENT (MNGMT) course list
MARKETING (MRKT) course list
SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty
The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- official transcripts from all post-secondary institutions attended
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the Penn State Harrisburg website.

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
**Analytic Skills Requirement:** Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

**Computer Skills Requirement:** Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through a college-level computer applications course within the past five years with a grade of B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

**Communications Skills Requirement:** Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

**Prescribed Courses:** 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INF SY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

**Elective Courses/Tracks:** 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

Transfer Credit and Course Substitutions

**Transfer Credits:** Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

**Course substitutions:** Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed...
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the [J.D. Admissions](#) section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the [Penn State Dickinson Law website](#). Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.
Advising of Students

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

Tuition

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

Additional Information

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

Integrated B.S. in Accounting/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 571, ACCT 572, ACCT 573, and FINAN 521.

**Integrated B.S. in Finance/M.B.A. Program**
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](https://www.pennstate.edu/graduate/apply), and must meet the [admission requirements of the Graduate School](https://www.pennstate.edu/graduate/admissions), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the admission requirements of the [Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A
graduate faculty adviser in collaboration with the Director of M.B.A. Program will help
undergraduate candidates determine a sequence of courses that will prepare them for
acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination
(GRE) is not required for admission into the program; however, if students are interested in a
graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth
semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must
have completed a minimum of 60 credits. Students must be admitted to an IUG program no
earlier than the beginning of the third semester of undergraduate study at Penn State
(regardless of transfer or AP credits accumulated prior to enrollment) and no later than the
end of the second week of the semester preceding the semester of expected conferral of the
undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade
point average of 3.5 and complete the following Entry to Major courses or equivalent:
ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4],

Student applications will be evaluated based on their overall portfolio, in addition to the
above requirements. In all cases, admission to the program will be at the discretion of the
Graduate Admissions Committee in Business Administration.

Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree,
subject to the double-counting of credits as outlined below. Degree requirements for the B.S.
in Information Systems are listed in the Undergraduate Bulletin. Degree requirements for the
M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree
requirements for both the graduate and undergraduate degrees. All courses counted for both
degrees must be at the 500- or 800-level. Credits associated with culminating experience for
the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be
double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560,
INFSY 565, INFSY 566, and INFSY 570.

Integrated B.S. in Management/M.B.A. Program

The School of Business Administration offers a limited number of academically superior
Bachelor of Science in Management candidates the opportunity to enroll in an integrated,
continuous program of study leading to both the Bachelor of Science in Management and the
Master of Business Administration. The ability to coordinate as well as concurrently pursue
the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

Integrated B.S. in Marketing/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

**Integrated B.S. in Project and Supply Chain Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Penn State Harrisburg
Department or Instructional Area: School of Business Administration

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor [ ] Change [ ] Drop

Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing): B.S. in Project and Supply Chain Mgmt and M.B.A. IUG Degree Program
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
[ ] First semester following approval
[ ] Second semester following approval

Submitted by Graduate Program Head

Dr. Stephen Schappe
Printed name
Signature
Date: 12/6/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Dr. Janet Duck
Printed name
Signature
Date: 12/12/16

Approved by College/School Dean/Chancellor (or Designee):

Dr. Peter Idwu
Printed name
Signature
Date: Dec 12, 2016
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of John Challis  
Printed name:  
Signature:  
Date: 4/4/2017

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of M. Kathleen Heid  
Printed name:  
Signature:  
Date: 4/4/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken  
Printed name:  
Signature:  
Date: 4/4/2017
Bachelor of Science in Project and Supply Chain Management and Master of Business Administration

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Business Administration

Penn State Harrisburg

February 11, 2017
A. Objectives of the Proposed IUG Program
The objectives of the Integrated Undergraduate Graduate Program are to:
1. Offer qualified students the opportunity to earn both bachelor and master degrees in five
   years. In particular, IUG students may count up to 12 credits toward their B.S. in Project
   and Supply Chain Management and M.B.A. degree requirements.
2. Permit coherent planning of studies through the graduate degree, with advising informed
   by not only the requirements of the baccalaureate program, but also the longer-range
   goals of the graduate degree.
3. Introduce students earlier to the rigors of the graduate program and research of graduate
   faculty.
4. Make the resources of the Graduate School available to IUG students.
5. Allow students with IUG status to benefit from their association with graduate students
   whose level of work and whose intensity of interest and commitment parallel their own.
6. Allow students to coordinate as well as concurrently pursue the two degree programs,
   which enables them to achieve greater depth and comprehension than if the degrees are
   pursued sequentially.

B. Summary of Changes
1. Penn State Harrisburg list of courses for support of major changed, but Undergraduate
   Bulletin description of Project and Supply Chain Management program needs no changes
   to include the proposed IUG program.
2. Graduate Bulletin description of M.B.A. program is revised to include the proposed IUG
   program.
3. No course changes are part of this proposal.
Table of Contents

I. Introduction ........................................................................................................................................ 1
II. Application Process ....................................................................................................................... 1
III. IUG Degree Requirements ......................................................................................................... 3
Appendix A: Bachelor of Science in Project and Supply Chain Management Degree Requirements ........................................................................................................................ 5
Appendix B: Bachelor of Science in Project and Supply Chain Management Typical Schedule ................................................................................................................. 8
Appendix C: Master of Business Administration Degree Requirements .................................. 9
Appendix C: External Consultation .................................................................................................. 10
Appendix D: B.S. in Project and Supply Chain Management and M.B.A. Integrated Undergraduate-Graduate (IUG) Handbook ............................................................................. 20
  1. Introduction ........................................................................................................................... 21
  2. Application Process ............................................................................................................. 21
  3. IUG Degree Requirements ................................................................................................... 23
Appendix A: Bachelor of Science in Project and Supply Chain Management Degree Requirements ........................................................................................................................ 25
Appendix B: Bachelor of Science in Project and Supply Chain Management Typical Schedule ................................................................................................................. 28
Appendix C: Master of Business Administration Degree Requirements .................................. 29
M.B.A. Bulletin Changes ................................................................................................................... 30
  1. Brief summary of proposed changes and justification for changes ........................................ 30
  2. Current bulletin description .................................................................................................. 30
  3. Revised bulletin description ................................................................................................... 42
  4. List of courses to be added, modified or dropped in the proposed curriculum ................. 58
B.S. in Project and Supply Chain Management and MBA
Integrated Undergraduate-Graduate (IUG) Degree Program Proposal
School of Business Administration
Penn State Harrisburg

I. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

II. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:
1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following courses or equivalent:
   • ACCTG 211 [4] Financial and Managerial Accounting for Decision
Making

- ECON 102 [3] Introductory Microeconomic Analysis and Policy
- ENGL 015 or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
- FIN 301 [3] Corporation Finance
- MKTG 301 [3] Principles of Marketing

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
### Semester V

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>SCM 320</td>
<td>Transport Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 341</td>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Semester VI

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 460</td>
<td>Purchasing and Materials Management</td>
<td>3</td>
</tr>
<tr>
<td>SCM 445</td>
<td>Operations Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>GS</td>
<td>Supporting Course</td>
<td>3</td>
</tr>
<tr>
<td>300/400-Level Business Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16.5</strong></td>
</tr>
</tbody>
</table>

### Semester VII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 540*</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 530*</td>
<td>Corporate Project II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester VIII

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>FIN 475</td>
<td>Financial Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>500-level SC&amp;IS elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester IX

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

### Semester X

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKT 514</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

* Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Project and Supply Chain Management degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

### III. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Project and Supply Chain Management and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take three additional credits in their third year, and three fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Project and Supply Chain Management Degree Requirements

**General Education Requirements (45 credits)**

- **Writing/Speaking (GWS)**
  ENGL 015S or 030 [3] Rhetoric and Composition or Honors Freshmen Composition
  CAS 100 [3] Effective Speech

- **Quantitative (GQ)**
  MATH 110 or 140 [4] Techniques of Calculus I or Calculus with Analytic Geometry I
  STAT 200 or SCM 200 [4] Elementary Statistics or Introduction to Statistics for Business

- **Natural Sciences (GN)**
  9 credits of any courses with a GN suffix

- **Arts (GA)**
  6 credits of any courses with a GA suffix

- **Humanities (GH)**
  6 credits of any courses with a GH suffix

- **Social & Behavioral Sciences (GS)**
  ECON 102 [3] Introductory Microeconomic Analysis and Policy
  ECON 104 [3] Introductory Macroeconomic Analysis and Policy

- **Health & Physical Activities (GHA)**
  3 credits of any courses with a GHA suffix

---

*aEntry to Major requirements
bStudents may apply 9-6-3 rule.

**General Electives (2 credits)**

2 credits of non-business courses
Major Requirements (88 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (43 credits)
  
  o Business Courses (28 credits)
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3; GS] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  
  o Project and Supply Chain Courses (15 credits)
  
- Additional Courses (33 credits)

  o Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business

  o Electives (21 credits)
    - Select 3 credits from: B A 364Y [3; IL] International Business and Society
    - ECON 470 [3]
    - FIN 471 [3]
    - MGMT 461 [3]
    - MKTG 445 [3]
    - or other 400-level international business courses
Select 6 credits of 300- or 400-level courses in one business supporting area or PSCM electives from:

- MGMT 432 [3] Small Business Field Study
- MGMT 433 [3] Leadership and Team Building
- MGMT 453 [3] Creativity and Innovation
- MGMT 466 [3] Organizational Learning and Knowledge Management
- MGMT 483 [3] Compliance and Fairness in Organizations

Select 3 credits from:


Select 3 credits from:


Select 3 credits from:

- SCM 455 [3] Operation Planning and Control

Select 3 credits from:


- Supporting Courses and Related Areas (12 credits)
  Select 12 credits of approved electives courses from any area.

**Additional Requirements**

- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
Appendix B: Bachelor of Science in Project and Supply Chain Management

Typical Schedule

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGL 015S or 030 Composition GWS</strong></td>
<td><strong>CAS 100 Effective Speech GWS</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>MATH 110 or 140 Calculus GQ</strong></td>
<td>*<strong>STAT 200 or SCM 200 Statistics GQ</strong></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Humanities GH</td>
<td><strong>MGMT 301 Basic Management concepts</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>ECON 102 Introductory Microeconomic Analysis GS</strong></td>
<td>Arts GA</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>Sciences GN</td>
</tr>
<tr>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCTG 211 Financial and Managerial Accounting</strong></td>
<td><strong>FIN 301 Corporation Finance</strong></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>MKTG 301 Principles of Marketing</strong></td>
<td><strong>MIS 390 Information System Management and App</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>MIS 204 Introduction to Business Information Systems</strong></td>
<td><strong>ENGL 202D Business Writing</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td><strong>SCM 301 Supply Chain Management</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td>Elective</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BA 241 Legal Environment of Business</strong></td>
<td><strong>SCM 460 Purchasing and Materials Management</strong></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>BA 242 Social and Ethical Environment of Business</strong></td>
<td><strong>SCM 445 Operations Planning and Control</strong></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>SCM 320 Transport Systems</strong></td>
<td><strong>ECON 104 Introductory Macroeconomics Analysis GS</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>MGMT 341 Human Resource Management</strong></td>
<td>Supporting Course*</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td><strong>SCM 416 Warehousing and Terminal Management</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>300/400-Level Business Elective</td>
</tr>
<tr>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BA 364 Y International Business and Society US; IL</strong></td>
<td><strong>BA 462 Business Strategy</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>SCM 416 Warehousing and Terminal Management</strong></td>
<td>Humanities GH</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>MGMT 410 Project Management</strong></td>
<td><strong>MGMT 418 Project Planning and Resource Mgmt</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course*</td>
<td>Supporting Course*</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td><strong>300/400-Level Business Elective</strong></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

*Supporting Courses List

- Computer Science Minor: CMPSC 122, CMPSC 221, CMPSC 360 and any 400 level CMPSC course
- Information Science and Technology Minor: IST 110, IST 210, IST 220, IST 301, IST 302, IST 402, IST 431 and IST 432
- Homeland Security Minor: PUBPL 201, PLSC 475, CRIMJ 304, CRIMJ 435, PUBPL 306 and PUBPL 475
- Psychology: PSYCH 100, PSYCH 301 and any 400 level PSYCH course
- Security and Risk Analysis: Any SRA courses
- Any Foreign Language Courses
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3] Corporate Finance or Corporate Finance II
- MRKT 514 [3] Strategic Marketing

Electives (9 credits)

- 9 credits of 500- or 800-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3] Organizational Behavior
Appendix C: External Consultation

Consultation with Black School of Business and the M.B.A. Program at Erie

From: "Greg Filbeck" <mgf11@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Monday, August 1, 2016 3:19:21 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thank you for your kind wishes.

Balaji did not share this information with me – but I am in total support of your initiatives. Looks like a great idea!

Greg

Dr. Greg Filbeck, CFA, FRM, CAIA, CIPM, PRM
Samuel P. Black III Professor of Finance and Risk Management
Interim Director, Black School of Business
Penn State Erie, the Behrend College
286 Burke
Erie, PA 16563

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 1:42 PM
To: MICHAEL FILBECK
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Greg,

Hope your summer has been going well. I just learned that you have become the School Director. Congratulations! So excited to be working with you.

I'm not sure whether Balaji mentioned to you regarding our IUG proposals or not. We sent the proposals to him in early April, but haven’t got his response. Pls. see the message below. Could you pls. review and provide a statement of support for our proposals? We’re ready to submit the proposals to the Academic Affairs Committee for review.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please do not hesitate to let me know.
Regards,
Oranee

P.S. We already heard back from Al that he supports the proposals.
Al

---------------------------------------

On Fri, Apr 1, 2016 at 12:44 PM Oranee Tawatnuntachai <oxt4@psu.edu> wrote:

Dear Al,

IUG is different. Students can double count up to 12 credits.

But for non-IUG students, if they take graduate courses, they can't count graduate courses toward their graduate degree.

Hope this helps.

Regards,
Oranee

---------------------------------------

From: "Al Warner" <alfredgwarner@gmail.com>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Sent: Friday, April 1, 2016 12:26:38 PM
Subject: Re: IUG proposals for business majors/MBA at Harrisburg

Oranee - I applaud your idea here but I am a bit surprised: I was under the impression that a course use to fulfill an undergraduate degree requirement could not also be used to fulfill a graduate program requirement. That's how I've been advised to handle excess undergrad credits, for example. Can you elaborate on how this doesn't get into double-dipping?

Regards-

Al

Alfred G. Warner
Associate Professor
Academic Director, MBA Program
Black School of Business
Penn State Erie
agw2@psu.edu
814-898-6509

---------------------------------------

On Fri, Apr 1, 2016 at 11:51 AM, Oranee Tawatnuntachai <oxt4@psu.edu> wrote:
Dear Al,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with the M.B.A. Program at Great Valley

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Thursday, August 11, 2016 6:34:31 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

Thanks for the clarification. I have no objections. Good luck with the IUGs. I will be interested to hear how they work out as we might want to explore these with our MBA, working with Penn State Abington and Penn State Brandywine. Also, I apologize for the delay in getting back to you.

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 4:10 PM
To: JAMES A NEMES <jan16@psu.edu>
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Re: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Jim,

Yes. our program is 30 credits at a minimum.

IUG students who get waived out of 18 foundation credits need additional 18 MBA credits (at the minimum). However, 12 credits double counted must be graduate-level courses. That is, IUG begin taking graduate courses during their senior year.

We expect majority of IUG students to be in this situation because we limit the number of seats and select only top students.
Regards,
Oranee

---------------------------------------

From: "JAMES A NEMES" <jan16@psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Monday, August 1, 2016 3:33:30 PM
Subject: RE: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Oranee,

I believe the one comment/clarification I have applies to all of these. The Harrisburg MBA appears to vary from 30 to 48 credits depending on how many foundation courses are waived if I understand the program correctly. Am I right that with this IUG that a student could have all foundation courses waived in addition to having 12 credits count toward both the Bachelor’s and the MBA? Essentially picking up the MBA for an additional 18 credits? Would this be the common situation or would that be the exception?

Thanks,

Jim

James A. Nemes, D.Sc.
Chancellor and Chief Academic Officer
Professor of Mechanical Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 East Swedesford Road
Malvern, PA 19355-1443
Phone: 610-648-3335
Fax: 610-648-3377
jan16@psu.edu

---------------------------------------

From: Oranee Tawatnuntachai [mailto:oxt4@psu.edu]
Sent: Monday, August 01, 2016 11:52 AM
To: jan16@psu.edu
Cc: Stephen Schappe <sxs28@psu.edu>
Subject: Fwd: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,
Hope your summer has been going well. We sent you the IUG proposals in April. We're ready to submit the proposals to the Academic Affairs Committee for review. Could you pls. provide a statement of support for our proposals?

If you have any questions, please do not hesitate to let me know.

Regards,

Oranee

-----------------------------------------------------

From: "Oranee Tawatnuntachai" <oxt4@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>
Cc: "Stephen Schappe" <sxs28@psu.edu>
Sent: Friday, April 1, 2016 11:46:05 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Jim,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,

Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Consultation with Smeal College of Business and the M.B.A. Program at Smeal College of Business

From: "Brian Cameron" <bcameron@smeal.psu.edu>
To: "Oranee Tawatnuntachai" <oxt4@psu.edu>
Cc: "Jeff Sharp" <jeffsharp@psu.edu>, "Steven Huddart" <sjh11@email.psu.edu>, "Charles H. Whiteman" <cwhiteman@psu.edu>, "Russell Barton" <rrb2@psu.edu>
Sent: Monday, August 8, 2016 9:09:53 AM
Subject: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Dear Oranee

I am responding on behalf of the Smeal College of Business. We support the IUG proposals overall and the only comments are below from Steve Huddart.

We wish you success with these new programs.

Best regards,

Brian

Tom,

I have reviewed the proposal for a B.S. in Accounting and M PAC IUG degree program at Harrisburg.

The proposal is clear and detailed.

I endorse it and wish you success with this new program.

The IUG program in accounting at Smeal graduates about 125 students each year. The students in this program are hotly recruited by employers and nearly all have accepted an offer of full-time employment before graduation.

My only comments on your proposal are minor:

1) Because the total number of credits needed to earn both degrees is reduced from 150 to 138, it may be useful to explain how an IUG student will meet the 150-credit-hour requirement for licensure as a CPA.

2) In the Admission Requirements section, the proposal states that "A typical student would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester." Should "fifth" be "fourth"?

3) The Accounting (ACNT)- Recommended Academic Plan on page 11 requires 121 credits. The academic plan for IUG students' semesters IX and X prescribes a further 18 credits. Does this mean that the total number of credits required to earn both degrees is 139, not 138?
4) I believe that one reason for the success of Smeal's accounting IUG is that most students in the program complete at least one internship. Provision is made for this student's academic plans. Is an internship encouraged and feasible within the proposed program?

Steven Huddart  
Department Chair and Smeal Chair Professor in Accounting  
Smeal College of Business  
Penn State  
354B Business Building  
University Park, PA 16802-3603  
(814) 865-0041

Begin forwarded message:

From: Jeff Sharp <jeffsharp@psu.edu>

Subject: FW: IUG proposals for business majors/MBA, ACCTG/MPACC and INFSY/MIS at Harrisburg

Date: August 2, 2016 at 11:27:09 AM EDT

To: "Charles H. Whiteman" <chwiteman@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, Bill Kracaw <wak4@psu.edu>, "huddart@psu.edu" <huddart@psu.edu>, Vilmos Misangyi <vfm10@psu.edu>, Nicholas Petruzzi <ncp12@smeal.psu.edu>, RMHead <rmhead@smeal.psu.edu>, Hans Baumgartner <HansBaumgartner@psu.edu>

Cc: Mike Gilpatrick <mjg11@psu.edu>, Lorraine Reitz <lar8@psu.edu>, "Christine Jones" <ChristineJones@psu.edu>, Tammy Whitehill <tas1@psu.edu>, Tena Ishler <tri3@psu.edu>, Dawn Corman <drc18@psu.edu>, Lara Jackson <ljw21@psu.edu>, Stephanie Ironside <sli1@psu.edu>

Colleagues,

Please review carefully these proposals from the Harrisburg campus that appear primarily to be directed toward graduate programs. I am not sure how much, if any, consultation has taken place.

The proposals appear to be efforts to integrate undergraduate degrees with Harrisburg’s MBA program. They are asking for our support.

Thanks,

Jeff

Jeffery M. Sharp | Associate Dean for Undergraduate Education  
Smeal College of Business | The Pennsylvania State University | 202 Business Building | University Park, PA 16802  
814 863-1947 (Office) | JeffSharp@psu.edu

---------------------------------------
Dear Dean Sharp,

Our School wants to provide opportunities to our outstanding undergraduate business students through IUGs. The IUGs include six undergraduate majors/MBA, Accounting/MPACC, and Information Systems/MIS. We respectfully request your help for the external review. Attached please find the proposals.

All proposals have similar admission requirements -- the number of seats is limited; candidates need to have 3.5 cumulative GPA and complete entry-to-major requirements. IUG students will count up to 12 credits of graduate courses toward their undergraduate degree.

If you have any questions, please feel free to let me know.

We appreciate your time and input.

Best regards,
Oranee

Oranee Tawatnuntachai, Ph.D., CFA
Associate Professor of Finance
Director, MBA Program
Penn State Harrisburg
Middletown, PA 17057
Tel. 717-948-6151
Fax 717-948-6456
Appendix D: B.S. in Project and Supply Chain Management and M.B.A.
Integrated Undergraduate-Graduate (IUG) Handbook
B. S. in Project and Supply Chain Management and M.B.A.
Integrated Undergraduate-Graduate (IUG)
Degree Program
School of Business Administration
Penn State Harrisburg, the Capital College

1. Introduction

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

2. Application Process

To initiate the application process, students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

Admission Requirements
The number of openings in the IUG program is limited. Applicants to the IUG program must have:
1. Completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.
2. Earned a minimum of cumulative grade point average of 3.5.
3. Completed the following courses or equivalent:
   • ACCTG 211 [4] Financial and Managerial Accounting for Decision
Making

- ECON 102 [3]  Introductory Microeconomic Analysis and Policy
- ENGL 015 or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition

To formally apply, students must submit a completed Graduate School application for admission. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Reduced Course Load
As many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs. All courses proposed to count for both degrees must be at the 500- or 800-level. Below shows a sample sequence of coursework for the third, fourth and fifth year.
### Semester V
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241</td>
<td>Legal Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>B A 242</td>
<td>Social and Ethical Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>SCM 320</td>
<td>Transport Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 341</td>
<td>Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Non-Business elective</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Semester VI
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 460</td>
<td>Purchasing and Materials Management</td>
<td>3</td>
</tr>
<tr>
<td>SCM 445</td>
<td>Operations Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>ECON 104</td>
<td>Introductory Macroeconomics Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>300/400-Level Business Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16.5</strong></td>
</tr>
</tbody>
</table>

### Semester VII
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364Y</td>
<td>International Business and Society US; IL</td>
<td>3</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 540*</td>
<td>Accounting for Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>FINAN 530*</td>
<td>Corporate Project II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester VIII
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462</td>
<td>Business Strategy</td>
<td>3</td>
</tr>
<tr>
<td>FIN 475</td>
<td>Financial Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>INFSY 540*</td>
<td>Information Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>500-level SC&amp;IS elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Semester IX
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 510</td>
<td>Business Analytics and Decision Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUS 515</td>
<td>Business Ethics, Governance and Law</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

### Semester X
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKT 514</td>
<td>Strategic Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 588</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>500- or 800-level Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

*Satisfies requirements for both the undergraduate and graduate programs for a total of 12 credits.

### Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning of the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. in Project and Supply Chain Management degree. The GMAT or GRE scores must be submitted by the end of the eighth semester to be considered for the assistantship.

### 3. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Project and Supply Chain Management and Master of Business Administration degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program, listed in Appendix B. Students in the IUG program take three additional credits in their third year, and three fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.
Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.
Appendix A: Bachelor of Science in Project and Supply Chain Management Degree Requirements

General Education Requirements (45 credits)

- Writing/Speaking (GWS)
  ENGL 015S or 030 [3]  Rhetoric and Composition or Honors Freshmen Composition\(^a\)
  CAS 100 [3]  Effective Speech

- Quantitative (GQ)
  MATH 110 or 140 [4]  Techniques of Calculus I or Calculus with Analytic Geometry \(^a\)
  STAT 200 or SCM 200 [4]  Elementary Statistics or Introduction to Statistics for Business\(^a\)

- Natural Sciences (GN)
  9 credits of any courses with a GN suffix

- Arts (GA)
  6 credits of any courses with a GA suffix\(^b\)

- Humanities (GH)
  6 credits of any courses with a GH suffix\(^b\)

- Social & Behavioral Sciences (GS)\(^b\)
  ECON 102 [3]  Introductory Microeconomic Analysis and Policy\(^a\)
  ECON 104 [3]  Introductory Macroeconomic Analysis and Policy

- Health & Physical Activities (GHA)
  3 credits of any courses with a GHA suffix

\(^a\)Entry to Major requirements
\(^b\)Students may apply 9-6-3 rule.

General Electives (2 credits)
2 credits of non-business courses
Major Requirements (88 credits, including 3 credits of GWS courses, 6 credits of GQ courses and 3 credits of GS courses)

- Prescribed Courses (43 credits)
  - Business Courses (28 credits)
    - ECON 102 [3; GS] Introductory Microeconomic Analysis and Policy
    - ECON 104 [3; GS] Introductory Macroeconomic Analysis and Policy
    - ENGL 202D [3; GWS] Effective Writing: Business Writing
    - FIN 301 [3] Corporation Finance
    - MIS 204 [3] Introductory to Business Information Systems
    - MKTG 301 [3] Principles of Marketing
    - SCM 301 [3] Supply Chain Management
  - Project and Supply Chain Courses (15 credits)
- Additional Courses (33 credits)
  - Math, Statistics and Law (12 credits)
    - Select 4 credits from MATH 110 [4; GQ] or MATH 140 [4; GQ]
    - Select 4 credits from SCM 200 [4; GQ] or STAT 200 [4; GQ]
    - B A 243 [4] Social, Legal, and Ethical Environment for Business
  - Electives (21 credits)
    - Select 3 credits from:
      - B A 364Y [3; IL] International Business and Society
      - ECON 470 [3]
      - FIN 471 [3]
      - MGMT 461 [3]
      - MKTG 445 [3]
    - or other 400-level international business courses
Select 6 credits of 300- or 400-level courses in one business supporting area or PSCM electives from:

- MGMT 432 [3] Small Business Field Study
- MGMT 433 [3] Leadership and Team Building
- MGMT 453 [3] Creativity and Innovation
- MGMT 466 [3] Organizational Learning and Knowledge Management
- MGMT 483 [3] Compliance and Fairness in Organizations

Select 3 credits from:


Select 3 credits from:


Select 3 credits from:

- SCM 455 [3] Operation Planning and Control

Select 3 credits from:


- Supporting Courses and Related Areas (12 credits)
  Select 12 credits of approved electives courses from any area.

**Additional Requirements**

- First-Year Seminar, 1 credit of any course with an S, T, X or PSU designation.
- United States Cultures and International Cultures requirements: 3 credits of any course with a US designation and 3 credits of any course with an IL designation. These are satisfied simultaneously with any of the above requirements.
- Writing across the Curriculum requirement is satisfied by B A 364Y, a prescribed course.
- No more than 60 credits should be from business and business-related courses.
### Appendix B: Bachelor of Science in Project and Supply Chain Management Typical Schedule

**Semester I**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ENGL 015 S or 030</em></td>
<td>Composition GWS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>MATH 110 or 140</em></td>
<td>Calculus GQ</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>ECON 102</em></td>
<td>Introductory Microeconomic Analysis GS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

**Semester II**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100 Effective Speech GWS</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>STAT 200 or SCM 200</em></td>
<td>Statistics GQ</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MGMT 301 Basic Management concepts</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Semester III**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ACCTG 211</em></td>
<td>Financial and Managerial Accounting</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MKTG 301 Principles of Marketing</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MIS 204 Introduction to Business Information Systems</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Arts GA</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Semester IV**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301 Corporation Finance</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MIS 390 Information System Management and App</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENGL 202D Business Writing</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SCM 301 Supply Chain Management</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

**Semester V**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 241 Legal Environment of Business</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>B A 242 Social and Ethical Environment of Business</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>SCM 320 Transport Systems</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MGMT 341 Human Resource Management</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>14.5</strong></td>
</tr>
</tbody>
</table>

**Semester VI**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM 460 Purchasing and Materials Management</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SCM 445 Operations Planning and Control</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ECON 104 Introductory Macroeconomics Analysis GS</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>300/400-Level Business Elective</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Semester VII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 364 Y International Business and Society US; IL</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SCM 416 Warehousing and Terminal Management</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MGMT 410 Project Management</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Sciences GN</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Semester VIII**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Component</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 462 Business Strategy</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities GH</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>MGMT 418 Project Planning and Resource Mgmt</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Supporting Course</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>300/400-Level Business Elective</td>
<td></td>
<td></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Bold type** requires a grade of C or better.

*Entry to major requirement

*Supporting Courses List

- Computer Science Minor: CMPSC 122, CMPSC 221, CMPSC 360 and any 400 level CMPSC course
- Information Science and Technology Minor: IST 110, IST 210, IST 220, IST 301, IST 302, IST 402, IST 431 and IST 432
- Homeland Security Minor: PUBPL 201, PLSC 475, CRIMJ 304, CRIMJ 435, PUBPL 306 and PUBPL 475
- Psychology: PSYCH 100, PSYCH 301 and any 400 level PSYCH course
- Security and Risk Analysis: Any SRA courses
- Any Foreign Language Courses
Appendix C: Master of Business Administration Degree Requirements

The M.B.A. program requires a minimum of 30 graduate credits. Twenty one of these credits are in prescribed areas of business, including accounting, finance, management, marketing and information systems. An additional nine credits are electives, permitting students to select courses in such areas as accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Depending on their level of preparation, some students may need to take additional course work (foundation courses) beyond the baccalaureate to permit them to begin their advanced business studies with a common conceptual foundation and adequate understanding of the integrated nature of the business enterprise.

A minimum grade point average of 3.0 must be earned for course work that is applied toward the graduate degree.

Prescribed Courses (21 credits)

- FINAN 521 or 530 [3]  Corporate Finance or Corporate Finance II
- MRKT 514 [3]    Strategic Marketing

Electives (9 credits)

- 9 credits of 500-level electives in accounting, business analytics, finance, information systems, strategic leadership and innovation and supply chain management.

Foundation Courses (up to 18 credits)

- MNGMT 511 [3]    Organizational Behavior
M.B.A. Bulletin Changes

1. Brief summary of proposed changes and justification for changes

We propose an Integrated Undergraduate Graduate (IUG) program in Project and Supply Chain Management at Penn State Harrisburg. This requires an update to the program bulletin. The updated section is in bold in Section 3.

2. Current bulletin description

**Business Administration (BADMN)**

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.

The Graduate Faculty

The Program

The MBA program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.
**Admission Requirements**

Admission requirements listed here are in addition to requirements stated in the **GENERAL INFORMATION** section of the *Graduate Bulletin*.

Decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT waiver for applicants seeking graduate assistantships.

Please visit www.mba.com for more information about the GMAT or www.ets.org/gre for information about the GRE).

The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- a copy of official transcripts from all colleges or universities attended (official transcripts will be required after being admitted to the program)
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume (optional)

For complete admission information, on-line application, and the latest updates on admission requirements and procedures, please consult the College Web page at [www.hbg.psu.edu](http://www.hbg.psu.edu).

**International Students**

As English is the language of instruction, English proficiency test scores (TOEFL/IELTS) may be required. Please see the English Proficiency requirements listed in the Graduate Bulletin.
Application Dates

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, should be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Preparation for the Program

Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session
of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

**Foundation Courses:**
The MBA program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.

**Degree Requirements**

Requirements listed here are in addition to requirements stated in the **DEGREE REQUIREMENTS** section of the *Graduate Bulletin*.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

**Prescribed Courses:** 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INF SY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, a capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

**Elective Courses/Tracks:** 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling mangers to synthesize
data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

**Tracks:**

**Accounting:** The objective of this Track is to provide the student, when combined with an undergraduate degree in accounting or comparable additional coursework, with the stipulated number of academic credits to satisfy the educational requirements for CPA licensure in Pennsylvania and most other states. Emphasis is placed on advanced level accounting skills including auditing, financial reporting, and taxation.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 504 Auditing Theory and Practice (3)
- ACCT 510 Business Tax Planning: Theory and Practice (3)
- ACCT 532 Accounting Information and Decision Systems (3)
- ACCT 545 Strategic Cost Management (3)
- ACCT 561 Financial Statement Analysis II (3)
- ACCT 572 Financial Reporting I (3)
- ACCT 573 Financial Reporting II (3)
- ACCT 590 or 890 Colloquium (1-3)
- ACCT 596 or 896 Individual Studies (1-9)
- ACCT 597 or 897 Special Topics (1-9)
- BUS 554 Master's Project (3)*

**Business Analytics:** The objective of this Track is to provide the student with data analytical skills that enable them to gain data insights and transform data into strategic decisions.

In consultation with their adviser, a student shall select 9 credits from the following:

- BUS554 Master's Project (3)*
- INFSY 535 Object-Oriented Design and Program Development in Business (3)
- INFSY 555 Data Management Systems (3)
- INFSY 565 Intelligent Systems in Business (3)
- INFSY 566 Data Mining and Knowledge Discovery (3)
- INFSY 896 Individual Studies (1-9)*
- MRKT 572 Marketing Research (3)
- SC&IS 570 Supply Chain Engineering (3)
Note that a student should take INFSY 535 as their first elective if planning to select INFSY 565 as another elective.

Finance: The objective of this Track is to examine and apply complex economic and financial models and techniques in decision making. Electives for the Finance Track cover four areas: corporate finance, investment, financial institution, and international finance. This Track also assists the student in preparation for the Chartered Financial Analysts (CFA) exam.

In consultation with their adviser, a student shall select 9 credits from the following:

- ACCT 572 Financial Reporting I or ACCT 573 Financial Reporting II (3)
- BUS 554 Master's Project (3)*
- FINAN 518 Financial Markets and the Economy (3)
- FINAN 522 Investment and Portfolio Management (3)
- FINAN 523 Risk Management of Modern Financial Institutions (3)
- FINAN 526 International Finance (3)
- FINAN 527 Derivative Securities (3)
- FINAN 530 Advanced Corporate Finance (3)**
- FINAN 531 Managing Financial Operations (3)
- FINAN 590 or 890 Colloquium (1-3)
- FINAN 596 or 896 Individual Studies (1-9)
- FINAN 597 or 897 Special Topics (1-9)

Information Systems: The objective of this Track is to develop a comprehensive understanding of information technology management and the software development competencies and tools that facilitate better business decisions. The required course for this track provides knowledge of object-oriented software development. Electives cover both information technology areas such as database management, web development and data mining, and management of information technology areas such as e-commerce, software engineering and global information technology.

Required Course (3 credits):

- INFSY 535 Object-Oriented Design and Program Development in Business (3)

Note that a student should take the required course before taking other electives.

Electives (6 credits):

In consultation with their adviser, a student shall select 6 credits form the following:

- BUS 554 Master's Project (3)*
- INFSY 547 WEB Enabled Technologies (3)
- INFSY 555 Data Management Systems (3)
- INFSY 560 Data Communications Systems and Networks (3)
Strategic Leadership and Innovation: Modern businesses exist in an era of intense global competition and efficient management practices that result in the rapid standardization of even the most recently developed products and processes. In this environment, the ability to innovate is a critical organizational competency for crafting and maintaining competitive advantage. The Strategic Leadership and Innovation track provides students with the knowledge necessary for understanding the process of innovation and the organizational characteristics that facilitate the process. Upon completing the track, students will have the competencies necessary for leading the formulation and implementation of an entrepreneurial strategy.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master's Project (3)*
BUS 580 Sustainable Business Theory Functions & Strategy (3)
MRKT 570 Marketing Strategy and Planning (3)
MNGMT 505 Managing Human Resources (3)
MNGMT 514 Organizational Innovation and New Venture Development (3)
MNGMT 515 Labor Management Relations (3)
MNGMT 570 Leadership Development (3)
MNGMT 590 Colloquium (1-3)
MNGMT 596 Individual Studies (1-9)
MNGMT 597 Special Topics (1-9)

Supply Chain Management: The objective of this Track is to provide the competencies and tools for developing the effective and efficient physical flow of goods as well as the information and financial flows necessary to effect them. Emphasis is both on organizations needing to design, maintain, and optimize their supply chains, and those that provide the requisite enabling services such as those engaged in transportation, warehousing, information intermediaries, and third-party combinations.

In consultation with their adviser, a student shall select 9 credits from the following:

BUS 554 Master’s Project (3)*
MNGMT 523 Service Operations Management (3)**
SC&IS 540 Transportation and Distribution Management (3)
SC&IS 546 Procurement and Supply Management (3)
SC&IS 565 Supply Chain Strategy (3)
SC&IS 570 Supply Chain Engineering (3)
SC&IS 590 Colloquium (1-3)
General Business: The objective of this Track is to allow students to select graduate courses that meet their personal and professional goals.

Select 9 graduate credits, in consultation with an adviser, to meet the objectives of the Track. **Individual Studies (1-9) and Master's Project (3) can be used to satisfy elective credits.** With program approval, a maximum of 6 graduate credits may be selected in courses outside of the School of Business Administration.

*Providing that the project or the study is relevant to the Track.*

**Cannot be used to satisfy elective credits taken as part of Foundation or Prescribed Courses.**

**Transfer Credit and Course Substitutions**

*Transfer Credits*: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

*Course substitutions*: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Grade-point Average and Time Limit**

A 3.00 (out of 4.00) minimum grade-point average is required for the M.B.A. degree. All course work must be completed within six years, or seven consecutive summers of matriculation.

**Financial aid**

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.
Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) to be granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) to be granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

The joint programs require that the student first be admitted to The Dickinson School of Law. Subsequently, the student is *recommended* for and *applies* for admission to the Graduate School for the Penn State Harrisburg M.B.A. program. Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the Graduate Bulletin.

The following are required for applicants:

*The Dickinson School of Law:* Completed Law School application; Law School Admission Test (LSAT) score; Law School Data Assembly Service (LSDAS) report; one page personal statement; employment record since high school; two letters of recommendation.
**M.B.A. Program:** Completed Graduate School application; Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE); letter of recommendation from the Associate Dean of the Dickinson School of Law; evidence of proficiency in analytic skills through college-level mathematics course demonstrated either by completion of a course or successful completion of a mathematics proficiency examination approved by the M.B.A. program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Analytical Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the J.D. program until the student is matriculated at The Dickinson School of Law. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another regionally accredited graduate-level institution may be applied to the M.B.A. in accordance with policies of Graduate Council.

**Degree Requirements**

To earn the M.B.A. degree, students in the joint degree program must complete all of the course degree requirements for the M.B.A. degree described above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.

**Advising of Students**

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

**Tuition**

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.
Additional Information

For more information and the latest updates on the joint degree program, call the Law school at 717-240-5207 or 800-840-1122, or visit the Law School and the M.B.A. program at Penn State Harrisburg web sites at:
Law.psu.edu/
Harrisburg.psu.edu/mba

Concurrent Degree Offering with the Penn State College of Medicine Biomedical Sciences Graduate Program

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State College of Medicine, Biomedical Sciences Graduate Program

Degrees Conferring:
Ph.D. (College of Medicine)
M.B.A. (The Capital College)

Concurrent Degree Programs

The Penn State College of Medicine, Biomedical Sciences program, and the School of Business Administration of Penn State Harrisburg, The Capital College offer cooperative programs leading to the degrees of doctor of philosophy (Ph.D.) in Biomedical Sciences to be granted by the College of Medicine, and the Master of Business Administration (M.B.A.) in Business Administration to be granted by the Capital College. This concurrent degree opportunity facilitates the completion of both a doctorate in biomedical sciences and a professional master's degree in business administration. The program is designed primarily for students interested in pursuing a career involving high-quality independent research and positions of management responsibility within the biomedical sciences community.

Admission Requirements:
The concurrent programs require that the student first be admitted to the Biomedical Sciences Graduate Program. Subsequently, the student is recommended for and applies for admission to the Penn State Harrisburg M.B.A. program by completing a Concurrent Graduate Degree Programs Plan of Study.

The following are required for applicants:

Biomedical Sciences Graduate Program: Completed Graduate School application; Graduate Record Examination (GRE) score; a bachelor's degree reflecting a reasonable background in zoology or biology, mathematics and chemistry; a minimum junior/senior grade point average of 3.00 and with appropriate course backgrounds; two letters of recommendation; a curriculum vitae; a description of career goals. Reading knowledge of one or two foreign languages is recommended.
M.B.A. Program: Completed concurrent degree form; Graduate Management Admission test (GMAT) or Graduate Record Examination (GRE) score; letter of recommendation from the department chair of the Biomedical Sciences Program; evidence of proficiency in analytic skills through a college-level mathematics course demonstrated either by completion of course or successful completion of a mathematics proficiency examination approved by the program; evidence of proficiency in computer applications skills; proficiency in writing evidenced by a score of "4" or higher on the Writing Assessment portion of the GMAT or GRE; evidence of proficiency in the academic disciplines of accounting, finance, economics, marketing, management and information sciences equivalent to that provided by completion of an integrated four-year business program, or completion of additional course work at the graduate level. Each course must have been completed with a grade of B or higher within seven years prior to admission to the M.B.A. program. The School of Business Administration will review the applicant's transcripts for acceptability of the courses.

No courses from the M.B.A. program may count toward the Ph.D. until the student is admitted to the Biomedical Sciences Graduate Program. However, graduate-level courses taken in the M.B.A. program at Penn State Harrisburg, or at another graduate-level institution, may be applied to the M.B.A. in accordance with the transfer policies of Graduate Council.

Degree Requirements

To earn the M.B.A. degree, students in the concurrent degree program must complete all of the degree requirements for the M.B.A. degree, described above. Nine credits of course work in biomedical sciences may be double-counted toward the M.B.A., subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted. Nine credits of M.B.A. coursework may be double-counted for credit toward the Ph.D. degree, subject to the approval of the Biomedical Sciences Graduate Program.

Advising of Students

All students in the concurrent program have two advisers, one in the School of Business Administration, and one from the faculty in the Biomedical Sciences Graduate Program. Because the concurrent program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the concurrent program. Such a decision will rest jointly with the faculties of the M.B.A. and the Biomedical Sciences Ph.D. programs. The students can graduate with one degree before the other as long as they have completed all of the requirements for that degree. If students accepted into the concurrent degree program are unable to complete the Ph.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.
The Course Matrix

For more information and the latest updates on the concurrent programs, call the Biomedical Sciences Graduate Program at 717-531-1045 or visit the websites at:
http://www2.med.psu.edu/
Pennsylvania.psu.edu/mba

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list

INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

3. Revised bulletin description

Business Administration (BADMN)

Program Home Page

Oranee Tawatnuntachai, Director
Penn State Harrisburg, School of Business Administration
777 W. Harrisburg Pike
E-355 Olmsted Building
Middletown, PA 17057-4898
717-948-6140
mbahbg@psu.edu

Degree Conferred:

M.B.A.
The Graduate Faculty
The Program

The M.B.A. program is intended to provide graduates with a foundation for personal and professional growth and lifelong learning; a firm grounding in the academic disciplines underlying the field of business; participative strengths; and decision making, problem solving, and critical thinking skills. Major emphasis is placed on the social, legal, and ethical context of business—particularly ethical values needed in the conduct of business. Program faculty place high value on teaching and currency of curriculum, an emphasis on oral and written communication, collaborative learning, and cross-functional integration of concepts.

Locations

The degree is offered in its entirety on the Penn State Harrisburg campus located in Middletown, PA. To provide flexibility for students, some courses are also offered online or in a hybrid format (i.e., a blend of resident instruction and online). Students should contact the program office for information on specific semester course offerings.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

The admission decision is based on the applicant's entire admission portfolio consisting of undergraduate degree, post baccalaureate course work, either the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) scores, professional experience, letters of recommendation, and statements provided in the application. An applicant with significant work experience may be admitted with a lower GMAT or GRE score while an applicant with limited work experience may be admitted with a higher GMAT or GRE score and an outstanding undergraduate background.

Standardized Test Requirements Waiver: The GMAT or GRE requirement may be waived for the following applicants:

- Graduates from business, engineering, science or related fields with a cumulative undergraduate GPA of at least 3.5 from accredited U.S. schools.
- Members of Beta Gamma Sigma, the international business honors society.
- Ph.D., J.D., M.D., or Master's degree holders in business, engineering, science or related fields from accredited U.S. schools.

Please note that there is no GMAT or GRE waiver for applicants seeking graduate assistantships.

Please visit the GMAT website or the GRE website for information about these examinations.
The candidate must apply for admission to the program via the Graduate School application for admission. The candidate is required to submit:

- a completed online application form with application fee
- official transcripts from all post-secondary institutions attended
- GMAT or GRE test scores (the test must have been taken within the past five years)
- two letters of recommendation
- resume

For complete admission information and the latest updates on admission requirements and procedures, please consult the Penn State Harrisburg website.

**International Students**

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.

**Application Dates**

Candidates may enter the program at the beginning of the fall or spring semester, or the summer session. To allow time for applications to be processed, all information, including the GMAT or GRE score, must be received by the admissions office no later than:

- Fall Semester - July 18
- Spring Semester - November 18
- Summer Session - April 18

Applicants from outside the United States must follow the early admission dates in order to allow the necessary clearances and paperwork to be processed in time. International application deadline dates are:

- Fall Semester--May 31
- Spring Semester--September 30
- Summer Session--February 28

To be considered for a graduate assistantship, applicants must submit a complete application by March 1. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

**Preparation for the Program**

Credits obtained to fulfill program preparation and foundation courses cannot be applied towards the requirements for the degree.
Analytic Skills Requirement: Students must demonstrate competence in analytic skills. This requirement can be satisfied in one of two ways: (1) by satisfactory completion of a college-level mathematics course; or (2) by successful completion of proficiency examination in mathematics approved by the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation, and completed with a grade of C or higher.

Computer Skills Requirement: Students are required to demonstrate proficiency in the use of computer applications. This requirement can be satisfied through of a college-level computer applications course within the past five years with a grade of a B or higher, or by documented, significant, computer-related work experience. If this requirement has not been met prior to admission, a college-level computer course such as MIS 204 or CMPSC 203 is required. Course work must be completed by the first semester or summer session of the student's matriculation with a grade of B or higher.

Communications Skills Requirement: Successful completion of the M.B.A. program requires the ability to think clearly, and to write and speak persuasively. Part of this requirement can be satisfied by achieving a score of "4" or higher on the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) Analytical Writing Assessment. If this score is not achieved, students must satisfy this requirement through additional course work in writing skills such as ENGL 202D or other work developed in consultation with the M.B.A. program. This requirement must be satisfied by the first semester or summer session of the student's matriculation. All courses taken must be completed with a grade of B or higher. The speech component of this requirement is satisfied through individual and group presentations in MNGMT 511 and other courses in the M.B.A. program.

Foundation Courses:
The M.B.A. program is grounded in the academic disciplines of accounting, finance, economics, marketing, management, and information sciences, among others, in order to provide students with the conceptual foundation required for competent pursuit of more advanced studies in business administration as well as the ethical and legal management of profit and non-profit organizations. This background can be provided by course work taken at the graduate level or as part of a baccalaureate degree from a regionally accredited U.S. institution or a tertiary (post-secondary) degree that is deemed comparable to a four-year bachelor’s degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. All courses must have been completed with a grade of B or higher, within seven years prior to admission to the M.B.A. program. Course work not meeting the tests of relevancy, quality, or currency must be taken at the graduate level prior to starting the relevant prescribed courses and electives. Time limits may be waived by the M.B.A. program on the basis of post-graduation training or current and relevant work experience. Courses available at Penn State Harrisburg that provide the necessary foundation for graduate business study include: ACCT 501, BUS 505, BUSEC 502, MNGMT 511; either MNGMT 522 or MNGMT 523; and MRKT 513.
Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

The M.B.A. degree requires 30 credits of course work at the graduate level (500- or 800-level). These credits are distributed over two clusters of courses: Prescribed Courses and Elective Courses/Tracks.

Prescribed Courses: 21 credits, ACCT 540, BUS 510, BUS 515, BUS 588, either FINAN 521, or FINAN 530, INFSY 540, MRKT 514. The prescribed courses develop key competencies in functional areas of business and BUS 588, the required capstone course, integrates knowledge from all functional areas. The capstone project, completed while the student is enrolled in BUS 588, is a feasibility study incorporating firm-level business strategies leading to sustainable competitive advantage.

Elective Courses/Tracks: 9 credits. Students may elect courses in clusters of "Tracks" organized around a common theme designed to be integrative and cohesive. The Tracks provide competencies and skill sets for decision making in seven areas: (1) The Accounting Track is designed to offer additional courses for students having prior academic preparation in accounting to enable them to satisfy the educational requirements for Certified Public Accountant (CPA) licensure in Pennsylvania and most other states; (2) the Business Analytics Track is intended to enhance data analytical skills enabling managers to synthesize data to make strategic decisions; (3) the Finance Track provides advanced corporate finance and investment knowledge enabling managers to apply various financial tools in decision making; (4) the Information Systems Track is designed to provide competencies enabling managers to develop and implement information technology; (5) the Strategic Leadership and Innovation Track is intended to further sharpen leadership and management skills; (6) the Supply Chain Management Track provides competencies needed to develop improvement and innovation in organizational supply chains; and (7) the General Business Track is provided for students who wish to develop a broad generalist program, or who have a particular personal or professional goals not met by one of the other tracks.

The list of courses required for each track and additional approved elective courses is maintained by the graduate program office.

Transfer Credit and Course Substitutions

Transfer Credits: Penn State allows a maximum of 10 transfer credits of high-quality work to be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Course substitutions: Some students enter the program with advanced coursework in one or more subject areas (e.g., a degree in accounting plus a C.P.A.) making some prescribed coursework redundant. Except for BUS 588 which must be taken at Penn State Harrisburg, students may petition or be advised by the program to replace up to 6 credits in Prescribed
Courses with an equivalent number of credits of more advanced graduate courses in the same subject area. Courses must have been completed within five years prior to the date of first degree registration at the Graduate School of Penn State, must be of at least B quality (grades of B- are not transferable), and must appear on an official transcript of a regionally accredited U.S. institution or recognized degree-granting international institution.

**Joint Degree Offering with the Penn State Dickinson School of Law**

Penn State Harrisburg, The Capital College, School of Business Administration
Penn State Dickinson School of Law

Degrees Conferred:
J.D. (Dickinson Law)
M.B.A. (The Capital College)

**Joint Degree Programs**

The Dickinson School of Law and the School of Business Administration of Penn State Harrisburg offer cooperative programs leading to the degrees of Juris Doctor (J.D.) granted by the Dickinson School of Law and the Master of Business Administration (M.B.A.) granted by Penn State Harrisburg, The Capital College. This joint degree opportunity facilitates the completion of both a law degree and a professional master's degree in business administration.

**Admission Requirements**

Applicants to the joint degree program must apply and be admitted first to Dickinson Law. Subsequently, the student is recommended for and applies for admission to the Graduate School for the Master of Business Administration graduate program. Admissions requirements and applications for admission for Dickinson Law are listed in the [J.D. Admissions](#) section of the Dickinson Law website. The admission requirements for the Master of Business Administration are listed above.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the J.D. program are listed on the [Penn State Dickinson Law website](#). Degree requirements for the M.B.A. degree are listed in the Degree Requirements section above. Nine credits of course work at The Dickinson School of Law may be double-counted toward the M.B.A. degree, subject to program approval. Students must obtain a grade satisfactory to the M.B.A. program in order for the credits to be double-counted for credit toward the J.D. degree at the Dickinson School of Law subject to the approval of the School of Law.
Advising of Students

All students in the joint degree program have two advisers, one in the School of Business Administration and one from the faculty at The Dickinson School of Law. Because the joint degree program is designed to be taken in synchrony with the objective that both degrees will be earned simultaneously, students who do not demonstrate progress toward completion of both degrees may be denied continuation in the joint degree program. Such a decision will rest jointly with the faculties of the M.B.A. program and the J.D. program. The students can graduate with one degree before the other as long as they have completed all of the requirements for the degree. If students accepted into the joint degree program are unable to complete the J.D. degree, they are still eligible to receive the M.B.A. degree if all the M.B.A. degree requirements have been satisfied.

Tuition

The Dickinson School of Law and Penn State Harrisburg will each charge their own tuition to students in the joint degree program.

Additional Information

For more information and the latest updates on the joint degree program, contact the Dickinson Law School and the M.B.A. program at Penn State Harrisburg.

Integrated B.S. in Accounting/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a
resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Accounting are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 504, ACCT 510, ACCT 532, ACCT 545, ACCT 561, ACCT 571, ACCT 572, ACCT 573, and FINAN 521.

**Integrated B.S. in Finance/M.B.A. Program**
The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].
Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Finance are listed in the [Undergraduate Bulletin](#). Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540, FINAN 518, FINAN 522, FINAN 523, FINAN 526, FINAN 527, FINAN 530, FINAN 531, and INFSY 540.

**Integrated B.S. in Information Systems/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be
reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Information Systems are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include FINAN 521, INFSY 540, INFSY 547, INFSY 555, INFSY 560, INFSY 565, INFSY 566, and INFSY 570.

**Integrated B.S. in Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically,
as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program, unless students have not completed 24 or more credits at Penn State, in which case they must take the GMAT and earn a score of at least 450. If students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.
Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include INFSY 540, MNGMT 505, MNGMT 514, MNGMT 515, MNGMT 520, MNGMT 570, MRKT 514, and MRKT 570.

Integrated B.S. in Marketing/M.B.A. Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed.

Admission Requirements

Students apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School, as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, official transcripts of all post-secondary courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.
The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Marketing are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include BUS 515, INFSY 540, MRKT 514, MRKT 571, MRKT 572, MRKT 585, and MRKT 587.

**Integrated B.S. in Project and Supply Chain Management/M.B.A. Program**

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master’s degree may be applied to both undergraduate and graduate degree programs.
If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed.

**Admission Requirements**

Students apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#), as well as the admission requirements for the M.B.A., listed above. Students should mention in the notes section that the application is for the IUG program in Business Administration. Students must submit a resume, a personal statement including career goals and how the M.B.A. will enhance their career goals, [official transcripts of all post-secondary courses](#) taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Students must be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 015 or 030 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

**Degree Requirements**
Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Project and Supply Chain Management are listed in the Undergraduate Bulletin. Degree requirements for the M.B.A. degree are listed above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees. All courses counted for both degrees must be at the 500- or 800-level. Credits associated with culminating experience for the graduate degree cannot be double-counted. The M.B.A. courses that could possibly be double-counted include ACCT 540; FINAN 530; INFSY 540; SCIS 525, SCIS 540, SCIS 546, SCIS 565 and SCIS 570.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin.

A limited number of scholarships, fellowships, and research grants are available, as well as several graduate assistantships. For more information on these, contact the School of Business Administration.

Many students work full-time and take classes part-time. In many cases, employers have a tuition-reimbursement plan paying for partial or full tuition. To find other options available to you, contact the Financial Aid Office, 717-948-6307.

**Graduate Assistantships**

Full-time graduate students who are interested in an assistantship should contact the program director. Students must be nominated for an assistantship by their program director. Students on graduate assistantships must adhere to the course load policy listed in the Bulletin.

Students applying for an assistantship should submit scores from the Graduate Management Admissions test, or similar examinations by the deadline.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

ACCOUNTING (ACCT) course list

BUSINESS (BUS) course list

FINANCIAL ANALYSIS (FINAN) course list
INFORMATION SYSTEMS (INFSY) course list

MANAGEMENT (MNGMT) course list

MARKETING (MRKT) course list

SUPPLY CHAIN (SC&IS) course list

4. List of courses to be added, modified or dropped in the proposed curriculum

None
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: College of Engineering
Department or Instructional Area: School of Electrical Engineering and Computer Science
                        Computer Science and Engineering

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
- First semester following approval
- Second semester following approval

Existing Graduate Program Option, or Minor: Change

Current designation of graduate program: Ph.D. Program in Computer Science and Engineering
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing): Ph.D. Program in Computer Science and Engineering
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if noted above): Changing course requirements for Ph.D. in CSE

Indicate effective semester:
- First semester following approval
- Second semester following approval

Submitted by Graduate Program Head

Mahmut Kandemir
Printed name

Date: 12/06/2016

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Printed name

Date: 1/20/17

Approved by College/School Dean/Chancellor (or designee):

Printed name

Date: 6/24/17
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

<table>
<thead>
<tr>
<th>On Behalf of John Challis</th>
<th>Unreadable</th>
<th>Date: 4/14/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

Recommended by Chair, Graduate Council Committee on Programs and Courses:

<table>
<thead>
<tr>
<th>On Behalf of M. Kathleen Heid</th>
<th>Unreadable</th>
<th>Date: 4/14/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>

Noted by Dean of the Graduate School:

<table>
<thead>
<tr>
<th>On Behalf of Regina Vasilatos-Younken</th>
<th>Unreadable</th>
<th>Date: 4/14/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td>Signature</td>
<td></td>
</tr>
</tbody>
</table>
The CSE department proposes to reduce the required course-load for PhD students from 48 credits to 33 credits.

**Justification for the Proposed Changes:**

Compared to many computer engineering and/or science departments at domestic peer institutions, as well as compared to other departments in the College of Engineering, the current course requirements for the PhD students in the CSE department are excessive in the total number of classes required. For example, the University of Michigan CSE PhD requires only 30 credit hours, in contrast to Penn State CSE’s 48. Requiring such a large number of courses delays when our CSE PhD students start spending significant time in research activities (as they spend most of their first two years in classes) and frequently demands that students still have course loads into their third year in the program. These delays affect the research throughput of the department. Moreover, the current course requirements are largely unstructured, relying on volume of credits to ensure core and breadth coverage, which does not appear to align with best practices in comparable departments. Motivated by this, the department proposes to bring down the course-load for its PhD students while retaining strong core topic coverage by requiring that all students take courses in at least two of three defined core areas.

**Specific Changes:**

Below are the current course-load requirements and proposed (reduced) requirements. The changed parts are highlighted in yellow.

**Current Doctoral Degree Requirements from the Graduate Bulletin:**

The doctoral degree requirements include the general requirements of the Graduate School as listed under Doctoral Degree Requirements. Furthermore, students applying for and gaining admittance to the Ph.D. program will not be permitted to switch to the master's program at a later date, except under extenuating circumstances. **To qualify for a Ph.D. degree, each student must take 27 credits of courses with numbers CSE 500-589 or CSE 598, and 21 additional credits of 400-level and above courses.** The 21 additional credits must include at least 3 credits of CSE 590 (colloquium), with a maximum of 3 credits of CSE 590 being counted toward the total of 48 minimum credits. **A maximum of 3 credits of X96 may also be counted.** A student must pass the Ph.D. candidacy examination by the third regular semester after entering the program (see Handbook). Students must pass the Ph.D. comprehensive examination after completion of most of the course work, and the English competency and communication requirements. A thesis must be completed under the direction of a Ph.D. committee and the results must be successfully defended in the thesis defense examination.
Proposed Doctoral Degree Requirements:

The doctoral degree requirements include the general requirements of the Graduate School as listed under Doctoral Degree Requirements. Furthermore, students applying for and gaining admittance to the Ph.D. program will not be permitted to switch to the master's program at a later date, except under extenuating circumstances. To qualify for a Ph.D. degree, students who do not have an M.S. degree in Computer Science or Computer Engineering must take a minimum of 33 credits, including:

- 6 credits of CSE 565 (3), CSE 511 (3), or CSE 530 (3);
- 15 credits of CSE courses, excluding CSE 596 and 598;
- 9 credits of 400-, 500-, or 800-level courses in CSE/EE/MATH/STAT, or 500- or 800-level IST courses (which may include up to 3 credits of CSE 596);
- 2 credits of CSE 590 Colloquium; and
- 1 credit of CSE 591

Students admitted to the Ph.D. program with an M.S. degree in Computer Science or Computer Engineering must take a minimum of 21 credits, including:

- 6 credits of CSE 565 (3), CSE 511 (3), or CSE 530 (3);
- 9 credits of CSE courses, excluding CSE 596 and 598;
- 3 credits of 400-, 500-, or 800-level courses in CSE/EE/MATH/STAT, or 500- or 800-level IST courses (which may include up to 3 credits of CSE 596);
- 2 credits of CSE 590 Colloquium; and
- 1 credit of CSE 591

A student must pass the Ph.D. candidacy examination by the third regular semester after entering the program. After completion of most of the course work and meeting the English competency requirement, students must pass the Ph.D. comprehensive examination. A dissertation must be completed under the direction of the doctoral committee and the results must be successfully defended in the final oral examination. To earn the Ph.D. degree, doctoral candidates must write a dissertation that is accepted by the doctoral committee, the head of the graduate program, and the Graduate School.
Graduate Bulletin Description (with Changes Marked):

Computer Science and Engineering (CSE)

Program Home Page

CHITARANJAN DAS, Head of the Department
Information Sciences and Technology Building
814-865-9505

Degrees Conferred:

Ph.D., M.S., M.Eng.
Dual-Title Ph.D., M.S., and M.Eng. in Operations Research

The Graduate Faculty

The Program

The department offers courses and is prepared to direct research in a variety of subfields of computer science and engineering, including VLSI, computer architecture, parallel/distributed processors and processing, multiprocessors, interconnection networks, pattern recognition and image processing, performance evaluation, reliability, fault tolerance, theory of computation, computer systems, numerical analysis and optimization, programming methodology, and analysis of algorithms. Research and instruction are supported by extensive computing facilities within the University's Information Technology Services and by the computer laboratories operated by the department.

Admission Requirements

Requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

All applicants must provide a one-page statement of purpose and scores from the Graduate Record Examinations (GRE) Aptitude Test (verbal, quantitative, and analytical). A subject test in the GRE is not required, but the subject test in Computer Science is recommended.

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information.
Those students seeking an assistantship in Computer Science and Engineering ARE REQUIRED to submit a Test of Spoken English (TSE) or the TOEFL iBT. A score of 26 on the speaking section of the TOEFL iBT is equivalent to passing the TSE. A lower score would require remedial English as a Second Language courses. For score reporting for TOEFL, the institution code is 2660 and the department code is 78.

**Master's Degree Requirements**

Requirements listed here are in addition to requirements stated in the **DEGREE REQUIREMENTS** section of the *Graduate Bulletin*.

All students are expected to have completed appropriate courses in computer architecture and machine organization, data structures and analysis of algorithms, programming languages, operating systems, and logical design/switching theory or theory of automata. Students who do not meet background requirements will be required to take the appropriate 400-level courses to prepare them for the 500-level courses. At most, 3 credits of background course work can be used to satisfy the degree requirements except as specified for the M.Eng. degree. Students admitted to the M.S. program will not be permitted to switch to the M. Eng. program at a later time, except under extenuating circumstances and at the discretion of the program.

A minimum of 30 credits is required for the M.S. degree:

- 15 credits of courses numbered CSE 500 through 589, including a minimum of 9 credits that satisfy a breadth requirement. The list of courses that will satisfy the breadth requirement is maintained by the program office;
- 9 credits of 400-, 500-, or 800-level courses (excluding independent studies courses). This must include at least 1, and at most 2, credits of CSE 590 (Colloquium);
- 6 credits of thesis research (CSE 600 or 610)

Students must complete and defend an M.S. thesis. The thesis must be accepted by the advisers and/or committee members, the head of the graduate program, and the Graduate School.

A minimum of 30 credits is required for the M.Eng. degree:

- Fall Semester: CMPSC 465 (3); either (CMPSC 443 (3) and CMPSC 431 (3)) or (CMPEN 431 (3) and CMPEN 472 (3)); and 3 credits in CSE 500-589 or 597.
- Spring Semester: 12 credits in CSE 500-589 or 597.
- Summer Semester: CSE 820 (3) and CSE 594 (3).

The culminating experience for the program is a paper completed while the student is enrolled in CSE 594.
Doctoral Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

Students applying for and gaining admittance to the Ph.D. program will not be permitted to switch to the master's program at a later date, except under extenuating circumstances, at the discretion of the program. To qualify for a Ph.D. degree, students who do not have an M.S. degree in Computer Science or Computer Engineering must take a minimum of 33 credits, including:

- 6 credits of CSE 565 (3), CSE 511 (3), or CSE 530 (3);
- 15 credits of CSE courses, excluding CSE 596 and 598;
- 9 credits of 400-, 500-, or 800-level courses in CSE/EE/MATH/STAT, or 500- or 800-level IST courses (which may include up to 3 credits of CSE 596);
- 2 credits of CSE 590 Colloquium; and
- 1 credit of CSE 591.

Students admitted to the Ph.D. program with an M.S. degree in Computer Science or Computer Engineering must take a minimum of 21 credits, including:

- 6 credits of CSE 565 (3), CSE 511 (3), or CSE 530 (3);
- 9 credits of CSE courses, excluding CSE 596 and 598;
- 3 credits of 400-, 500-, or 800-level courses in CSE/EE/MATH/STAT, or 500- or 800-level IST courses (which may include up to 3 credits of CSE 596);
- 2 credits of CSE 590 Colloquium; and
- 1 credit of CSE 591.

A student must pass the Ph.D. candidacy examination by the third regular semester after entering the program. After completion of most of the course work and meeting the English competency requirement, students must pass the Ph.D. comprehensive examination. A dissertation must be completed under the direction of the doctoral committee and the results must be successfully defended in the final oral examination.

To earn the Ph.D. degree, doctoral candidates must write a dissertation that is accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

Dual-Title Ph.D., M.S., and M.Eng. in Operations Research

Admissions Requirements

Students must apply and be admitted to the graduate program in Computer Science and Engineering and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to
and meet the admissions requirements of the Operations Research dual-title program. Refer to the Admission Requirements section of the Operations Research Bulletin page. Doctoral students must be admitted into the dual-title degree program in Operations Research prior to obtaining candidacy in their primary graduate program.

**Degree Requirements**

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Computer Science and Engineering, listed above. In addition, students must complete the degree requirements for the dual-title in Operations Research, listed on the Operations Research Bulletin page.

The candidacy examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Computer Science and Engineering and must include at least one Graduate Faculty member from the Operations Research program. Faculty members who hold appointments in both programs’ Graduate Faculty may serve in a combined role. There will be a single candidacy examination, containing elements of both Computer Science and Engineering and Operations Research. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the candidacy examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for doctoral committees, the doctoral committee of a Computer Science and Engineering and Operations Research dual-title Ph.D. student must include at least one member of the Operations Research Graduate Faculty. Faculty members who hold appointments in both programs’ Graduate Faculty may serve in a combined role. If the chair of the doctoral committee is not also a member of the Graduate Faculty in Operations Research, the member of the committee representing Operations Research must be appointed as co-chair. The Operations Research representative on the student’s doctoral committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their doctoral committee and reflects their original research and education in Computer Science and Engineering and Operations Research. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin. Students on assistantships must adhere to the course load limits set forth in the Graduate Bulletin.
Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

**COMPUTER SCIENCE AND ENGINEERING (CSE) course list**

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06

Review Date: 4/14/2015

Faculty linked: 6/5/14
### Table Showing Current Ph.D. Requirements and Proposed Requirements

<table>
<thead>
<tr>
<th>Current Requirement</th>
<th>Accelerated Track (for students entering with MS in CS or equivalent)</th>
<th>Standard Track (for students entering with BS or MS in different field)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Minimum of 48 credits of non-thesis graduate level courses, with at least 27 credits of courses with numbers CSE 500-589 or CSE 597, and 21 additional credits of 400 level and above courses.</td>
<td>• Two courses from CSE 565, CSE 511, CSE 530 (total 6 credits); 9 credits from CSE courses excluding CSE 596 and CSE 598; 3 credits from 400 level and above in CSE/EE/MATH/STAT or 500 level IST. This can include up to 3 CSE 596 credits.</td>
<td>• Two courses from CSE 565, CSE 511, CSE 530 (total 6 credits); 15 credits from CSE courses excluding CSE 596 and CSE 598; 9 credits from 400 level and above in CSE/EE/MATH/STAT or 500 level IST. This can include up to 3 CSE 596 credits.</td>
</tr>
<tr>
<td>• 3 credits of CSE 590 (colloquium). Only 3 credits of CSE 590 can be counted towards the 48 minimum credits. A maximum of 3 credits of X96 can also be counted.</td>
<td>• 2 credits of CSE 590 (colloquium)</td>
<td>• 2 credits of CSE 590 (colloquium)</td>
</tr>
<tr>
<td>• 2CSE 591 (Research Experience in CSE; 1 credit)</td>
<td>• CSE 591 (Research Experience in CSE; 1 credit)</td>
<td>• CSE 591 (Research Experience in CSE); 1 credit</td>
</tr>
</tbody>
</table>
Consultation from Departments Affected by Proposed Change:

Feedback from Andrew Sears, IST Dean:

Mahmut,

Thanks for checking. When I shared your proposal, it generated a little conversation as people, but in the end there are no concerns with the proposed changes that I can recall. I don't anticipate anyone raising concerns or objections and I can assure you that I would let you know ASAP if I were to hear of any concerns that you should be aware of. Hopefully your proposal will go along smoothly.

Thanks,
Andrew

---
Andrew Sears
Dean and Professor
College of Information Sciences and Technology

Additional notes:

It is important to emphasize that this proposal changes only the required course-load for PhD students. It does not affect in any way the set of courses the CSE department usually offers. Consequently, it is not expected to have any impact on outside students taking CSE courses. Also, the proposal does not affect the SARI requirements. Finally, the candidacy exam or comprehensive exam requirements for PhD students are not affected either.
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Office of the Dean of the Graduate School, 211 Kern Building, University Park. For more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Graduate School
Department or Instructional Area: IGDP

New Graduate Program, Option, or Minor: Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
First semester following approval
Second semester following approval

Existing Graduate Program Option, or Minor: Change Drop

Current designation of graduate program: Molecular, Cellular and Integrative Biosciences
Current designation of graduate option: Bioinformatics and Genomics
Current designation of graduate minor:

New designation of existing graduate program (if changing): Keep MCIBS with no option- just dropping the BG option
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above): Drop BG option from MCIBS concurrent with it becoming a stand-alone program

Indicate effective semester:
First semester following approval
Second semester following approval

Submitted by Graduate Program Head

Melissa Rolls
Printed name
Signature
Date: 02/27/2017

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Michael Vendome
Printed name
Signature
Date: 2/28/17

Approved by College/School Dean/Chancellor (or Designee):

Michael Vendome
Printed name
Signature
Date: 3/22/17
<table>
<thead>
<tr>
<th>Role</th>
<th>Printed name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of John Challis</td>
<td>Velockwiff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended by Chair, Graduate Council Committee on Programs and Courses:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td>Velockwiff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noted by Dean of the Graduate School:</td>
<td></td>
<td></td>
<td>4/4/2017</td>
</tr>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
<td>Velockwiff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Date: February 27, 2017

To: Graduate Council

From: Melissa Rolls, Chair, Intercollege Graduate Degree Program in Molecular Cellular and Integrative Biosciences (MCIBS)

Re: Establishment of an independent Bioinformatics and Genomics Graduate Program

Bioinformatics and Genomics (BG) has been operating as an Option within MCIBS. The BG Option is now recognized as being a strong, independent entity that will function best as a stand-alone program. I am fully supportive of BG becoming independent, and am submitting the paperwork to drop it as an Option from MCIBS. MCIBS will continue operating as it has been, with the one exception that it will no longer house the BG Option.

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Chair, Molecular, Cellular and Integrative Biosciences Graduate Program
The Pennsylvania State University
Molecular, Cellular and Integrative Biosciences (MCIBS)

Program Home Page

MELISSA ROLLS, Chair
201 Life Sciences Building
University Park, PA 16802
814-863-3273
gradinfo@huck.psu.edu

Degrees Conferred:

Ph.D., MD/Ph.D, M.S.

The Graduate Faculty

The Program

The Intercollege Graduate Degree Program (IGDP) in Molecular, Cellular, and Integrative Biosciences (MCIBS) is designed to prepare researchers across an array of specializations in the biological sciences that share an emphasis on trans-disciplinary training, an approach that considers the whole organism and spans the continuum of understanding from fundamental mechanisms of action at the molecular/cellular level of discovery, to the function of the organism in its environment, with applications that enhance health and well-being. To achieve this goal, the IGDP in MCIBS serves as an umbrella portal for the entry and subsequent training of the next generation of researchers for academic, industrial, non-profit foundation, government, and other research entities in the biomedical sciences. Researchers will be trained across a wide range of specializations in the biological sciences that share the goal to elucidate mechanisms of action at the molecular, cellular, and organismal level, including disease.

The program currently offers educational and research emphasis areas in Cell and Developmental Biology; Immunology and Infectious Disease; Molecular and Evolutionary Genetics; Molecular Medicine; and Molecular Toxicology and Neurobiology, but is structured to remain contemporary with evolving or emerging fields within the biological/health sciences. Incoming students enroll in core courses of instruction covering basic biochemistry and molecular biology of cellular processes; ethics; and current research topics related to the diverse pathological mechanisms that underlie disease etiologies in humans and animals. In addition, students take specialized courses associated with one of the above programmatic emphasis areas or the option, as well as elective courses that complement and support their research interests and foci.

Calling upon the expertise of an extensive list of life science research faculty members representing an array of different departments across multiple colleges, the IGDP in MCIBS offers a unique opportunity to learn about and work in multiple bioscience disciplines. The MCIBS graduate program is supported by modern telecommunications facilities and equipment, and students not only explore new conceptual connections at the frontiers of research, but also engage in active group learning experiences and explore a variety of potential career opportunities before graduation.
General Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin. Applicants apply for admission to the program via the Graduate School application for admission.

Review of completed applications begins December 1 of each year. Applicants to the Ph.D. program are considered for admission; the program does not admit applicants for the terminal master's degree. Required application materials include:

1. Completed official Penn State Graduate School application.
2. Paid, nonrefundable application fee (see Requirements for Graduate Admission for current fee).
3. Official transcripts from all post-secondary institutions attended.
4. Application for a U.S. visa (international applicants only).
5. Graduate Record Examination (GRE) General Test; successful applicants generally have scores above the 75th percentile for each of the verbal, quantitative, and analytical writing sections.
6. Names and contact information, including business email addresses, for three references.
7. Statement of goals that pertain to the life sciences including motivation for pursuing a research doctorate; research experience and interests; and professional goals. The statement should include biological problems that are of interest to the applicant and how the applicant’s past experiences have prepared him or her to pursue this research.
8. The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. Consult the English Proficiency section of the Graduate Bulletin Application and Admission Procedures page for more information. Applicants to the MCIBS graduate program must have a minimum TOEFL score of 575 for the paper-based test, or a total score of 90 with a 21 on the speaking section for the Internet-based test (iBT). Successful applicants generally have a minimum score of 100 (with a 23 on the speaking section) on the Internet-based test.
9. Successful applicants generally will have completed coursework in biochemistry, molecular and/or cell biology, physics, chemistry (organic and inorganic), and calculus have a minimum 3.5/4.0 Jr./Sr. undergraduate grade point average.

Degree Requirements

Requirements listed here are in addition to requirements stated in the DEGREE REQUIREMENTS section of the Graduate Bulletin.

All students in the MCIBS graduate program are required to complete a minimum of 24 credits consisting of the following:

1. Core Required Courses (12 cr.):

A minimum of 12 credits in the following core courses is required: MCIBS 590 Colloquium (2 cr.), MCIBS 591 Ethics in the Life Sciences (1 cr.), BIOL 593 Experiential Teaching in Biology (2 cr.), MCIBS 596 Individual Studies (for Research Rotations) (1 cr.), MCIBS/BIOL/BMMB/VB SC 503 Critical Elements of Genetics and Molecular and Cellular Biology (4 cr.), and MCIBS 592 Current Research Seminars (2 cr.).

2. Emphasis Areas (9 cr.):

MCIBS offers curricular/research specializations in the following Emphasis Areas:
Specialized Courses and Research for Emphasis Areas: To complete an emphasis in any of the areas listed above, students take a minimum of 9 credits of specialized coursework and conduct original research associated with the respective Emphasis Area. The list of specialized courses that will count towards each Emphasis Area is maintained by the program office.

3. Additional Course Requirements (3 cr.):

Quantitative Foundation Course (≥ 3 credits): 400- or 500-level courses in a quantitative area such as statistics, genetics, bioinformatics, etc. (e.g., STAT 501 Regression Methods; STAT 502 Analysis of Variance and Design of Experiments; STAT 503 Design of Experiments; Population Genetics; etc. The list of courses that will count towards the Quantitative Foundation requirement is maintained by the program office.

Teaching Experience – In addition, all graduate students in MCIBS are required to have one semester of teaching experience by serving as a teaching assistant (TA) in an undergraduate course (400-level or lower) in a bioscience-related field. Teaching assistant opportunities are arranged in consultation with the adviser and program chair.

M.S.-specific Degree Requirements

Master’s students must take a minimum of 30 credits (the 24 credits described above, plus at least 6 credits of MCIBS 600 Thesis Research). At least 18 credits in 500- and 600-level courses combined must be included in the program. A minimum of 24 credits in course work (400, 500, and 800 series), as contrasted with research, must be completed in the major program.

Master’s students must complete at least 6 credits of thesis research (MCIBS 600), and up to 6 of the MCIBS 600 credits may be assigned a quality grade (A-F). In consultation with the adviser, the student must select a thesis committee of at least three members (including the adviser), write a thesis, and defend the thesis. The thesis must be accepted by the advisers and/or committee members, the head of the graduate program, and the Graduate School, and the student must pass the thesis defense. If all course credits and requirements are met, a student does not have to be registered for classes while writing and/or defending the thesis. Students must present their thesis in accordance with Graduate Council and Graduate School guidelines as described in the THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations.

Ph.D.-specific Degree Requirements

Course Work:

Ph.D. students must take a minimum of 24 credits, as described above. At least 18 credits in 500- and 600-level courses combined must be included in the program. A minimum of 24 credits in course work (400, 500, and 800 series), as contrasted with research (MCIBS 600), must be completed in the major program. A student’s doctoral committee can require additional course work depending on the student’s background and research plans.
English Competence:

Candidates for all doctoral degrees are required to demonstrate high-level competence in the use of the English language, including reading, writing, and speaking, as part of the language and communication requirements for the doctorate. This will be assessed for both domestic and international students as part of the candidacy exam, which includes a reading and original writing component. Should deficiencies be identified at the candidacy examination, students will be directed into appropriate remedial activities, including additional English and communication courses. Competence must be formally attested by the program before the doctoral candidate’s comprehensive examination is scheduled. (Note: Passage of the minimal TOEFL or IELTS requirement does not demonstrate the level of competence expected of a doctoral degree candidate and for conferral of a doctorate from Penn State.)

Candidacy Exam:

All Ph.D. students in the IGDP in MCIBS must take a candidacy exam no later than the fall semester of the second year. The purpose of the exam is to ensure that students have mastered the core concepts necessary to proceed further towards the Ph.D. The exam consists of both written and oral components, and is based primarily on the students' ability to critically read, understand, and communicate the key findings of a current research paper selected from the literature. Official entrance into the Ph.D. program occurs upon successful completion of the candidacy examination.

Doctoral Committee:

Upon successful completion of the Candidacy Examination, the student in consultation with his/her adviser will, as soon as possible, select a doctoral committee. The committee must meet Graduate Council guidelines for the composition of doctoral committees. This committee is responsible for supervising the academic program and monitoring the progress of the student towards his/her degree. It is the charge of this committee to assure that the student carries out a substantial piece of independent research and presents it as a dissertation.

Comprehensive Examination:

The Comprehensive Examination is administered and evaluated by the entire Doctoral Committee when the student has completed substantially all required coursework, and is intended to determine the feasibility of the student’s proposed research and the preparedness of the student to embark on his/her dissertation research. Students must be registered for classes (typically MCIBS 600) the semester they take this exam. The examination will consist of a written research proposal using an NRSA or NSF format, based upon the student’s proposed dissertation research, and an oral presentation of the proposed research. The proposal must include a timeline for the completion of the work that will be considered in the feasibility of the work.

Dissertation:

All Ph.D. candidates must conduct original research and prepare a dissertation that makes a significant contribution of new knowledge, is presented in a scholarly manner, and demonstrates an ability on the part of the candidate to do independent research of high quality. The contents and conclusions of the dissertation must be defended at the time of the final oral examination. The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School, and the student must pass a final oral examination (the dissertation defense).

Students must present their dissertation in accordance with Graduate Council and Graduate School guidelines as described in the THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations.
**Final Oral Examination:**

The final examination of the doctoral candidate is an oral examination administered and evaluated by the entire doctoral committee. It consists of an oral presentation of the dissertation by the candidate and a period of questions and responses. These will relate in large part to the dissertation, but may cover the candidate's entire program of study, because a major purpose of the examination is also to assess the general scholarly attainments of the candidate. The portion of the examination in which the dissertation is presented is open to the University community and the public; therefore, it is expected that the examination will take place at University Park or the Hershey campus.

**Additional Requirements:**

All MCIBS graduate students must maintain a cumulative grade-point average of $\geq 3.0$ to remain in good academic standing. Furthermore, the Ph.D. student must have a 3.0 GPA to take the doctoral candidacy, the comprehensive, and the final oral examinations. One or more failing grades (F) or a cumulative grade-point average below 3.0 will be considered evidence of unsatisfactory scholarship and may be grounds for dismissal from the program.

**M.D./Ph.D. Admissions Requirements**

Students interested in simultaneously pursuing an M.D. and Ph.D. degree must apply to the College of Medicine M.D. program using the national American Medical College Application Service (AMCAS) application system and indicate their intent to pursue the joint degree program. Admissions requirements and applications for admission to Penn State College of Medicine are available at the [M.D. Program](#) section of the Penn State College of Medicine website. The College of Medicine M.D./Ph.D. Admissions Committee reviews applications and evaluates candidates for acceptance into both the M.D. and Ph.D. program. Students not accepted into the joint degree program can be referred to either the M.D. or Ph.D. program, depending on their qualifications and interests.

After the review committee has accepted an applicant to the joint degree program, s/he must [apply and be admitted to the Graduate School](#) for admission to the graduate program. The general admission requirements for the Ph.D. degree are listed in the General Admission Requirements section above. Additional admission requirements for the joint degree are listed below:

- **Academic Achievement** - Applicants to our program generally have very strong grades and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.
- **Research Experience** - We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively, in-depth research experience as an undergraduate can suffice.
- **Recommendations** - We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.
- **Goals** - Applicants must be able to clearly articulate the reasons for pursuing the joint degree.
- **International Students** - All qualified students are eligible to apply regardless of citizenship.

**M.D./Ph.D. Degree Requirements**

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the M.D. program are listed on
the M.D. Program section of the Penn State College of Medicine website. Degree requirements for the Ph.D. degree are listed in the Ph.D.-specific Degree Requirements section above.

During the first two years of medical school, the student conducts at least three research rotations. After successful completion of the first two years of medical school the candidate joins their dissertation lab in the MCIBS Graduate Program.

During the summer after the second year of medical school M.D./Ph.D. students take Step 1 of the United States Medical Licensing Examination (USMLE), which serves in lieu of the knowledge-based part of the Candidacy Examination for the MCIBS program. Successful completion of BMS 506 A and B, which is taken in the second year of medical school, with a grade of B or higher, meets the critical thinking and paper analysis requirement of the candidacy exam.

The doctoral committee of an M.D./Ph.D. student in the MCIBS program is formed upon entry into the dissertation laboratory. In addition to the general Graduate Council requirements for doctoral committees, the committee must include at least two members of the MCIBS program Graduate Faculty and one M.D./Ph.D. steering committee member.

The MCIBS program will accept passing grades in the medical school courses SPM 711 Scientific Principles of Medicine (15 cr.) in lieu of 11 required credits for the MCIBS Core Required and Elective courses. The 11 required credits include 5 credits of MCIBS Core Required Courses (MCIBS 503 (4 cr.) and MCIBS 596 (1 cr.)), and 6 credits of elective courses (BMMB 541 (3 cr.) and BMMB 542 (3 cr.)). Because students in the M.D./Ph.D. program are being trained to combine research and medicine, most likely in medical schools, the MCIBS requirement for exposure to undergraduate teaching is waived. M.D./Ph.D. candidates are not required to take BIOL 593 Experiential Teaching in Biology (2 credits) or to be teaching assistants. The Emphasis Area requirement and the Quantitative Foundation Course requirement are also waived.

In addition to taking the required courses MCIBS 590 Colloquium (2 cr.), MCIBS 591 Ethics in the Life Sciences (1 cr.), and MCIBS 592 Current Research Seminars (2 cr.), elective courses are selected in consultation with the student’s dissertation adviser and doctoral committee, with guidance from the MCIBS emphasis area course lists and program chair. 6 credits of elective courses will be selected.

The M.D./Ph.D. candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee. A dissertation must be prepared and defended by each M.D./Ph.D. candidate, as described above in Ph.D.-specific Degree Requirements. In addition, M.D./Ph.D. students must have submitted a first-author manuscript before defending their dissertation. Before returning to medical school, the doctoral dissertation must be accepted by the Graduate School.

The M.D./Ph.D. Program requires that students have one first author peer-reviewed paper published based on their research accepted prior to completing medical school, and preferably accepted for publication prior to returning to the third year of medical school. At the discretion of the College of Medicine Vice Dean for Research and Graduate Studies, in consultation with the MCIBS Program Chair, the requirement for a first author publication prior to completing medical school may be waived. Examples of conditions that might warrant exemptions include: (a) prolonged illness, (b) mentor’s relocation, (c) mentor’s reluctance to submit the student’s work for publication, (d) the student’s project is published by another research group, or (e) delays or challenges in the publication review process beyond the control of the student or dissertation advisor.

If a student decides not to return to medical school, or for some other reason is not able to complete the last two years of medical school, but they have successfully completed their Ph.D. dissertation and final oral examination and met all other degree requirements for the Ph.D. in MCIBS, they will eligible to receive the
Ph.D. The latter will be conferred after the student notifies the program that she/he wishes to withdraw from the M.D. program and completes all requirements for conferral of the Ph.D. degree.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the Student Aid section of the Graduate Bulletin. Students on graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

**Courses**

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.