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.

October 4, 2017

Graduate Degree Programs

ADD

Information and Communication Technologies for Development – new graduate minor program (Donald P. Bellisario College of Communications), page 14

CHANGE

Business Administration – change degree requirements of the Executive M.B.A. degree program (Smeal College of Business), page 23

Geographic Information Systems – change degree requirements for the M.G.I.S. degree program (College of Earth and Mineral Sciences), page 38

Graduate Courses

ADD

ACCTG 821
Analysis and Interpretation of Tax Law
TAX LAW ANALYSIS (3)
ACCTG 821 provides accounting and law students who are interested in the practice of taxation with an overview of U.S. federal income tax system research. The course focuses on resolving tax law questions in support of economic decision making and tax return position defense. Students learn to conduct and document in-depth legal research and analysis within the domain of tax law. This writing intensive course hones students’ writing skills within the domain of tax law and business decision making. Additionally, the course provides an in-depth understanding of the ethical constructs that guide and limit the practice of taxation.
PREREQUISITES: ACCTG 405
PROPOSED START: SP2018
ACCTG 822
Corporate Taxation and Financial Reporting
CORP TAX REPORTING (3)
ACCTG 822 provides accounting students with knowledge about the taxation of corporations. The course focuses on the tax law treatment of corporate formations, operations, distributions, mergers, and acquisitions. Additionally, students learn about Accounting Standards Codification Topic 740--Income Tax, planning for corporate structure classification, and related ethical considerations.
PREREQUISITES: ACCTG 821
PROPOSED START: SP2018

ACCTG 823
Survey of Tax Topics
TAX TOPICS (3)
ACCTG 823 provides accounting students who are interested in the practice of taxation a survey of the law defining the taxation of pass-through entities including partnerships, S-corporations, limited liability companies, and trusts. The course focuses on the tax law treatment of formation, operations, distributions, mergers, and acquisitions to the entity and its owners. Planning for structure classification and limitations thereof are embellishments to the basic tax law applicable to pass-through entities. This course also provides an overview of State and Local Taxation (SALT) and taxation of international operations.
PREREQUISITES: ACCTG 821
PROPOSED START: SP2018

CAS 564
Measurement in Communication Science
MEASURMENT (3)
This course is concerned with the theory and technology of measuring variables relevant to the study of communication. In a phrase, the course is about construct validity. It consists of three major sections. The first focuses on how to devise and evaluate a conceptual definition, then create a corresponding operational definition. This section lays the groundwork for the subsequent sections that present data-analytic procedures for evaluating the correspondence between concept and operation. Part two of the course addresses measures in which the symbols reflective of the phenomenon are ordered. Specific topics include consistency indices of reliability, exploratory factor analysis, and confirmatory factor analysis. Part three emphasizes measurement of phenomena for which the symbols are not ordered, that is, the measurement of categories. It covers the creation and evaluation of coding schemes as they are used in verbal protocols, content analysis, and social interaction analysis as well as agreement indices of reliability. The overarching goal of the course is to impart some of the conceptual and practical skills necessary for conducting social scientific research.
PROPOSED START: SP2018

CMLIT 524
Comparative Arab/ic Literature and Criticism
COMP ARABIC LIT (3)
This course provides students with a comprehensive overview of modern Arab/ic literature, in dialogue with critical approaches that illuminate these texts within a comparative framework. By examining the critical interventions and debates that have shaped Arabic literature up until our present moment, this course invites students to attend to the manifold ways that this literature engages the major theoretical paradigms of global literary studies. It subsequently de-provincializes these debates beyond the limited
purview of ethno-linguistic, philological, or geopolitical divisions of the field. It instead situates this literature as an active agent within world literary debates and criticism—both past and present. In this regard, the course will invite students to critically reframe the (neo)colonial or (neo)orientalist categories of the ‘Middle East’ and ‘Near East,’ and to consider other supra- and transnational exchanges staged across Asia, Africa, and the Mediterranean—as well as in the diaspora. In so doing, the course aims to look beyond the exclusive lens of the (post)colonial, or binary models of center/periphery, that dominate discussions of ‘third-world’ literature. In moving away from the siloing of these traditions within Area Studies, the course considers the repercussions of these debates for narrative, aesthetic, geopolitical, theoretical, and pedagogical concerns across the study of Comparative Literature. Students will read a wide variety of literary texts in English translation, spanning a range of genres (prose, poetry, drama, film). Alongside these works, they will engage with critical and philosophical writings from the Arab/ic context, on topics such as aesthetics and the sublime, affects and embodiment, futurity and dystopia, ecocriticism and the Anthropocene, language, modernity/postmodernism, globalization, trauma, and more. After having taken this class, students will have gained a sound grasp of the field, as well as its literary and historical dimensions. They will also have developed a critical understanding of the current challenges and directions of the study of modern Arab/ic literature.

PROPOSED START: SP2018

DAAN 501
Analytics Research and Problem Framing
ANALYTICS RESEARCH (3)
Students in this course will explore the elements of the research process within quantitative, qualitative, and mixed methods approaches as it applies to research into data analytics and its use. The ethical principles and challenges of research will be covered including human-subject research guidelines and the Institutional Review Board approval process. Students will use these theoretical underpinnings to begin to critically review literature in the analytics domain, determine how research findings are useful in forming their understanding of their work, and place their own research within the context of the extant literature.
PREREQUISITES: STAT 500
PROPOSED START: SP2018

DAAN 826
Large Scale Databases for Real-Time Analytics
BIG DATA REAL-TIME (3)
This course provides an exploration of current and emerging big data solutions for handling large quantities of data in real-time. In particular, this course investigates methods to design, develop, and implement several systems used for real-time data analysis and storage such as document databases, column-based databases, queueing systems, and real-time processing systems. Students will learn to design a wide variety of large database solutions, and how to interconnect those systems to create a lambda architecture. Using this platform, students will collect, process, store, and report real-time data.
PREREQUISITES: DAAN 825
PROPOSED START: SP2018
HRER 826
Talent Management
TALENT MGMT (3)
This course covers one of the main functional areas of Human Resource Management, staffing, and prepares students to be effective staffing professionals. The course focuses on the effective management of the flow of talent into, through, and out of organizations. Particular attention is given to the impact of business strategy, internal and external labor markets, recruiting, selection, and analytics on staffing practices. We will cover human resource planning, layoffs, career transitions, and other workforce movement. Experiences focusing on the transfer of course material to real-world situations will be an integral part of the class.
PROPOSED START: SP2018

HRER 827
Talent Development
TALENT DEVELOPMENT (3)
This course covers one of the main functional areas of Human Resource Management, training and development, and prepares students to be effective training and development professionals. The course focuses on the systematic assessment required to determine actual learning needs, identifying where learning is best achieved in a training and development intervention, as well as the actual creation of effective and efficient training classes. In this regard students will study training methods, program design elements, and training program assessment methods.
PREREQUISITES: HRER 505
PROPOSED START: SP2018

INTAF 500
Research Design
RESEARCH DESIGN (3)
This course provides a general overview of empirical research methods appropriate for international affairs specialists. The approach is hands-on, with a focus on learning practical skills for evaluating real-world events.
PROPOSED START: SP2018

LDT 577
Computer Supported Collaborative Learning
COMP COLLAB LEARN (3)
CSCL is an interdisciplinary branch within the Learning Sciences that focuses on the study of social learning processes with and without technology, and the development and evaluation of tools to improve the practice of collective cognition in learning contexts. CSCL also promotes a shift in mainstream education from a practice that prioritizes individual knowledge acquisition of inert forms of knowledge about things, to one that prioritizes higher forms of psychological function, such as control over learning processes, artifact creation, and collaborative knowledge building. The CSCL community is made up of a diverse collection of researchers and includes design and lab-based studies. As such, this class will provide an overview of a variety of literature in CSCL and take a collaborative approach towards exploring this exciting field. We will use collaborative technologies to discuss and build understanding of key CSCL theories, learn about CSCL methodologies, and create new tools, artifacts, and designs to articulate our developing understanding.
PROPOSED START: SP2018
METEO 515
Practical Statistics for Atmospheric Sciences
ATMO STATISTICS (3)
The aim of this course is to build practical statistical tools for data analysis in the atmospheric sciences. The course will first provide the students with a solid foundation in fundamental statistical concepts, including hypothesis testing, maximum likelihood estimation, random variables, and probability density functions. Once the students are familiar with the basic terminology and concepts in statistics, the course will move on to a suite of more advanced statistical techniques that are commonly used in atmospheric science research. The advanced topics include regression analysis, nonparametric tests and resampling techniques, data reduction such as eigendecompositions and principal component analysis, time series analysis, spatial statistics, and Bayesian modeling. The emphasis will be on the sound application of these techniques and their interpretations, rather than technical foundations and derivations. The goal is to build intuition behind commonly used statistical tools and learn how to avoid potential pitfalls in their applications.
RECOMMENDED PREPERATIONS: No formal prerequisites. The course assumes familiarity with calculus and linear algebra, including basic matrix manipulations and eigendecomposition. Students are also expected to enter the course with basic competency in the programming language of their choice.
PROPOSED START: SP2018

METEO 527
Data Assimilation
DATA ASSIMILATION (3)
Data assimilation (DA) is the process of finding the best estimate of the state and associated uncertainty by combining all available information including model forecasts and observations and their respective uncertainties. DA is best known for producing accurate initial conditions for numerical weather prediction (NWP) models, but has been recently adopted for state and parameter estimation for a wide range of dynamical systems across many disciplines such as ocean, land, water, air quality, climate, ecosystem, and astrophysics. Taking advantages of improved observing networks, better forecast models, and high performing computing, there are two leading types of advanced approaches, namely variational data assimilation through minimization of a cost function, or ensemble-based data assimilation through a Kalman filter. Hybrid techniques, parameter estimation, predictability, and ensemble sensitivity methods will also be covered. Emphasis will be on applications to atmospheric science and numerical weather prediction, and the unique aspects of its observing systems, computer models, and predictability characteristics.
The material in this course may be relevant to those in engineering, statistics, mathematics, hydrology, earth systems science, atmospheric science, and many other fields that seek to integrate information from observations and models.
RECOMMENDED PREPERATION: A basic knowledge of probability theory, statistics, calculus, linear algebra/matrices, and computer programming is expected.
PROPOSED START: SP2018

METEO 551
Physical Oceanography
PHYS OCEANOGRAPHY (3)
This course provides graduate and advanced undergraduate students in the sciences and engineering an overview of the circulation of the ocean and the theories used to explain it. The focus is on the large-scale circulation driven by winds, buoyancy, and tidal forces. The course will also cover the distributions
of temperature and salinity in the ocean, the surface ocean mixed layer, mesoscale eddies, and internal waves.

METEO 556
The Atmospheric Boundary Layer
ATMOS BOUND LAYER (3)
The atmospheric boundary layer is the layer of the atmosphere that is in frequent contact with the surface of the earth. It is the layer where life exists, and which mediates exchanges of energy, momentum, and chemicals between the earth’s surface and the atmosphere. The scales of motion in the atmospheric boundary layer, because of the presence of the earth’s surface, are small compared to the rest of the atmosphere. The dynamics, therefore, differ from those found in the “free” atmosphere. This course describes the physical properties of the layer of the earth’s atmosphere that is in frequent contact with the earth’s surface, the atmospheric boundary layer. The course includes a descriptive overview of this layer using observations, then presents the governing equations and common simplifications used to describe the boundary layer. Conservation of mass, energy, and momentum, are covered. A core principle is the decomposition of the governing equations into a mean state and turbulent components, and the challenges introduced by this decomposition. The concepts of eddy diffusivity and closure methods are motivated by this challenge. These principles and governing equations are used to understand the typical evolution of the atmospheric boundary layer as a function of time of day. Convective and stable boundary layer conditions are contrasted. The contrasting conditions are linked to changes in the exchange of energy, momentum and water vapor at the earth’s surface. The fundamentals of plume dispersion are described and tested. A simple numerical model of the atmospheric boundary layer is discussed and applied to atmospheric data. Stability conditions in the atmosphere are further explored using the equation for turbulent kinetic energy. Parameters describing the turbulence state of the surface layer and boundary layer, including the Obukhov length, friction velocity, convective velocity scale, and Richardson number, are discussed and applied to typical boundary layer conditions and observations. Similarity theory is discussed as a means of describing turbulent properties of the atmospheric boundary layer as a function of stability conditions. Monin-Obukhov similarity theory for the surface layer is applied to atmospheric observations. Additional common atmospheric boundary layer states are described, including cloud topped boundary layers, marine boundary layers, and boundary layers in heterogeneous terrain. Observational, measurement and numerical methods are presented and used in class assignments.

METEO 561
The Global Carbon Cycle
GLOBAL CARBON CYC (3)
This course focuses on one of the most challenging environmental issues of our era, the accumulation of carbon dioxide (CO2) and methane (CH4) in our atmosphere due to human modification of the global carbon cycle. We will study the processes, terrestrial, oceanic, atmospheric, and anthropogenic, that govern the sources and sinks of carbon into and out of the global atmosphere, and will study the methods used to quantify the carbon cycle. The primary focus is on the recent past (industrial era) and near-future (~100 years), when carbon cycle management decisions will play a critical role in climate change. The course starts with a review of global atmospheric CO2 and CH4 trends during the industrial era, and examines how atmospheric data inform our understanding of the global carbon cycle. The course then studies contemporary terrestrial biosphere, marine, and anthropogenic processes governing
the carbon cycle. The paleorecord of the carbon cycle is reviewed, including glacial / interglacial cycles. Carbon cycle predictions and projections, including options for human management of the carbon cycle, are presented and evaluated. Ethical and economic factors, in addition to physical and biological processes, are considered.
The course is appropriate for graduate students or advanced undergraduates with a sound background in quantitative sciences or engineering. The course is suitable for students from a wide variety of degree programs across the university.

PROPOSED START: SP2018

METEO 570
Climate System Dynamics
CLIM SYS DYNAMICS (3)
Climate Dynamics delves into the fundamental processes that control the earth's climate of the past, present, and future. Fundamentals are developed from concepts of basic dynamic meteorology, radiative transfer, and thermodynamics. The surface energy and hydrologic budgets, and the atmospheric and oceanic circulation are covered. The cryosphere and its interactions with the atmosphere are also discussed. A survey of the earth's climate through geologic history is also explored. The concepts developed in this course are applied to the topic of anthropogenic climate change and how various aspects of the climate system could be influenced by global mean, long-term warming.

PROPOSED START: SP2018

NUCE 544
Global Nuclear Security Policies
GLOB NUC SEC POLCS (3)
This course reviews the historical development and examines the current state of American and international policies and laws related to global nuclear security. U.S. policy has evolved over a period of more than sixty years since the Manhattan Project and has embraced the importance of both safeguards (applicable to weapons states and non-weapons states that commit to peaceful use of nuclear materials) and proliferation prevention (policies intended to deter and detect attempts to illicitly acquire nuclear weapons). Over this time improvements in technology have increased the potential for proliferation but have also increased the ability to detect proliferation. Recently, heightened danger of unauthorized proliferation by states and, more worrisome, transnational non-states, has led to increased emphasis on control and detection.
Within this context students in this course will study U.S. national security strategy in the areas of counterterrorism and nonproliferation. We will discuss those policies aimed at enhancing nuclear security and examine the roles of various agencies, including the Department of Homeland Security, the Department of Energy (including the National Nuclear Security Administration), the Nuclear Regulatory Commission, the Department of Defense, and the Environmental Protection Agency. International treaties and conventions on nuclear safeguards, arms control, and terrorism will be covered. Regulations promulgated by the U.S. Nuclear Regulatory Commission and the International Atomic Energy Agency will also be studied. The course will consider how these policies are intended to control the actions of both state and non-state adversaries and applications to both government and private sector nuclear activities. The role of transnational and domestic groups will be discussed, especially with regard to motivation and potential capabilities.

PROPOSED START: SP2018
**NURS 828**  
Person-Centered Care: Emerging Interdisciplinary Approaches for Older Adults  
PERSON-CENTER CARE (3)  
This course examines the delivery of person-centered care for older adults and their families across the health care continuum. Application of relevant theories will provide a framework of understanding and delivering care which addresses the individual’s goals and behavioral episodes in the context of personal interactions and environmental factors. The importance of assessment and care planning in relation to individuals’ context, personal history, and preferences for everyday living will be emphasized, while integrating care related to complex medical problems in older adults. Students will explore interdisciplinary roles, examine case studies, and identify specific interventions. The course will use a holistic approach which addresses the biological, mental/emotional, social/cultural, and spiritual delivery of person centered care to older adults and their families.  
PROPOSED START: SP2018

**PHS 538**  
Mixed Methods Research  
MIXED METHODS RES (3)  
This course will emphasize the use of qualitative methods to complement quantitative data. The course will review the assumptions and mental models that inform both approaches, and the ways in which qualitative and quantitative goals, questions, methods, analysis strategies, and presentation styles can be integrated. Students will first learn the basics of question-making, interviewing, coding, and analyzing qualitative data through practice and examples in the literature. After this overview of qualitative research, the course will highlight the main five designs of mixed methods in the social, behavioral, and health sciences: (1) explanatory sequential; (2) exploratory sequential; (3) embedded; (4) convergent parallel; and (5) transformative. The class will review current literature and guidelines from the National Institutes of Health as primary resources.  
PREREQUISITES: PHS 520; STAT 500, PHS 550; STAT 507  
PROPOSED START: SP2018

**PLSC 567**  
Terrorism  
TERRORISM (3)  
This seminar provides a general and cumulative investigation into the phenomenon of terrorism from a Political Science perspective. It is a study of terrorism with an attention to what it is – theoretically, conceptually, empirically – and how and why it is used by nonstate actors; its political, economic, and social root causes; its consequences to political, economic, and social institutions and outcomes; and the implications of current research on terrorism and counterterrorism. Although the study of terrorism has a long pedigree in the social sciences, research by political scientists became more extensive following the September 11, 2001 attacks on the World Trade Center. This course critically evaluates this new literature, noting its contributions, limitations, gaps, and opportunities for future discovery. Much of the contemporary scholarly literature on terrorism makes use of state-of-the-art political science research methods and quantitative analysis.  
CROSS-LISTED COURSES: INTAF 567  
PROPOSED START: SP2018

**PSYC 843**  
Trauma-Focused Approaches to Psychological Intervention I  
TRAUMA INTERVEN I (3)
This course covers the etiology, symptoms, diagnosis, and treatment of trauma-related dysfunction, particularly post-traumatic stress disorder (PTSD), acute stress disorder (ASD), and common comorbid conditions. Students will learn about the range of events associated with trauma, the prevalence, incidence, and developmental impact of trauma-related disorders across the lifespan, the major risk factors for trauma-related dysfunction, cultural factors that impact dysfunction, trauma-focused assessments for identifying trauma-related symptoms, and the major research-supported approaches to treatment and prevention of trauma-related disorders in the aftermath of trauma. Major treatment approaches to be covered include prolonged exposure (PE), trauma-focused cognitive-behavioral therapy (TF-CBT), cognitive processing therapy (CPT), eye-movement desensitization and reprocessing (EMDR), emotion-focused treatment (EFT), stress management techniques, and psychopharmacological interventions. The recognition, prevention, and treatment of compassion fatigue and vicarious traumatization in the clinician will be emphasized.

PROPOSED START: SP2018

PSYC 844
Trauma-Focused Approaches to Psychological Intervention II
TRAUMA INTERVEN II (3)
This course covers issues concerning the diagnosis and treatment of complex trauma-related dysfunction, particularly post-traumatic stress disorder (PTSD), Dissociative Disorders, and treating special populations issues. Building upon the theoretical knowledge gained in PSYC 843, the emphasis of the course will be on development and application of skills in conducting empirically-supported therapy and assessment for Type I (“single-event”) and Type II (“complex”) trauma, Dissociative Disorders, and trauma-associated somatic symptoms. Major treatment approaches to be covered will include phase-oriented integrated treatment and relational models; Skills Training in Affective and Interpersonal Regulation (STAIR); Stress-Inoculation Therapy (SIT), Acceptance and Commitment Therapy (ACT); Dialectical-Behavioral Therapy (DBT), Imagery Rehearsal Therapy (IRT), Narrative Exposure Therapy (NET), and couples and family approaches. The course will also address specific treatment considerations based on trauma type as well as ethical issues relevant to clinical work with trauma survivors. The course will also address the assessment, diagnosis, and treatment of comorbid conditions (depression, anxiety, substance use, relationship problems) and special populations.
PREREQUISITES: PSYC 843
PROPOSED START: SP2018

PSYC 845
Crisis and Disaster-Related Interventions in Psychology
CRISIS INTERVEN (3)
This course will provide students foundational knowledge about crisis intervention and disaster interventions. Students will learn about empirically supported models and best practices of psychological interventions during disasters, taking into context cultural and trauma-specific contextual information. Students will be trained in basic crisis intervention skills and psychological first aid and practice crisis case handling. Students will learn about how to handle specific crisis situations and how to handle issues of burnout, vicarious traumatization, and compassion fatigue in disaster and crisis situations. By the end of the course, students will be able to describe clinicians’ roles and responsibilities as members of an interdisciplinary emergency response team during a local, regional, or national crisis, disaster, or other trauma-causing event and know the skills needed to provide crisis intervention services. Students will also learn how to differentiate between diagnosis and developmentally appropriate reactions during crisis, trauma, and disaster using appropriate assessment and diagnosis.
Students will be given the opportunity to practice crisis assessment and intervention, as well as learn how assessment, diagnosis, and treatment may be influenced by crisis, trauma, and disasters.

**WFED 852**  
Global Talent Development  
GLOBAL TALENT DEV (3)  
Global Talent Development (GTD) is the systematic process of developing employees to be in the right place at the right time to do the right things to achieve the right results in ways that align with business strategy, organizational values, and organizational ethics. The Global Talent Development Leader is the person in the organization who facilitates this process. Part of a larger talent management effort, GTD emphasizes growing the organization’s internal talent to meet present and future needs.

**WFED 870**  
Whole System Change for Workforce Professionals  
WHOLE SYS CHANGE (3)  
The Whole System Change Approach is a change model for transforming any business into a thriving organization by aligning internal systems with external forces and engaging every person in an organization. This course provides the background and theory for building a Whole System Change Approach that is sustainable and strategic. The approach is intended to alter the relationship between an organization and its environment, and to affect outcomes at the organization level, including revenue, profitability, and culture. WFED 870 (Whole System Change) is designed to familiarize students with the Whole System Change Approach, including models, concepts, techniques for designing large-scale changes, implementing, and evaluating results of the whole system change intervention in organizations.

**CHANGE**

**OLD**

**CSD 595C**  
Speech/Language Therapy Externship  
SP/LANG THPY EXTER (7-15/ Repeatable Max: 15)  
This course is a full-time externship experience in the assessment and treatment of communication disorders and is completed at an off-campus site. Students may complete the externship in a variety of clinical and/or educational settings including hospitals, rehabilitation centers, and public schools.

**EFFECTIVE START: SP2006**

**NEW**

**CSD 895C**  
Speech/Language Therapy Externship  
SP/LANG THPY EXTER (7-15/ Repeatable Max: 15)  
This course is a full-time externship experience in the assessment and treatment of communication disorders and is completed at an off-campus site. Graduate students in
Communication Sciences and Disorders participate in an active learning clinical practicum with working professionals to enhance their academic and clinical competencies and skills. Students will accrue required clinical practice hours in an off-campus clinical and/or educational setting including hospitals, rehabilitation centers, nursing homes, early intervention programs, and public schools including pre-school programs.

OLD
CSD 595I
Speech Pathology Mini-Placement
SP PATH MINI-PLACE (1-6/Repeatable Max: 6)
Graduate students in Communication Sciences and Disorders participate in an active learning clinical practicum with working professionals to enhance their academic and clinical competencies and skills. Students will accrue these required hours (minimum of 50 hours) by completing this mini-placement in an off-campus clinical and/or educational setting including hospitals, rehabilitation centers, nursing homes, early intervention programs, and public schools including pre-school programs. This experience will be completed part-time during the Spring or Fall semester or fulltime during Summer I or Summer II semester.
EFFECTIVE START: SP2006

NEW
CSD 895I
Speech Pathology Mini-Placement
SP PATH MINI-PLACE (1-9/Repeatable Max: 9)
Graduate students in Communication Sciences and Disorders participate in an active learning clinical practicum with working professionals to enhance their academic and clinical competencies and skills. Students will accrue these required clinical practice hours by completing this mini-placement in an off-campus clinical and/or educational setting including hospitals, rehabilitation centers, nursing homes, early intervention programs, and public schools including pre-school programs.

OLD
FIN 581
FUND FIN MKTS (2)
Operation, structure of money, bond markets and concepts; and techniques used in evaluating and managing fixed income portfolios.
PREREQUISITES: FIN 550
EFFECTIVE START: SU2002

NEW
FIN 581
FUND FIN MKTS (1-3)
This course describes important financial markets, and develops tools for pricing and managing different sources of financial risks. The course will cover traditional securities and the term structure concepts, as well as more recently developed financial instruments. The course is
rigorous and quantitative. Students are expected to understand and apply quantitative methods. Examples illustrate important real-world applications of the theory.
PREREQUISITES: None
RECOMMENDED PREPERATION: Smeal M.B.A. Core Courses

OLD
FIN 583
Modern Portfolio Management: Theory and Practice
FIN MOD PORT MGT (2)
Theoretical foundations and tools needed for structuring, managing, and monitoring the performance of an investment portfolio.
PREREQUISITES: FIN 550, FIN 581
EFFECTIVE START: SP2012

NEW
FIN 583
Modern Portfolio Management: Theory and Practice
FIN MOD PORT MGT (1-3)
This course explores tools used by portfolio managers. Topics covered include a review of the structure of the asset markets, basic pricing formulas, fundamental and technical analysis and the the different models relating risk and return, as well as portfolio management and derivative pricing. Statistical concepts such as mean, variance, covariance, and regression analysis will be used extensively throughout the course.
PREREQUISITES: None
RECOMMENDED PREPERATION: Smeal M.B.A. Core Courses

OLD
PHS 535
Quality of Care Measurement
QUALITY OF CARE (3)
Emphasizes the concept and measurement issues involved in assessing and improving the quality of health care.
PREREQUISITES: Enrollment in the Master of Science in Public Health Sciences program and satisfactory completion of PHS 510 520
EFFECTIVE START: SP2012

NEW
PHS 535
Quality of Care Measurement
QUALITY OF CARE (3)
Emphasizes the concept and measurement issues involved in assessing and improving the quality of health care. Students will become acquainted with definitions of quality of care and with a broad range of measures and methods used in public reporting and outcomes research. The policy dimensions of quality of care measurement and improvement will be discussed.
Course content will be useful to those interested in outcomes research or research on quality of care, and to those who will assume responsibility for quality of care measurement and improvement programs in public health and/or health care organizations.

PREREQUISITES: PHS 520, OR STAT 500, AND PHS 550 OR STAT 507

OLD
PNG 501
Steady State Flow in Porous Media
STEADY FLOW (3)
The formulation and analytical solution of the problems of steady state fluid flow in porous media.
EFFECTIVE START: SP1999

NEW
PNG 501
Flow in Porous Media
FLOW POROUS MEDIA (3)
This course provides students with fundamental skills to formulate problems of fluid flow in porous media in the context of reservoir engineering applications. Emphasis is placed on description of petrophysical properties, characterization methods, formulation of the equations that govern flow in porous media, and analytical solutions to steady-state flow problems.

DROP

EDLDR 553
Issues in Curriculum
ISS IN CURRICULUM (3/Repeatable Max: 6)
In-depth study of issues and trends in the understanding and practice of curriculum. EDLDR 553 Issues in Curriculum (3 per semester/maximum of 6) This course provides for in-depth study of issues and trends in the understanding and practices of curriculum. Readings and class activities provide students with the opportunity to examine theoretical implications for the world of practice and life in schools.
PROPOSED DROP: FA2017
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: College of Communications
Department or Instructional Area: MA Media Studies, Ph.D. Mass Communications

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: ICT4D Minor (Information and Communications Technologies for Development)

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
Matthew McAllister
Printed name
Signature
Date: 9/15/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Michael Schmierbach
Printed name
Signature
Date: 9-15-16

Approved by College/School Dean/Chancellor (or Designee):
Ford Risley
Printed name
Signature
Date: 7-15-16
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole  
Printed name  
Signature  
Date: 9/20/2017

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

On Behalf of M. Kathleen Heid  
Printed name  
Signature  
Date: 9/20/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken  
Printed name  
Signature  
Date: 9/20/2017
Intercollegiate Graduate Minor in ICT4D

Rev. August 23, 2017

1. New Programs, Options and Minors

   a. Justification for the Program

   Information and Communications Technologies for Development (ICT4D) is a multidisciplinary field of research and practice that focuses on the use of information and communication technologies such as computers, broadband Internet, mobile devices, social media, and related software, services, and applications to foster economic development, individual empowerment, and social change. ICT4D is located at the intersection of a variety of fields such as communications, information sciences and technology (IST), development economics, sociology, business studies, anthropology, political science, agriculture, and psychology, and also interfaces with other interdisciplinary areas of study such as human-computer interaction (HCI) and community informatics. Scholars in ICT4D utilize a variety of methods to address relevant research questions, such as survey, experiment, content analysis, econometric analysis, big-data analysis, ethnography, and case study. In recent years, ICT4D has emerged as a distinct field of scholarly study and practice, with its own academic journals and conferences.

   While ICT4D as an area of research and teaching is being practiced in a number of academic units at Penn State, there is no coordinated framework for curriculum development, or advising to graduate students intending to pursue scholarly research or careers in ICT4D. The proposed graduate minor is intended to remedy this.

   Furthermore, the proposed graduate minor will further consolidate Penn State University’s reputation as an innovator in the application of scientific knowledge to solve global problems, and further its land grant mission.

   b. Objectives of the Program

   The College of Communications proposes to lead the development of an inter-college graduate minor in ICT4D, with the objective of providing doctoral and master’s students with exposure to the multidisciplinary theoretical and methodological foundations of ICT4D and opportunities for scholarly engagement with communities of practice in the discipline. It will challenge students to simultaneously develop new concepts, theories, and methods for the study of ICT4D, and to apply this knowledge to socially relevant projects and programs.

   c. List of New Courses to be Established as Part of the New Offering

   No new courses are currently proposed to be offered. ICT4D-related courses are already taught in a number of academic units across University Park (see below). The proposed graduate minor will be based on these offerings. Additional courses will be added to the list of acceptable course for the graduate minor as they become available.
d. Complete Program Statement

The ICT4D graduate minor is proposed as both a doctoral minor and a master’s minor. The doctoral minor will require the completion of a minimum of 15 credits of integrated or articulated course work in information and communication technologies for development, related to but different from that of the student’s major, chosen from the list provided below, with a preponderance of courses at the 500 level. A minimum of 6 credits must be at the 500 level for the doctoral minor. At least 3 credits must be from information and communications technologies and at least 3 from development, as listed below. Official requests to add the minor to a doctoral candidate’s academic record must be submitted to Graduate Enrollment Services prior to establishment of the doctoral committee and prior to scheduling the comprehensive examination. At least one Graduate Faculty member from the minor field must serve on the candidate’s doctoral committee.

The master’s minor requires a minimum of 6 credits of integrated or articulated course work in information and communication technologies for development, related to but different from, that of the student’s major, chosen from the list below, with a preponderance of courses at the 500 level. A minimum of 3 credits must be at the 500 level for the master’s minor. At least 3 credits must be from information and communications technologies and at least 3 from development, as listed below.

Students may select courses from the following list. Additional courses will be added to the list of acceptable course for the graduate minor as they become available. Note: A competitive enrollment process might be instituted for any course or sequence of courses for which there is significant enrollment demand from the ICT4D minor, beyond the capacity of the offering College/School to fulfill.

Courses:

Information and communication technologies courses:
COMM 517 Psychological Aspects of Communication Technology (3)
COMM 518 Media Effects (3)
COMM 489 Advanced Telecommunications Topics (3)
ENGR 451 Social Entrepreneurship (3)
EDSGN 452 Projects in Humanitarian Engineering (2)
EDSGN 453 Design for Developing Communities (1)
IST 442 Information Technology in an International Context (3)

Development courses:
AEE 520 Scientific Method in the Study of Agricultural and Extension Education (1-4)
AYFCE 550 Program Development & Evaluation in Youth, Families, and Communities (3)
COMM 505 International Communication Problems (3)
COMM 506 Research Methods in Communication (3)
COMM 584 International Telecommunications and Trade Policy (3)
INTAF 504 Political Economy of Development and Growth (3)
INTAF 812 The Role of Intelligence in International Relations (3)
INTAF 815 Dynamics of International Economic Order: Law, Politics, and Power (3)
AEE 440 Communication Methods and Media (3)
AEE 450 Program Design and Delivery (3)
IB 460 International Business in Emerging Nations (3)

**Draft Copy of the Bulletin Statement for the Minor**

**Information and Communication Technologies for Development**

The inter-college graduate minor in ICT4D provides doctoral and master’s students with exposure to the multidisciplinary theoretical and methodological foundations of ICT4D and opportunities for scholarly engagement with communities of practice in the discipline. It will challenge students to simultaneously develop new concepts, theories, and methods for the study of ICT4D, and to apply this knowledge to socially relevant projects and programs.

The ICT4D Consortium will provide organizational support for the proposed graduate minor. The Consortium currently includes faculty from the Colleges of Agriculture, Business, Communication, and Information Sciences and Technology. Courses for the minor are drawn from these colleges, the College of Engineering and the School of International Affairs.

Students in any doctoral and master’s degree program at Penn State may enroll in the doctoral or master’s minor respectively with the consent of the student’s major advisor, the faculty coordinator of the ICT4D Consortium and the Graduate School.

The doctoral minor will require the completion of a minimum of 15 credits of integrated or articulated course work in information and communication technologies for development, related to but different from that of the student’s major, chosen from the list provided below, with a preponderance of courses at the 500 level. A minimum of 6 credits must be at the 500 level for the doctoral minor. At least 3 credits must be from information and communications technologies and at least 3 from development, as identified in the list of courses maintained by the College of Communications. Official requests to add the minor to a doctoral candidate’s academic record must be submitted to Graduate Enrollment Services prior to establishment of the doctoral committee and prior to scheduling the comprehensive examination. At least one Graduate Faculty member from the minor field must serve on the candidate’s doctoral committee.

The master’s minor requires a minimum of 6 credits of integrated or articulated course work in information and communication technologies for development, related to but different from, that of the student’s major, chosen from the list below, with a preponderance of courses at the 500 level. A minimum of 3 credits must be at the 500 level for the master’s minor. At least 3 credits must be from information and communications technologies and at least 3 from development, as listed below.

A list of courses approved to count towards this minor will be maintained by the Bellisario College of Communications. Note: A competitive enrollment process might be instituted for any course or sequence of courses for which there is significant enrollment demand from the ICT4D minor, beyond the capacity of the offering College/School to fulfill.
e. Admissions Requirements for the Minor

Students in any doctoral and master’s degree program at Penn State may enroll in the doctoral or master’s minor respectively with the consent of the student’s major adviser, the faculty coordinator of the ICT4D Consortium, and the Graduate School.

f. Justification for the Degree Title Used

The proposed graduate minors will be titled as the Doctoral minor in Information and Communications Technologies for Development and Master’s minor in Information and Communications Technologies for Development, which accurately reflect the type of program being proposed and the subject matter coverage.

g. Accreditation

None. Since ICT4D is a relatively new field of study, appropriate accrediting bodies have not yet emerged.

h. Consultations

College of Agriculture

(by email)

Hello Betsy,

Thank you for sharing the ICT4D graduate minor proposal. I’ve discussed with Dr. Jayakar regarding the proposal and the list of courses that pertains to my department offerings. I strongly support the proposal. I believe it opens up a new avenue of specialization for our graduates. If you have questions, let me know. Thanks.

Dr. Rama Radhakrishna
Assistant Dean of Graduate Education
Professor of Agricultural and Extension Education
102 Ferguson Building, University Park, PA 16802
Email: brr100@psu.edu, Work Phone: 814-863-7420

Response to comments: Thank you for your support

College of Business

(by email)

I concur, Betsy.

Sincerely,

Russell
Russell R. Barton  
Senior Associate Dean for Research and Faculty  
The Mary Jean and Frank P. Smeal College of Business Administration  
The Pennsylvania State University  
University Park, PA 16802  
Phone: 814-865-3585 Email: rbarton@psu.edu

Response to comments: Thank you for your support

College of Engineering
(by email)
Betsy,

Here are some comments on this proposal from Engineering:

"This is a very good development for Penn State and a great opportunity for students. It is also an elegant way to engage graduate students in HESE.

From the coursework perspective, EDSGN 452 Projects in Humanitarian Engineering (2) and EDSGN 453 Design for Developing Communities (1) go hand-in-hand and hence, the EDSGN 453 course should be added to the list.

The other concern is that there might be too many students interested in the graduate minor that would sign up for the HESE courses.

As of now, the group is small (8-10 students, mostly from Comm and IST) and it is unlikely to grow at a very fast pace. At the same time, having a safeguard in place would be good idea.

If there can be a clause that, if more than 5 non-engineering students pursuing the graduate minor would sign up for the HESE courses, a competitive entry process might be instituted.

Overall, this is a great step forward, because of the focus and rigor with students who want to pursue ICT for development and not to improve their soft skills!"

Peter J. Butler, PhD  
Associate Dean for Education, College of Engineering  
Professor of Biomedical Engineering  
Penn State University  
102A Hammond Building  
University Park, PA 16802  
Office: (814) 863-3750  
Email: pbbutler@psu.edu
Response to comments: EDSGN 453 Design for Developing Communities has been added to the list of courses. The following text has been added to the program description: “A competitive enrollment process might be instituted for any course or sequence of courses for which there is significant enrollment demand from the ICT4D minor, beyond the capacity of the offering College/School.”

College of IST
(by email)

Betsy – I shared this among a number of IST graduate faculty and there was quite a bit of general support. One comment was that the current proposal does not address design as an element of ICT4D, even though ICT4D has long been a thread within the broad field of human-computer interaction. Another comment is that the program seems to focus very much on the developing world but that many of the same issues apply to the challenges of poverty-stricken rural or urban settings within the U.S. We hope that in the future we can join Krishna and others in discussions regarding additions to this program that can make better use of IST's graduate offerings in this area. However in the meantime we are happy to support the minor as it goes forward.

Dr. Rosson

Mary Beth Rosson
Professor and Associate Dean
College of Information Sciences & Technology
The Pennsylvania State University
http://mrosson.ist.psu.edu

Response to comments: Thank you for your support

School of International Affairs
(by text of reply letter)

Dear Ms. Hall,

I wish to support, strongly, the Intercollege Graduate Minor in Information and Communications Technologies for Development (ICT4D).

Information and communications technology are both rapidly changing, as are the factors driving economic and social development. As a result, the relationship between technology and development has become increasingly dynamic and fluid. It is essential that Penn State graduate students generate a sophisticated and fully-informed understanding of this relationship. Given its complexities, it is clear that the best method to pursue this highly divergent and rapidly emerging dynamic is through a multi-disciplinary approach. The Intercollege Graduate Minor in Information and Communications Technologies for Development provides an innovative and extremely valuable lens through which to view the
dynamic relationship of information and communications technologies on social and economic development.

I think there would be strong support among SIA faculty to participate in the Intercollege Graduate Minor in Information and Communications Technologies for Development and among School of International Affair’s students to participate.

One suggestion we might make is to add the following class to the list of possible courses in this graduate minor:

INTAF 504 Political Economy of Development and Growth Johannes Fedderke

This graduate minor has the strong support of the School of International Affairs at Pennsylvania State University. Please let me know if there is anything more that I or SIA can provide in support of this terrific initiative.

Very Respectfully,

Scott Sigmund Gartner, Ph.D.
Director & Professor, Penn State School of International Affairs
245 Lewis Katz Building
University Park, PA 16802
gartner@psu.edu
(814) 867-2789 (ph.)

Response to comments: INTAF 504 Political Economy of Development and Growth has been added to the course listing
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 Business School
Department or Instructional Area: Professional Graduate Programs Office

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: Executive MBA
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): Reduced the number of required credits from 54 to 45 and provide a set of elective courses that allows students to earn a concentration in "Executive Leadership and Strategy"

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

Submitted by Graduate Program Head

Brian Cameron
Printed name
Signature
Date: 7/19/2017

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

Arvind Rangaswamy
Printed name
Signature
Date: 7/26/2017

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

Charles Whiteman
Printed name
Signature
Date: 7/26/17
| Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses: |
| --- | --- | --- |
| Printed name | Signature | Date: |

| Recommended by Chair, Graduate Council Committee on Programs and Courses: |
| --- | --- | --- |
| Printed name | Signature | Date: |

<p>| Noted by Dean of the Graduate School: |
| --- | --- | --- |
| Printed name | Signature | Date: |</p>
<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Printed name</th>
<th>Signature</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Chair, Graduate Council Subcommittee</td>
<td>C. Andrew Cole</td>
<td>C. Andrew Cole</td>
<td>[Signature]</td>
<td>9/26/2017</td>
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<tr>
<td>Chair, Graduate Council Committee</td>
<td>M. Kathleen Heid</td>
<td>M. Kathleen Heid</td>
<td>[Signature]</td>
<td>9/26/2017</td>
</tr>
<tr>
<td>Dean of the Graduate School</td>
<td>Regina Vasilatos-Younken</td>
<td>Regina Vasilatos-Younken</td>
<td>[Signature]</td>
<td>9/26/2017</td>
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Introduction

The Residential MBA Program
The first Penn State Smeal Master of Business Administration degree was conferred in 1960. It was designed as a professional degree to prepare individuals for managerial positions in business, government, and nonprofit institutions. The MBA curriculum blends technical rigor, managerial theory, and integrative learning experiences through various teaching methods. The program serves students with approximately 5 years of work experience. The residential MBA is a full time, 54 credit program delivered at the University Park campus. The residential MBA program primarily serves students looking to change careers. The program completed a revision in 2017 that reduced the program credits from 60 to 54 and changed the core curriculum starting in the fall 2017 semester.

The Executive MBA Program (EMBA)
In 2002, Smeal launched an EMBA program in suburban Philadelphia as a part-time program that serves students with significant work experience. The EMBA program curriculum is currently not a stand-alone graduate program. The EMBA is a track within the residential program. The EMBA curriculum replicates the MBA curriculum by offering the same core courses and number of credits. The MBA and EMBA programs differ in the number of electives and concentrations.

The EMBA market has shrunk due to the proliferation of part-time MBA programs, online MBA programs, specialty Masters’ programs, and graduate certificate programs. In order to keep the Penn State Smeal EMBA program current and responsive to market demands, the EMBA Revision Committee was formed in August 2016 and charged with considering revisions to the current EMBA program. The committee objectives were:

- Maintain high student satisfaction, academic rigor, and senior faculty involvement
- Increase student enrollments to ensure long term program viability by making the program more attractive to prospective students considering other programs

The EMBA Revision Committee
The EMBA Revision Committee met monthly during the 2016-2017 academic year and considered many changes to the program including program curriculum, duration, price, costs, delivery methods, meeting days and location, student services, marketing, and competition.

A. Program Justification

Recommendation
The committee felt strongly that the program should offer more flexibility while continuing to position itself as a high quality, rigorous, residential (Philadelphia) Executive MBA program. The
proposed changes will reduce the core curriculum and provides a set of elective courses that allows students to earn a concentration in “Executive Leadership and Strategy”.

The committee recommends the following curricular changes to the EMBA program:
(1) Decouple the EMBA and Residential MBA curriculum, and tailor the EMBA curriculum to the EMBA market.
(2) Reduce the EMBA core curriculum by reducing communications and global business curriculum. EMBA students generally have global experience and strong communication skills.
(3) Reduce the elective and overall credits to allow students to complete the program in 17 months. EMBA students generally have substantial experience in a particular function which reduces the need to offer more elective courses in functional areas.
(4) Offer elective courses above the minimum credit requirements to provide flexibility for students to pursue academic interests in the Spring of year 2.

The following table compares the current MBA program (revised in 2017) and recommended EMBA program curriculum.

<table>
<thead>
<tr>
<th>Current MBA Program</th>
<th>Credits</th>
<th>EMBA Proposal</th>
<th>Credits</th>
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<td>2 (-2)</td>
</tr>
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<td>BA 801: Management</td>
<td>2</td>
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<tr>
<td>BA 815: Statistics</td>
<td>2</td>
<td>BA 815: Statistics</td>
<td>2</td>
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<td>1</td>
<td>BA 802: Team Process and Perf.</td>
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<tr>
<td>BA 533: Economics for Mgrs.</td>
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<td>BA 533: Economics for Mgrs.</td>
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<tr>
<td>BA 831: Foundations in Finance</td>
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<td>BA 831: Foundations in Finance</td>
<td>2</td>
</tr>
<tr>
<td>BA 810: Supply Chain &amp; Ops</td>
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<td>BA 810: Supply Chain &amp; Ops</td>
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<tr>
<td>BA 571: Strategic Management</td>
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<td>BA 512: Quantitative Analysis for Managerial Decision Making</td>
<td>2</td>
<td>BA 512: Quantitative Analysis for Managerial Decision Making</td>
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<td>BA 800: Marketing Mgmt</td>
<td>2</td>
<td>BA 800: Marketing Mgmt</td>
<td>2</td>
</tr>
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<td>BA 832: Global Business Envir.</td>
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<td>BA 832: Global Business Envir.</td>
<td>1</td>
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<tr>
<td>BA 821: Foundation in Managerial Accounting</td>
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<td>BA 821: Foundation in Managerial Accounting</td>
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<td>BA 805: Negotiation Theory and Skills</td>
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<td>BA 804: Ethical Leadership</td>
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<td>BA 835: Global Perspectives</td>
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<td>BA 836: Global Immersion</td>
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<td>Total Core Credits</td>
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<td>Total Core Credits</td>
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</tr>
<tr>
<td>Electives (Min-Max)</td>
<td>22-28</td>
<td>Electives (Min-Max)</td>
<td>12-18</td>
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<tr>
<td>Total Credits (Min-Max)</td>
<td>54-60</td>
<td>Total Credits (Min-Max)</td>
<td>40-46</td>
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</table>
Example of Revised EMBA Calendar

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Credits</th>
<th>Fall (Concentration Electives*)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall (Core)</strong></td>
<td><em><em>Fall (Concentration Electives</em>)</em>*</td>
<td></td>
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<tr>
<td>BA 802: Team Process and Perf.</td>
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<td>Strategy Elective</td>
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<td>BA 811: Financial Accounting</td>
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<td>Management Elective</td>
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<td>BA 801: Management</td>
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<td>Finance Elective</td>
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<tr>
<td>BA 815: Statistics</td>
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<td>Marketing Elective</td>
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<tr>
<td>BA 817: Comm. Skills for Lship</td>
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<td>Supply Chain Elective</td>
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<tr>
<td>BA 533: Economics for Mgrs.</td>
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<td>Capstone Elective</td>
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<td></td>
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<td>11</td>
<td>12</td>
<td></td>
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<tr>
<td><strong>Spring (Core)</strong></td>
<td><strong>Spring (Optional Electives)</strong></td>
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<td>BA 831: Foundations in Finance</td>
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<td>Entrepreneurship</td>
<td>3</td>
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<tr>
<td>BA 810: Supply Chain &amp; Ops</td>
<td>2</td>
<td>Global Immersion</td>
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<tr>
<td>BA 571: Strategic Management</td>
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<tr>
<td>BA 512: Quantitative Analysis for Managerial Decision Making</td>
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<td><strong>Spring (Optional Electives)</strong></td>
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<td>BA 800: Marketing Mgmt</td>
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<tr>
<td><strong>Summer (Core)</strong></td>
<td><strong>Total Year 1 (Core) Credits</strong></td>
<td></td>
<td><strong>Total Year 2 Credits</strong></td>
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<tr>
<td>BA 832: Global Business Envir.</td>
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<td>BA 821: Foundation in Managerial Accounting</td>
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<td>12-18</td>
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<tr>
<td>BA 805: Negotiation Theory and Skills</td>
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<td><strong>Total Program Credits</strong>: 40-46</td>
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</tbody>
</table>

* Currently planned concentration elective courses to earn “Strategic Leadership and Strategy” concentration. These are degree requirement courses and may change.
** Optional electives are not required for graduation.
B. Graduate Bulletin Copy

Business Administration, Executive Master of (exMBA)

Dr. Brian H. Cameron, Associate Dean for Professional Graduate Programs
The Smeal College of Business
220S Business Building
814-863-1460

Jason Stieg, Director of EMBA Program
220 Business Building

Degree Conferred:

M.B.A.

The Graduate Faculty, MBA programs

The Program

The Executive MBA program is a cohort program with a class of approximately forty students moving in lockstep through the program. Classes are taught primarily on the weekends in the Philadelphia area, complemented with several residence weeks on the University Park campus.

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.

Criteria for evaluating applicants include professional and academic accomplishments, recommendations, and personal data from application forms that provide indications of future academic and professional accomplishment. Applications for the Executive M.B.A. degree are only accepted for Fall semester admission.

Executive MBA Degree Requirements

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

The EMBA program consists of two distinct portions: (1) preprogram competency expectations, including accounting, mathematics, and statistics; and (2) a minimum of 40 credits at the 400, 500, or 800 levels, and a minimum of 18 credits at the 500 or 800 level, with at least 6 credits at the 500 level. Of the minimum 40 credits, 28 credits are required core courses: The remaining 12 elective credits must be chosen from a list of approved concentration elective courses maintained by the graduate program office.

<table>
<thead>
<tr>
<th>EMBA Proposal</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 817: Comm. Skills for Lship</td>
<td>2</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>BA 811: Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BA 801: Management</td>
<td>2</td>
</tr>
<tr>
<td>BA 815: Statistics</td>
<td>2</td>
</tr>
<tr>
<td>BA 802: Team Process and Perf.</td>
<td>1</td>
</tr>
<tr>
<td>BA 533: Economics for Mgrs.</td>
<td>2</td>
</tr>
<tr>
<td>BA 831: Foundations in Finance</td>
<td>2</td>
</tr>
<tr>
<td>BA 810: Supply Chain &amp; Ops</td>
<td>2</td>
</tr>
<tr>
<td>BA 571: Strategic Management</td>
<td>2</td>
</tr>
<tr>
<td>BA 512: Quantitative Analysis for Managerial Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>BA 800: Marketing Mgmt</td>
<td>2</td>
</tr>
<tr>
<td>BA 832: Global Business Envir.</td>
<td>1</td>
</tr>
<tr>
<td>BA 821: Foundation in Managerial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BA 805: Negotiation Theory and Skills</td>
<td>1</td>
</tr>
<tr>
<td>BA 804: Ethical Leadership</td>
<td>2</td>
</tr>
<tr>
<td>BA 835: Global Perspectives</td>
<td>1</td>
</tr>
<tr>
<td>Total Core Credits</td>
<td>28</td>
</tr>
<tr>
<td>Electives (Min-Max)</td>
<td>12-18</td>
</tr>
<tr>
<td>Total Credits (Min-Max)</td>
<td>40-46</td>
</tr>
</tbody>
</table>

Twelve concentration elective credits must be chosen from a list of approved elective courses maintained by the graduate program office. An example of electives is shown below.

<table>
<thead>
<tr>
<th>Concentration Elective Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy Elective (e.g., Strategy Implementation)</td>
<td>2</td>
</tr>
<tr>
<td>Management Elective (e.g., Management and Change)</td>
<td>2</td>
</tr>
<tr>
<td>Finance Elective (e.g., Global Finance)</td>
<td>2</td>
</tr>
<tr>
<td>Marketing Elective (e.g., Marketing Comm. and Brand Mgt)</td>
<td>2</td>
</tr>
<tr>
<td>Supply Chain Elective (e.g., Supply Chain for the C-suite)</td>
<td>2</td>
</tr>
<tr>
<td>Capstone Elective (e.g., Strategic Leadership)</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits</td>
<td>12</td>
</tr>
</tbody>
</table>

The culminating experience for the M.B.A. is the capstone course BA 571 Strategic Management. This course is designed to bring together the many functional areas previously studied and integrate them into a strategic analysis of the firm.

In addition to 12 concentration electives, students may be offered optional electives. An example of optional electives is shown below.

<table>
<thead>
<tr>
<th>Optional Electives</th>
<th>Credits</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Entrepreneurship</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Immersion</td>
<td>3</td>
</tr>
<tr>
<td>Total Credits</td>
<td>6</td>
</tr>
</tbody>
</table>

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.
C. Additional Specific Degree Requirements section for the Executive M.B.A.

Executive M.B.A. – The purpose of the Executive M.B.A. program is to develop professional managerial knowledge and skills as these are applied to decisions in complex organizations. The curriculum was developed by the graduate business faculty to blend technical rigor, managerial theory, and integrative learning experiences through case studies and other teaching methods.

A minimum of 40 credits at the 400, 500, or 800 levels, and a minimum of 18 credits at the 500 or 800 level, with at least 6 credits at the 500 level is required. Of the minimum 40 credits, 28 credits are required core courses and 12 are electives. The culminating experience for the M.B.A. is the capstone course BA 571 Strategic Management.

D. Consultation Responses

**Responses from the relevant committees at the Smeal College of Business**

The Graduate Policy Committee at the Smeal College of Business has reviewed and approves the proposal for the redesigned MBA program.

From: Brent Ambrose
Sent: Friday, July 7, 2017 12:44 PM
To: Brian Cameron
Cc: Mike Gilpatrick
Subject: Proposed Change to the EMBA Program

Dear Brian,

The Graduate Policy Committee has voted via email regarding the Proposed Change to the EMBA Program. The Committee approves the proposal with the following votes:
- 3 – yes
- 0 – no
- 3 – abstentions

Given the email discussions of the proposal, I think it safe to assume the abstentions are positive.

Regards,
Brent

9
Brent W. Ambrose, Ph.D.
Smeal Professor of Real Estate and Director
Institute for Real Estate Studies
Smeal College of Business
The Pennsylvania State University
University Park, PA 16801
(814) 867-0066

Consultation from the Black School of Business, Penn State Erie, the Behrend College

From: Greg Filbeck <mfg11@psu.edu>
Sent: Thursday, July 6, 2017 11:17 AM
To: Brian Cameron
Subject: RE: Exec MBA Change Proposal

Brian,

I have reviewed the proposal (and asked a couple of others to do so as well) – we fully support your efforts Brian! Thanks for including me.

Have a great day!

Greg

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

Consultation from Great Valley
From: JAMES A NEMES <jan16@psu.edu>
Sent: Friday, July 21, 2017 11:53 AM
To: Brian Cameron
Subject: RE: Exec MBA Change Proposal

Brian,

We have no objections with the proposed changes to the Smeal Executive MBA program.

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

Consultation from Harrisburg

From: Steve Schappe <sxs28@psu.edu>
Sent: Thursday, July 20, 2017 10:28 AM
To: Brian Cameron
Subject: Re: Exec MBA Change Proposal

Hi Brian,

I appreciate the opportunity to review your proposal to modify the executive MBA.

We have no objections and support your efforts.

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
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: Earth and Mineral Sciences
Department or Instructional Area: Better-Education-Institute Geography

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: X Change Drop
Current designation of graduate program: Geographic Information Systems
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): Change credits and name of course
Indicate effective semester:
X First semester following approval
Second semester following approval

Submitted by Graduate Program Head
Anthony C. Robinson Signature Date: 5/19/2017

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Bryan H. King Signature Date: 6/19/17

Approved by College/School Dean/Chancellor (or Designee):
John Hellmann Signature Date: 6/20/17
| Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses: |
| On Behalf of C. Andrew Cole | [Signature] | Date: 9/26/2017 |
| Printed name | Signature |

| Recommended by Chair, Graduate Council Committee on Programs and Courses: |
| On Behalf of M. Kathleen Heid | [Signature] | Date: 9/26/2017 |
| Printed name | Signature |

| Noted by Dean of the Graduate School: |
| On Behalf of Regina Vasilatos-Younken | [Signature] | Date: 9/26/2017 |
| Printed name | Signature |
GEOG 482:

"This proposal changes the current MGIS bulletin listing to reflect a title change to GEOG 482 to its new title of "Making Maps that Matter with GIS" and making it a 3 credit course instead of a 2 credit course. No additional changes to the MGIS bulletin are proposed at this time."
Old Bulletin:

**GEOG 482 The Nature of Geographic Information (2)** Orientation to the properties of geographic data and the practice of distance learning.
Effective: Summer 2004
Prerequisite: admission to the Master of GIS program or Certificate Program in GIS

New Bulletin:

GEOG 482: Making Maps that Matter with GIS (3) Case studies, student investigations, and projects reveal the scope, impact, and trajectory of the Geospatial Revolution.
Effective: Summer 2017
Prerequisite: admission to the Master of GIS program or Certificate program in GIS
Geographic Information Systems (GIS)
Program Home Page
Department of Geography, via World Campus
Anthony C. Robinson, Ph.D. Assistant Professor, Department of Geography Director, Online Geospatial Education Programs
John A. Dutton e-Education Institute
acr181@psu.edu

Degrees Conferred:
M.G.I.S.

The Graduate Faculty

The Program
The Master of Geographic Information Systems (M.G.I.S.) degree is awarded to students who demonstrate mastery of the technical competencies and leadership skills required to design, manage, and use geographic information technologies successfully in a wide range of professional fields. The M.G.I.S. program is intended specifically for working professionals who are able to participate only on a part-time basis and at a distance. It is offered exclusively through World Campus. The M.G.I.S. complements, but does not replace, the Department of Geography’s research-focused Master of Science program, which is offered at the University Park campus. Students who expect to pursue the Ph.D. in Geography should apply for admission to the residential M.S. program.

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.

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.

Additional requirements imposed by the Department of Geography include:

- Statement of professional experience and goals including documentation of a minimum two years of professional experience, preferably (but not necessarily) related to geographic information technologies. A résumé may be attached as a supplement, but the statement itself should be an essay (two to three pages) that demonstrates the applicant’s verbal communication skills;
- Three letters of recommendation that attest to the applicant’s readiness for graduate study and that he or she has the requisite minimum of two years of professional experience;
- Official transcripts from all post-secondary institution attended, including the institution that conferred the applicant’s baccalaureate degree (and any graduate degrees, if applicable). Official Graduate Records Examinations (GRE) score reported directly from the testing center to Penn State. GRE scores are required; however, this requirement may be waived at the discretion of the program. Please contact the graduate program directly for information on obtaining a waiver of the GRE requirement.
Credits earned at other institutions but not used to earn a degree may be applied toward the requirements for a graduate degree, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

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

Students earn the M.G.I.S. degree by successfully completing 36 credits of course work, including a supervised independent project. Course requirements include a minimum of 18 credits at the 500 or 800 level, with at least 6 credits at the 500 level. The culminating experience for the degree is an independent project completed while enrolled in GEOG 596. A minimum of 6 credits and a maximum of 9 credits of GEOG 596 will count towards the degree. The independent project demonstrates the student’s ability to apply advanced knowledge and skills related to geographic information systems in a way that makes a substantial contribution to his or her professional work. For most students, the project culminates in a formal public presentation, attended by a member of the graduate faculty associated with the M.G.I.S. program, which takes place at an appropriate professional conference. Alternative arrangements are made for students with special needs or constraints. For example, students who submit written reports of project aims and outcomes for publication in adviser-approved peer-reviewed journals are exempt from the public presentation requirement. Presentations and papers are preceded by dress rehearsals that are open to all students in the program through Web and audio conferencing. As part of his or her individual studies, every student is expected to contribute a formal peer review of one other student’s rehearsal.

PRESCRIBED COURSES

MASTER OF GEOGRAPHIC INFORMATION SYSTEMS

GEOGRAPHY (GEOG)

- 482. Making Maps that Matter with GIS (3)
  OR
  864. Professionalism in GIS&T (2)
  483. Problem-Solving with GIS (3)
  484. GIS Database Development (3)
  583. Geospatial System Analysis and Design (3)
  871. Geospatial Technology Project Management (3)
  586. Geographical Information Analysis (3)
  596. Individual Studies (6-9)

In lieu of specified prescribed and elective courses, MGIS students may elect to substitute those for courses that comprise an option. There are two option choices: Geospatial Intelligence Option (15 credits) and Geodesign Option (12 credits).

GEOSPATIAL INTELLIGENCE OPTION

M.G.I.S. students who choose to complete the Geospatial Intelligence Option may substitute the 15 credits that comprise the option for 15 credits of prescribed and elective courses (including GEOG 482 or 864 + 483 + 484). This option is designed for current or aspiring practitioners in government agencies,
businesses, and non-governmental organizations that rely on insights produced through skillful, knowledgeable, and conscientious analysis of diverse geo-referenced data to plan for emergencies, to coordinate responses to natural and human induced disasters, to enforce the law, and to plan and conduct military operations.

Core required courses: GEOG 583 (3), GEOG 586 (3), GEOG 871 (3), and GEOG 596 (6-9).
Courses required for the option (15 cr.):

GEOGRAPHY (GEOG)
- 571. Intelligence Analysis, Cultural Geography, and Homeland Security (3)
- 882. Geographic Foundations of Geospatial Intelligence (3)
- 883. Remote Sensing for the Geospatial Intelligence Professional (3)
- 884. Geographic Information Systems for the Geospatial Intelligence Professional (3)
- 885. Advanced Analytic Methods in Geospatial Intelligence (3)

GEODESIGN OPTION

In lieu of 3 credits of a prescribed introductory course (GEOG 484) plus 9 additional elective credits, M.G.I.S. students may substitute 12 credits associated with courses that comprise the Geodesign Option. This option is designed for current or aspiring professionals in government agencies, businesses, and non-profit organizations who see limitations in current regional and urban planning and design approaches, and who seek a foundation in geospatially-based design through investigating the methods and collaborative nature of the Geodesign process.

Core required courses: GEOG 482 (3) or GEOG 864 (2), GEOG 483 (3), GEOG 583 (3), GEOG 586 (3), GEOG 871 (3), and GEOG 596 (6-9).
Courses required for the option (12 cr.):

GEODESIGN (GEODZ)
511. Geodesign History, Theory, Principles (3)
822. Geodesign Models I: Evaluation and Decision (3)

GEOGRAPHY (GEOG)
487. Environmental Applications of GIS (3)
865. Cloud and Server GIS (3)

Student Aid
Graduate assistantships are not available. World Campus students in graduate degree programs may be eligible for financial aid. Refer to the Tuition and Financial Aid section of the World Campus website for more information.

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.
GEODESIGN (GEODZ) courses
GEOGRAPHY (GEOG) courses