2017-2018 Graduate Council
Meeting Agenda: November 15, 2017 | 3:30 p.m.–5:00 p.m. | 102 Kern Graduate Building

1. Minutes of the October 18, 2017, Meeting (2 minutes)
2. Communications to Graduate Council (1 minutes)
3. Announcements/Remarks by the Chair – Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School (10 minutes)
4. Reports of Standing Committees of Graduate Council (60 minutes)
   a) Committee on Committees and Procedures – Daniel Morgan, Chair (5 minute)
   b) Committee on Academic Standards – L. Sam Finn, Chair (10 minutes)
   c) Committee on Programs and Courses – M. Kathleen Heid, Chair (5 minutes)
      1. Graduate Council Curriculum Report, 11/1/2017 (Appendix A)
   d) Committee on Fellowships and Awards – Jose Mendez, Chair (5 minutes)
   e) Committee on Graduate Research – Siela Maximova, Chair (10 minutes)
   f) Committee on Graduate Student and Faculty Issues – Sarah Ades, Chair (25 minutes)
      1. Graduate Student Advising Guidelines (Appendix B)
5. Reports of Special Committees (5 minutes)
   a) Graduate School’s Graduate Exhibition Committee – Daniel Morgan, Chair (5 minutes)
6. Special Reports (5 minutes)
   a) Graduate and Professional Student Association (5 minutes)
7. Unfinished Business (2 minutes)
8. New Business (3 minutes)
9. Comments and Recommendations for the Good of the Graduate Community (2 minutes)
2017-2018 Graduate Council
Minutes of the Meeting: October 18, 2017

Graduate Council met on Wednesday, October 18, 2017 at 3:30 p.m. in 102 Kern Graduate Building, Dr. Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School chaired the meeting. The minutes of the September 13, 2017 meeting were approved.

Communications to Graduate Council
None.

Announcements/Remarks by the Chair – Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School

Dr. Vasilatos-Younken introduced Dr. William Clark, new Associate Dean of the Graduate School. Dr. Clark will play an important role in overseeing graduate program review, the placement portal, and a comprehensive effort to encourage improvement in graduate programs by providing them with relevant data.

Dr. Vasilatos-Younken announced that Dr. Suzanne Adair, Associate Dean for Graduate Student Affairs, was appointed Vice President for Affirmative Action beginning November 1.

Dr. Vasilatos-Younken announced that the McNair Scholars Program, administered by the Office of Graduate Educational Equity Programs, was awarded another five years of funding through a competitive grant process of the Department of Education. This program is a federal TRIO program designed to help prepare and recruit first-generation, low-income students, as well as students from underrepresented populations to graduate programs. Penn State is the only institution in the state of Pennsylvania that was successful in being selected for funding from this program.

Dr. Vasilatos-Younken briefed the Council on the fourth annual STEM Open House hosted by the Graduate School in collaboration with the College of Earth and Mineral Sciences, College of Agricultural Sciences, College of Information Sciences and Technology, Huck Institutes of the Life Sciences, and the Materials Research Science and Engineering Center at Penn State. The event, held October 12-14, provided underrepresented junior and senior undergraduates with strong academic records and research experience who are interested in applying to a graduate program at Penn State the opportunity to visit the University Park campus. Out of 63 invited students, 54 participated in the event. The students toured the campus and community, and met with faculty members, staff, and students. Since this is the fourth year the event has been held, the Graduate School plans to examine whether participation in the STEM Open House leads to subsequent application and/or enrollment in a Penn State graduate program. Other colleges may be interested in the possibility of replicating the Open House model for non-STEM students. The agenda for this year’s STEM Open House is attached at the end of the minutes.

Dr. Vasilatos-Younken announced that Dr. Stephanie Preston, Assistant Dean for Graduate Educational Equity, was selected from a pool of candidates from across the country as Faculty Mentor of the Year by The Compact for Faculty Diversity 2017 Institute on Teaching and Mentoring (ITM). She will be honored at the annual ITM meeting at the end of October.

Dr. Vasilatos-Younken shared early indications regarding a recent federal budget proposal that would result in cuts to the National Science Foundation Graduate Research Fellowship Program (NSF-GRFP) that would reduce
their annual award distribution by half, from the current level of 2,000 annual awards to 1,000 awards per year. [NOTE: A recent update subsequent to the meeting of Council indicates this is no longer the case].

Reports of Standing Committees of Graduate Council

Committee on Committees and Procedures
Dr. Vasilatos-Younken recognized Dr. Daniel Morgan, Chair of the Committee on Committees and Procedures.

Dr. Morgan indicated the committee had nothing to report.

Committee on Academic Standards
Dr. Vasilatos-Younken recognized Dr. L. Sam Finn, Chair of the Committee on Academic Standards.

Dr. Finn reported that the committee met earlier to review and potentially revise as appropriate existing policies related to the research doctorate. The committee hopes to complete its review of the policy draft on dissertation committee formation, composition, and review at the next meeting, and will then move on to a related policy on dissertation committee responsibilities.

Committee on Programs and Courses
Dr. Vasilatos-Younken recognized Dr. M. Kathleen Heid, Chair of the Committee on Programs and Courses.

Dr. Heid presented the Graduate Council Curriculum Report, 10/4/2017 (Appendix A) as an informational item.

Dr. Heid reported that the committee will hold its monthly meeting the next day. In addition to the docket of program and course proposals for review, there are a number of items on the agenda for discussion including: the current policy on three-year reports for off-campus and/or online degree programs, formation of a subcommittee to explore differences in research expectations across disciplines, and identification of the defining characteristics of M.A./M.S. degrees and how these may or may not be met through online delivery.

Committee on Fellowships and Awards
Dr. Vasilatos-Younken recognized Dr. Jose Mendez, Chair of the Committee on Fellowships and Awards.

Dr. Mendez reported that the committee met September 21 and assigned members to subgroups for review of annual student and faculty awards. The committee will meet again the next day to complete reviews for the University Graduate Fellowships. A subgroup will then compile the report for the Dean of the Graduate School by early December.

Committee on Graduate Research
Dr. Vasilatos-Younken recognized Dr. Kevin Luhman reporting on behalf of Dr. Siela Maximova, Chair of the Committee on Graduate Research.

Dr. Luhman reported that at the last meeting Dr. Neil Sharkey, Vice President for Research, provided an update on the Pennsylvania State budget, and from Dr. Vasilatos-Younken on graduate education. The committee also received a presentation on Federal Aviation Administration (FAA) and Penn State policies governing the use of unmanned aircraft, commonly referred to as drones, including a draft of proposed revisions to Penn State policy that will be shared with the appropriate officers/committee of the Faculty Senate.
Committee on Graduate Student and Faculty Issues

Dr. Vasilatos-Younken recognized Dr. Sarah Ades, Chair of the Committee on Graduate Student and Faculty Issues.

Dr. Ades presented the Graduate Student Advising Guidelines (Appendix B). Dr. Ades expressed the committee’s recommendation that Council endorse these guidelines to establish best practices, help to address issues before they reach a crisis stage, and outline the expectations of students and faculty with regard to advising and mentorship. The committee envisions these guidelines as a tool graduate programs can use to begin internal conversations on this important matter and develop specific expectations geared appropriately for their discipline. Council members are encouraged to consult with Graduate Faculty colleagues in their constituencies and return with any comments to share at the November Graduate Council meeting. A vote to endorse the guidelines may be held at the November meeting.

Dr. Vasilatos-Younken applauded the committee for its work to develop a broad approach that covers students, faculty, and administrators. She suggested the title did not fully represent the comprehensive nature and scope of the document, and suggested for consideration, “Best Practices in Graduate Education” or “Best Practices for Graduate Students’ Success” as possible alternatives. Subsequent discussion led to recommendations for the Committee to further distill the guidelines to its broadest elements, analogous to the Scholarly and Professional Goals for All Graduate Students that were developed and approved by Council, and share with all programs for their feedback before bringing a final draft to Graduate Council for endorsement, recognizing individual programs may further customize as appropriate.

Reports of Special Committees

Graduate School’s Graduate Exhibition Committee

Dr. Vasilatos-Younken recognized Dr. Daniel Morgan, Chair of the Graduate School’s Graduate Exhibition Committee.

Dr. Morgan reported the committee held its first meeting earlier that day. This year’s Graduate Exhibition will be held the weekend of March 23, 2018. The performance option will be held the evening of Friday, March 23 in Eisenhower Auditorium, due to the construction project currently underway on Esber Recital Hall. The poster and video option will be held Sunday, March 25 in the HUB-Robeson Center. The visual arts projects will be on display from March 23 to April 27 in the HUB Gallery.

Special Reports

Graduate and Professional Student Association

Dr. Vasilatos-Younken recognized Ms. Ling Yang reporting on behalf of the Graduate and Professional Student Association (GPSA).

Ms. Yang reported that the GPSA’s first Graduate Writing Boot Camp of the academic year was successful; the second offering is currently underway. In addition to Graduate Writing Boot Camp, GPSA plans to hold one or two roundtables in the Fall semester with topics chosen by students. GPSA continues to encourage students to speak directly with the Student Health Insurance Office regarding any health insurance issues they may experience.
Unfinished Business
None.

New Business
None.

Comments and Recommendations for the Good of the Graduate Community
None.

Next meeting:
Wednesday, November 15, 3:30 p.m. – 5:00 p.m., 102 Kern Graduate Building
# The Pennsylvania State University
## 2017 STEM Open House
### October 12th – 15th

### Day 1 – Thursday

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 – 10:00 PM</td>
<td>Check-in</td>
<td>(Hotel Lobby Rotunda, Nittany Lion Inn)</td>
</tr>
<tr>
<td>6:30 – 9:30 PM</td>
<td><strong>Dinner, Games, Music &amp; Bowling</strong></td>
<td>(Northland Bowl, State College, PA)</td>
</tr>
<tr>
<td></td>
<td><strong>Departure:</strong> Meet in the hotel lobby at 6:00 PM for bus transportation</td>
<td></td>
</tr>
</tbody>
</table>

### Day 2 - Friday

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 – 7:45 AM</td>
<td><strong>Continental Breakfast</strong></td>
<td>(Ballroom AB, Nittany Lion Inn)</td>
</tr>
<tr>
<td>7:45 – 8:45 AM</td>
<td><strong>Welcome Remarks</strong></td>
<td>(Ballroom AB, Nittany Lion Inn)</td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Stephanie Preston, Assistant Dean of The Graduate School</strong></td>
<td></td>
</tr>
<tr>
<td>9:00 – 11:30 AM</td>
<td><strong>AM – Graduate Programs: Tours &amp; Interviews</strong></td>
<td>(See individual schedule insert)</td>
</tr>
<tr>
<td></td>
<td><strong>Meet faculty, staff and graduate student hosts</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tours of lab facilities and research project areas</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Interviews and information sharing</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Departure:</strong> Attendees escorted to morning activities by Department Hosts</td>
<td></td>
</tr>
<tr>
<td>12:00 – 1:00 PM</td>
<td><strong>Lunch with Graduate Program Faculty</strong></td>
<td>(Alumni Hall, HUB)</td>
</tr>
<tr>
<td>1:00 – 1:45 PM</td>
<td><strong>Why Penn State?</strong></td>
<td>(Alumni Hall, HUB)</td>
</tr>
<tr>
<td></td>
<td><strong>Living in the Happy Valley Community: Strengths, Benefits, Support and Opportunities!</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Facilitator:</strong> Dr. Donna Korzick</td>
<td>Chair of the Physiology Graduate Program Professor of Physiology &amp; Kinesiology</td>
</tr>
<tr>
<td></td>
<td><strong>Faculty Panel:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Ismaila Dabo</strong></td>
<td>Assistant Professor of Materials Science and Engineering</td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Esther Obonyo</strong></td>
<td>Associate Professor of Engineering Design, Technical and Professional Programs</td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Jose Palacios</strong></td>
<td>Assistant Professor of Aerospace Engineering</td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Lynette Yarger</strong></td>
<td>Associate Professor of Information Sciences and Technology</td>
</tr>
<tr>
<td></td>
<td><strong>Departure:</strong> Attendees escorted to afternoon activities by Department Hosts</td>
<td></td>
</tr>
<tr>
<td>2:00 – 4:30 PM</td>
<td><strong>PM - Graduate Programs: Tours &amp; Interviews</strong></td>
<td>(See individual schedule insert)</td>
</tr>
<tr>
<td></td>
<td><strong>Meet faculty, staff and graduate student hosts</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tours of lab facilities and research project areas</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Interviews and information sharing</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Departure:</strong> Hosts escort attendees to the Nittany Lion Inn</td>
<td></td>
</tr>
<tr>
<td>6:00 – 8:30 PM</td>
<td><strong>Dinner</strong></td>
<td>(Ballroom DE, Nittany Lion Inn)</td>
</tr>
<tr>
<td></td>
<td><strong>Oh, The Places You'll Go... with a Penn State Graduate Degree!</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Domestic and global career opportunities in industry, government, academia, business, policy, and more!</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dr. Karen Thole</strong></td>
<td>Department Head of Mechanical &amp; Nuclear Engineering, Professor of Mechanical Engineering</td>
</tr>
</tbody>
</table>
7:45 AM sharp! Departure to the Millennium Science Complex (MSC) – meet in the hotel lobby at 7:30AM
8:00 – 8:30 AM Continental Breakfast (3rd Floor Café Commons, MSC)
8:30 – 10:00 AM Research Features of Penn State (MSC Café Commons)
State-of-the-Art Facilities, Interdisciplinary Focus, Connections to Industry, International Opportunities
- Dr. Vincent Crespi Center for Nanoscale Science (PSU MRSEC)
- Dr. Lara Fowler Institutes of Energy and the Environment (IEE), The Sustainability Institute
- Ms. Marcy Perini Applied Research Lab (ARL)
- Dr. Clive Randall Materials Research Institute (MRI)
- Dr. Cooduvalli Shashikant Huck Institutes for the Life Sciences
10:00 – 11:30 AM Tour of the Millennium Science Complex - Materials Research Institute & Huck Institutes of the Life Sciences (MSC)
11:30 – 11:45 AM Short Break
11:45 – 12:45 PM Lunch (MSC Café Commons)
The Real Deal: Life in the Penn State Community Conversations with Penn State graduate students (OGEEP* Scholars)
* Office of Graduate Educational Equity Programs
12:45 – 1:00 PM Transit to McAllister Building
1:00 – 1:45 PM Insider Tips for Applying & Excelling in Grad School at PSU (114 McAllister)
- Defining the “Right Fit”
- Key Differences between Undergrad and Grad School
- Your Faculty Mentor
- Creating Opportunities for after Grad School
Facilitator: Dr. Wayne Gersie Director of Diversity Enhancement and Student Programs, ARL
Faculty Panel:
- Dr. Jared Ali Assistant Professor of Entomology
- Dr. Catherine Berdanier Research Associate, Mechanical and Nuclear Engineering
- Dr. Enrique Gomez Associate Professor of Chemical Engineering
- Dr. Suzanne Mohney Professor of Materials Science and Engineering and Electrical Engineering
1:45 – 2:00 PM Transit to Boucke Building
2:00 – 3:00 PM Starting Your Penn State Application** (111 Boucke)
** Senior undergrads and recent graduates
Summer Research Experience Opportunities at Penn State *** (114 McAllister)
*** Junior undergrads
3:15 – 4:00 PM-A Tour of the Penn State Campus (with OGEEP Scholars)
Group A starts and ends in front of the main entrance to the Hetzel Union Building (HUB)
4:00 – 4:45 PM-B Group B starts at the HUB and ends at the Nittany Lion statue
5:00 PM sharp! Group Photo at the Nittany Lion Statue
6:00 – 8:00 PM Dinner (Ballroom DE, Nittany Lion Inn)

**Academic Excellence and Success**

*The Essential Elements That Maximize Opportunities at Penn State and Beyond*

Dr. Greg Jenkins, Professor of Meteorology

**Closing Remarks**

Dr. Stephanie Preston, Assistant Dean of The Graduate School

6:45 – 11:00 AM Breakfast Buffet (The Dining Room, Nittany Lion Inn)

(arrange at hotel front desk)

Hotel Shuttle departure to the State College Area Airport

---

**Day 4 - Sunday**

**Departure**
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.

November 1, 2017

Graduate Degree Programs

CHANGE

Criminal Justice – add IUG program pairing the B.S. in Criminal Justice with the M.A. in Criminal Justice (Penn State Harrisburg), page 7

Data Analytics – add an M.S. degree and add new option in Marketing Analytics to the M.P.S. degree (Penn State Great Valley), page 39

Mechanical Engineering – drop B.S./M.S. IUG program and drop Operations Research dual-title adoption (College of Engineering), page 71

Nursing – change degree requirements, change option requirements, and drop Clinical Nurse Specialist option (College of Nursing), page 83

DROP

Corporate Training – drop M.P.S. degree program (College of Education), page 109

Graduate Courses

ADD

BA 840
Business Data Management
BUS DATA MGMT (3)
Business Data Management will enable students to use various database designs to acquire the information needed to make effective business decisions. Successful students will be able to design, create, and implement a relational database and be able to write SQL statements to obtain information from a database. In addition, students will investigate the next generation approaches for storing, manipulating, and managing web data in unstructured formats. Students will gain an understanding of the advantages and disadvantages among XML, NoSQL, NewSQL, and Relational databases. After successfully completing this course, students will have the knowledge, skills, and abilities to:
• structure a database, configure it, perform analysis within it, and report from it
• have adequate understanding of SQL to retrieve data from a database using SQL query language
• design a database system including an ER Model and a UML class diagram, and implement the design in an enterprise database application
• understand NoSQL databases, XML native databases, NewSQL databases, and the advantages and disadvantages of these databases.

RECOMMENDED PREPARATION: Three credits of data analytics

PROPOSED START: SP2018

BA 841
Business Intelligence
BUS INTELLIGENCE (3)
Business intelligence encompasses the IT tools for exploring, analyzing, integrating, and reporting business data for fact-based, intelligent decision making. This course primarily investigates methods and tools for exploring and analyzing large amounts of business data, also called "Big Data". Learning methods emphasize active learning in the application of methods and tools to real data and the presentation of the results. Students will be exposed to a variety of methods for analyzing both structured and unstructured data and they will work with business data sets to understand the value that can be extracted from large data sets. They will also learn how to classify and associate data to discover business rules that can be used to support decision making. The course will also cover methods to analyze social media information and tools that can facilitate such analysis and discovery. Students will work with data from real social networks to gain an appreciation of how value can be obtained from such networks. Finally, they will learn about techniques for visualizing, presenting, and communicating information in a useful way, e.g. through dashboards and with other technologies on various platforms. Upon successful completion of this course, students will have:
• acquired the tools and techniques of data cleaning and preparation, data mining, and data visualization
• become competent in analyzing both structured and unstructured data
• developed an understanding of, and an appreciation for, the complexities of mining unstructured data such as text data including documents, web pages, emails, etc.
• developed an understanding of social networks as well as mobile and location-based analytics

RECOMMENDED PREPARATION: Three credits of data analytics

PROPOSED START: SP2018

CSD 453
Craniofacial Anomalies: Cleft Lip and Cleft Palate
CRANIOFACIAL ANOM (1)
This course enhances graduate students’ understanding of the following topics: 1) velopharyngeal mechanism and function for speech production in individuals with and without cleft palate and craniofacial anomalies; 2) basic embryological development related to the lip and palate fusion process; 3) common genetic syndromes that involve cleft palate; 4) in-depth understanding of resonance disorders; and 5) assessment and treatment of resonance disorders.

PROPOSED START: SP2018
Additive manufacturing (AM, colloquially 3D printing) is rapidly changing the face of modern manufacturing. This layer-by-layer manufacturing approach allows for parts to be created with significant levels of complexity and in cost-effective small batches, with reduced raw material waste when compared with traditional manufacturing processes. This technology has given rise to the need for Design for Additive Manufacturing (DfAM) techniques capable of accounting for both the possibilities and restrictions offered by AM in product design. However, due to the relative youth of the technology, understanding of how to properly establish and evaluate these design considerations is still evolving. In this course, students will be exposed to research in the field of DfAM that aims to establish an understanding of both opportunistic possibilities (e.g., lattice structures, topology optimization, and mass customization) and quantify restrictive limitations (e.g., minimum feature size and support material removal) when designing products for creation with additive manufacturing. The material will be presented through a combination of literature investigations and design exercises viewed through the lens of research in the DfAM field.

The objectives of the course include describing the role that DfAM plays in the greater field of additive manufacturing, identifying similarities and differences between existing DfAM approaches and frameworks, synthesizing opportunistic DfAM approaches and how they improve product quality and novelty, identifying and quantifying restrictive DfAM considerations through experimentation, and identifying and discussing key areas of future research to advance the field of DfAM.

**CONCURRENTS:** IE 527

**PROPOSED START:** SP2018

---

**EMGT 810**

Ecosystem Monitoring

This course provides students with an overview of ecosystem monitoring methods and analyses. Students completing the course will have the ability to apply a quantitative approach to the monitoring of ecosystems. Students will learn about monitoring planning, various sampling designs, and specific measurement methods used to accomplish particular monitoring objectives associated with ecosystem management. Students will be able to apply specific sampling, measurement, and data analysis methods for monitoring vegetation, wildlife, water quantity and quality, and soils, and they will have a statistical foundation for evaluating the various types of data that are collected. Specifically, students will be able to calculate reliability measures, trends, and indicators of ecosystem change, and apply hypothesis testing to these measures to determine their statistical significance. Specific sampling designs will be presented, such as simple random sampling, stratified random sampling, systematic sampling, and cluster sampling.

**PREREQUISITES:** STAT 500

**PROPOSED START:** FA2018

---

**IE 527**

Additive Manufacturing Processes

The course will cover the fundamentals of Additive Manufacturing (AM) processes. During the course the students will leverage their background in computer-aided manufacturing to learn the Digital Work Flow steps from Design to Manufactured AM parts. They will learn and gain experience in the various data representation, algorithms and software tools, processes, and techniques that enable
advanced/additive manufacturing. Computational algorithms will be researched and evaluated. Detailed research investigations into the fundamental process models of various additive manufacturing (AM) processes using polymers, metals, and other material will provide insight into the operating principles, capabilities, and limitations of AM processes. In addition to theoretical knowledge, the students will gain hands-on experience with AM machines and understand the complete process steps through design, fabrication, and measurement of example parts. The students will study the range of applications of AM across a spectrum of industries (e.g., aerospace/automotive, medical devices, and consumer products) while developing an understanding of the requirements, constraints, and business case for the applications. After completing this course, students will have a fundamental understanding of the research in AM processes and prepare them for additional depth in follow on courses. Additionally the students will be able to appropriately utilize (e.g., evaluate, select, design) this developing technology in the future of manufacturing and digital transformation of manufacturing.

PREREQUISITES: IE 463
PROPOSED START: SP2018

NURS 588
Healthcare Policy for Nurse and Healthcare Scholars

HEALTHCARE POLICY (3)
This course prepares scholars to influence healthcare and related policies. Theories of social justice and other scholarly perspectives are used to explore the interrelationships among health policy and the social, political, and economic determinants of health. Strategies for developing, initiating, analyzing, and evaluating health policies are proposed using students' areas of foci as a basis. The course provides the foundation for leadership in interdisciplinary collaborative endeavors to address health policy at the regional, national, and global levels.

PROPOSED START: FA2018

VBSC 535
Oncology: Bench to Bedside

ONCOLOGY (3)
This course is required for graduate students in the MCIBS program who are in the Cancer Biology Emphasis Area. It is designed to give students who are studying cancer at a molecular, reductive level experience with the clinical aspects of the disease. The course will be held at Mt. Nittany Medical Center once a week for 3 hrs, in both patient-oriented, hands-on and didactic settings to understand how cancer is diagnosed, imaged, and treated, how patient care and side effects of therapy are managed, and the importance of clinical trials in developing new treatments for cancer. For each subject area students will spend 2 hours engaged in a clinical experience related to cancer under the supervision of course directors or additional clinicians at Mt. Nittany, followed by a 1 hour lecture/didactic session on a related topic. In addition to broad learning objectives, this course will make students aware of critical issues in cancer biology and treatment that may serve as a springboard for future research.

CROSS-LISTED COURSES: MCIBS 535
PREREQUISITES: MCIBS 503, MCIBS 590, BIOL 416; VBSC 534
PROPOSED START: SP2019
CHANGE

OLD
MATH 535
Linear Algebra
LINEAR ALGEBRA (3)
PREREQUISITES: MATH 436
APPROVED START: SP2013

NEW
MATH 535
Linear Algebra and its Applications
LINEAR ALGEBRA APP (3)
PREREQUISITES: None

OLD
NURS 513
M.S.N. Capstone
M S N CAPSTONE (3)
Analysis and synthesis of research to develop recommendations for evidence-based nursing practice, education, or administration.
PREREQUISITES: NURS 512
APPROVED START: FA2014

NEW
NURS 513
Evidence-Based Practice in Professional Nursing
EVID-BASED PRACT (3)
NURS 513 Evidence-Based Practice in Professional Nursing (3) focuses on the analysis and synthesis of research to develop the project. Students will identify a significant issue or problem that is common in their area of nursing practice. These practice areas may include advanced practice nursing specialties, nursing education, or nursing administration. Students will systematically search, analyze, and synthesize relevant research literature to make recommendations for evidence-based nursing practice, education, or administration.
PREREQUISITES: NURS 512

DROP
NURS 581
Developing Theoretical Constructs Relevant to Nursing
THEO CONST NURS (3)
This course provides experience in concept analysis as one mechanism facilitating the development of nursing knowledge.
### NURS 818
Clinical Nurse Specialist I: Concepts and Theory  
CNS I (4)  
Development of a conceptual foundation for advanced nursing practice as a Clinical Nurse Specialist.  
PROPOSED DROP: SP2018

### NURS 819
Clinical Nurse Specialist II: Analysis and Application  
CNS II  
Analysis and application of nursing interventions for individuals, families, and aggregate groups in varied health care delivery settings.  
PROPOSED DROP: SP2018

### NURS 821  
Nurse Practicum: Clinical Nurse Specialist  
CNS PRACTICUM (4-8/Repeatable Max: 8)  
Integration and synthesis of specialty knowledge and theories into the CNS role.  
PROPOSED DROP: SP2018
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 Curriculum 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: Capital College
Department or Instructional Area: School of Public Affairs

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 x Drop

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

New designation of existing graduate program (if changing): Integrated Undergraduate Graduate Program in Criminal Justice
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   X
  Second semester following approval

Submitted by Graduate Program Head
Patricia Sales
Printed name
Signature
Date: 4/20/17

Noted by College/School Representative in Graduate Council Subcommittee on New and Revised Programs and Courses:
Janet Duck
Printed name
Signature
Date: 1/31/17

Approved by College/School Dean/Chancellor (or Designee):
PETER IDOWA
Printed name
Signature
Date: Aug. 7, 2017
<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of C. Andrew Cole</td>
<td></td>
<td></td>
<td>1/1/2017</td>
</tr>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
<td></td>
<td></td>
<td>1/1/2017</td>
</tr>
<tr>
<td>Noted by Dean of the Graduate School</td>
<td></td>
<td></td>
<td>1/1/2017</td>
</tr>
</tbody>
</table>
Bachelor of Science in Criminal Justice and Master of Arts in Criminal Justice

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Public Affairs

Penn State Harrisburg

June 10, 2017
B.S. in Criminal Justice and Master of Arts in Criminal Justice

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 Criminal Justice and MACJ 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 and specific interests of the student.
3. Introduce students earlier to the rigors of graduate study and the 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 Criminal Justice program is revised to include the proposed IUG program.
2. Graduate Bulletin description of MACJ program is revised to include the proposed IUG program.
3. No course changes are part of this proposal.
Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>II.</td>
<td>Admission Requirements</td>
<td>2</td>
</tr>
<tr>
<td>III.</td>
<td>IUG Requirements</td>
<td>4</td>
</tr>
<tr>
<td>IV.</td>
<td>Appendix A: Bachelor of Science in Criminal Justice Degree Requirements</td>
<td>5</td>
</tr>
<tr>
<td>V.</td>
<td>Appendix B: Existing Undergraduate Program Bulletin</td>
<td>8</td>
</tr>
<tr>
<td>VI.</td>
<td>Appendix C: Proposed Undergraduate Program Bulletin</td>
<td>10</td>
</tr>
<tr>
<td>VII.</td>
<td>Appendix D: Existing Graduate Program Bulletin</td>
<td>14</td>
</tr>
<tr>
<td>VIII.</td>
<td>Appendix E: Proposed Graduate Program Bulletin</td>
<td>17</td>
</tr>
<tr>
<td>IX.</td>
<td>Appendix F: List of Courses to be Added, Modified, or Dropped in the</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Proposed Curriculum</td>
<td></td>
</tr>
<tr>
<td>X.</td>
<td>Appendix G: Justification for Changes</td>
<td>24</td>
</tr>
<tr>
<td>XI.</td>
<td>Appendix H: Written Evidence of Disciplinary Consultation</td>
<td>24</td>
</tr>
</tbody>
</table>
B.S. in Criminal Justice and M.A. in Criminal Justice

Integrated Undergraduate-Graduate (IUG)

Degree Program Proposal

School of Public Affairs

Penn State Harrisburg

I. Introduction

The Criminal Justice Program offers an integrated B.S./M.A. program that is designed to allow academically superior baccalaureate students enrolled in the Criminal Justice major to obtain both the B.S. and the M.A. degrees in Criminal Justice within five years of study. The first two years of undergraduate coursework typically include the University General Education requirements and lower-level courses. In the third year, students typically take upper-division coursework in Criminal Justice and define areas of interest. The fourth year involves graduate-level Criminal Justice coursework including required courses in Criminal Justice Theory and Policy (CRIMJ 500; CRIMJ 502), as well as coursework in a student-designed nine credit concentration. The fifth and final year of the program typically consists of graduate coursework in Criminal Justice including Advanced Research Methods and Statistics in Criminal Justice (CRIMJ 501; CRIMJ 503), completion of the concentration, and identification of an original research project that will culminate in a thesis (six credits of CRIMJ 600) or a master’s paper (3 credits of CRIMJ 594).

By encouraging greater depth and focus in the course of study beginning in the third undergraduate year, this program will help the student more clearly define his/her area of interest and expertise in the field of criminal justice. As a result, long-range academic planning for exceptional students pursuing doctoral degrees or other professional goals after leaving Penn State will be greatly enhanced. For most students, the total time required to reach completion of the higher degree will be shortened by about a year. The student will have earlier contact with the rigors of graduate study and with Graduate Faculty. The resources of the Graduate School are accessible to students accepted into the IUG program. Students in their third and fourth year of study with IUG status benefit from their association with graduate students whose level of work parallel their own.

For the IUG Criminal Justice B.S./M.A. degree, a minimum of 120 credits are required for the B.S. and 30 credits for the M.A. Twelve credits at the 400, 500, or 800 level, in consultation with the adviser, can apply to both the B.S. and M.A. degrees. A minimum
of 50% of the double-counted courses must be at the 500 or 800 level. Credits associated with the culminating experience for the graduate degree cannot be double-counted.

If students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

II. Admission Requirements

The number of openings in the integrated B.S./M.A. program is limited. Admission will be selective based on specific criteria and the unqualified recommendation of faculty. To initiate the application process, students must submit a resume, a personal statement including career goals and how the MACJ will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from a Criminal Justice faculty member, and a plan of study that integrates both undergraduate and graduate requirements. A Graduate Faculty adviser in collaboration with the MACJ Program Coordinator 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

Applicants to the integrated program:

1. Must be enrolled in the B.S. program in Criminal Justice and meet the admission requirements of the Criminal Justice M.A. program at Harrisburg.
2. Must apply and be admitted to the Graduate School.
3. Shall be admitted 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, as specified in the proposed IUG plan of study.
4. Must submit transcript(s) of undergraduate work taken outside of Penn State, recommendations from two faculty members, writing sample, and statement of goals.
5. Must have an overall GPA at or above 3.0 (on a 4.0 scale) in undergraduate coursework and a GPA at or above 3.25 in all coursework completed for their major.
6. Must present a plan of study approved by the student’s adviser in the application process. 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.
To formally apply, students must submit a completed Graduate School application. The students should mention in the notes section that the application is for the IUG program in Criminal Justice. The Graduate Record Examination (GRE) is not required for admission into the program, however, if students are interested in applying for a graduate assistantship, 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 Criminal Justice Graduate Admissions Committee.

**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 400-, 500-, or 800-level. A minimum of 50% of the double-counted courses must be at the 500 or 800 level. Credits associated with the culminating experience for the graduate degree cannot be double-counted.

**Sample Sequence of Coursework**

A typical sequence of coursework for the integrated program would appear as follows (two 400-level Criminal Justice courses, as well as CRIMJ 500 and CRIMJ 502) are applied to both undergraduate and graduate degree programs):

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd (Junior)</td>
<td>CRIMJ 250W</td>
<td>CRIMJ 260 or STAT 200</td>
</tr>
<tr>
<td></td>
<td>CRIMJ Supporting Course</td>
<td>CRIMJ Supporting Course</td>
</tr>
<tr>
<td></td>
<td>CRIMJ Elective</td>
<td>BS Requirement: Other Cultures</td>
</tr>
<tr>
<td></td>
<td>BS Requirement: Knowledge Domain</td>
<td>CRIMJ Elective</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>4th (Senior)</td>
<td>CRIMJ 500*</td>
<td>CRIMJ 502*</td>
</tr>
<tr>
<td></td>
<td>CRIMJ 450W</td>
<td>CRIMJ 465</td>
</tr>
<tr>
<td></td>
<td>400 level CRIMJ course</td>
<td>400 level CRIMJ course</td>
</tr>
<tr>
<td></td>
<td>MACJ 400/500/800 level concentration course*</td>
<td>MACJ 400/500/800 level concentration course</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>5th (Graduate)</td>
<td>MACJ 500/800 level concentration course</td>
<td>CRIMJ 503</td>
</tr>
<tr>
<td></td>
<td>CRIMJ 501</td>
<td>CRIMJ 504</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
</tr>
</tbody>
</table>
III. IUG Degree Requirements

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Criminal Justice and Master of Arts in Criminal Justice degrees, as listed in Appendix A and Appendix D. 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. 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 Arts in Criminal Justice 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 students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied. 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. Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count towards the graduate degree.

Appendix A: Bachelor of Science in Criminal Justice Degree Requirements

General Education Requirements (45-46 credits)
• Writing/Speaking (GWS)
  ENGL 015S or 030 [3]  Rhetoric and Composition or
  Honors Freshmen Composition
  CAS 100 [3]  Effective Speech

• Quantitative (GQ)
  STAT 200 [4} or CRIMJ 260 [3]  Elementary Statistics or
  Statistics Analysis for the Social Sciences^
  3 credits of any course with a GQ

• 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)
  6 credits of any courses with a GS suffix*

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

  ^STAT 200 or CRIMJ 260 also count toward prescribed major
  requirements in CRIMJ
  *Must be non-CRIMJ courses
BS in Criminal Justice Major Requirements: 60-61 credits
(This includes 3-4 credits of General Education courses: 3-4 credits of GQ courses.)

Prescribed Courses (24 credits)[1]:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIMJ 012 [3]</td>
<td></td>
<td>Criminology</td>
</tr>
<tr>
<td>CRIMJ 100 [3]</td>
<td></td>
<td>Introduction to Criminal Justice</td>
</tr>
<tr>
<td>CRIMJ 210 [3]</td>
<td></td>
<td>Policing in America</td>
</tr>
<tr>
<td>CRIMJ 220 [3]</td>
<td></td>
<td>Courts and the Prosecution Process</td>
</tr>
<tr>
<td>CRIMJ 230 [3]</td>
<td></td>
<td>Corrections in America</td>
</tr>
<tr>
<td>CRIMJ 450W [3]</td>
<td></td>
<td>Senior Seminar</td>
</tr>
</tbody>
</table>

Additional Courses (15-16 credits):

Select 3-4 credits from CRIMJ 260 [3] or STAT 200 [4]*

* STAT 200 or CRIMJ 260 also count toward General Education requirements.

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIMJ 200 [3]</td>
<td></td>
<td>Introduction to Security and Loss Control</td>
</tr>
<tr>
<td>CRIMJ 221 [3]</td>
<td></td>
<td>Issues in the American Criminal Justice System</td>
</tr>
</tbody>
</table>

Select 6 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIMJ 304 [3]</td>
<td></td>
<td>Security Administration</td>
</tr>
<tr>
<td>CRIMJ 408 [3]</td>
<td></td>
<td>Police Administration</td>
</tr>
</tbody>
</table>
CRIMJ 415 [3]    Drug Control Policy in Comparative Perspective
CRIMJ 423 [3]    Sexual and Domestic Violence
CRIMJ 426 [3-6]    Special Offender Types
CRIMJ 430 [3]    Alternatives to Incarceration
CRIMJ 441 [3]    The Juvenile Justice System
CRIMJ 460 [3]    History and Function of Criminal Justice Components
CRIMJ 462 [3]    Comparative Criminal Justice Systems
CRIMJ 495 [3-12]    Internship in Criminal Justice
CRIMJ 496 [1-18]    Independent Studies
CRIMJ 497 [1-9]    Special Topics

OR

Select 12 credits from the following:

CRIMJ 304 [3]    Security Administration
CRIMJ 408 [3]    Police Administration
CRIMJ 415 [3]    Drug Control Policy in Comparative Perspective
CRIMJ 423 [3]    Sexual and Domestic Violence
CRIMJ 426 [3-6]    Special Offender Types
CRIMJ 430 [3]    Alternatives to Incarceration
CRIMJ 441 [3]    The Juvenile Justice System
CRIMJ 460 [3]    History and Function of Criminal Justice Components
CRIMJ 462 [3]    Comparative Criminal Justice Systems
CRIMJ 495 [3-12]    Internship in Criminal Justice
CRIMJ 496 [1-18] Independent Studies
CRIMJ 497 [1-9] Special Topics

Supporting Courses and Related Areas (21 credits)
Select 6 credits: 3 credits at the 200 level and 3 credits at the 300 and 400 level or 6 credits at the 300 and 400 level from the following:

AFRAS
BE SC
PL SC
PUBPL
PSYCH
SOC

Select 15 credits in consultation with an academic adviser and in support of the student's interests. For information about specific courses in this area, contact the School of Public Affairs.

(At least 9 credits in Additional Courses and/or Supporting Courses must be at the 400 level.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

General Electives (13-15 credits)

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 CRIMJ 250W and CRIMJ 450W, both prescribed courses.

Appendix B: Existing Undergraduate Program Bulletin

Criminal Justice

Capital College (CRIMJ): Penn State Harrisburg
World Campus
PROFESSOR SHAUN GABBIDON, Program Chair, School of Public Affairs

The Bachelor of Science degree program in Criminal Justice helps provide its graduates with the communications and analytical skills critical to succeed in criminal justice and related careers. Through an interdisciplinary approach to the problems of crime and society, the program also equips students to pursue graduate study in criminal justice or related disciplines, and educates students to become effective problem-solvers as professionals in the field of criminal justice.

The study of criminal justice is approached as an applied interdisciplinary science, teaching students both the theoretical and the practical aspects of crime control and the administration of justice. The Criminal Justice curriculum provides students with the opportunity and assistance to acquire knowledge of the roles of policing, courts, laws, and corrections as they relate to both the adult and juvenile justice system. Students also gain knowledge of the history, concepts, and critical issues related to the role of gender and race/ethnicity in the criminal justice system, victimology, and ethics in criminal justice. The curriculum further provides a theoretical foundation of the discipline, combined with a thorough understanding of the scientific method as it applies to criminal justice. This combination is expected to sharpen the students' talents of reasoning and judgment, qualities imperative to rational functioning in criminal justice and related professions.

For a B.S. degree in Criminal Justice, a minimum of 120 credits is required.

**Admission Requirements for Transfer Students:**
Transfer applicants must have at least a 2.0 cumulative grade-point average (4.0 scale). The evaluation of prior college work is conducted on an individual basis by the Office of Enrollment Services at both campuses.

**Entry to Major Requirements:**
The student must have a 2.00 cumulative grade-point average and an average of C (2.00) or better in any course already taken in the major.

**Scheduling Recommendation by Semester Standing given like (Sem: 1-2)**

**GENERAL EDUCATION:** 45 credits
(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)
FIRST-YEAR SEMINAR:  
( Included in ELECTIVES) 

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:  
( Included in REQUIREMENTS FOR THE MAJOR) 

WRITING ACROSS THE CURRICULUM:  
( Included in REQUIREMENTS FOR THE MAJOR) 

ELECTIVES:  13-17 credits 

Last Revised by the Department: Fall Semester 2013 

Blue Sheet Item #: 42-04-018 

Review Date: 01/14/2014 

UCA Revision #1: 8/20/06 
UCA Revision #2: 7/27/07 

Appendix C: Proposed Undergraduate Program Bulletin (changes shown in bold and strikethrough) 

Criminal Justice 

Capital College (CRIMJ): Penn State Harrisburg  
World Campus  

PROFESSOR SHAUN GABBIDON, Program Chair, School of Public Affairs 

The Bachelor of Science degree program in Criminal Justice helps provide its graduates with the communications and analytical skills critical to succeed in criminal justice and related careers. Through an interdisciplinary approach to the problems of crime and society, the program also equips students to pursue graduate study in criminal justice or related disciplines, and educates students to become effective problem-solvers as professionals in the field of criminal justice. 

The study of criminal justice is approached as an applied interdisciplinary science, teaching students both the theoretical and the practical aspects of crime control and the
administration of justice. The Criminal Justice curriculum provides students with the opportunity and assistance to acquire knowledge of the roles of policing, courts, laws, and corrections as they relate to both the adult and juvenile justice system. Students also gain knowledge of the history, concepts, and critical issues related to the role of gender and race/ethnicity in the criminal justice system, victimology, and ethics in criminal justice. The curriculum further provides a theoretical foundation of the discipline, combined with a thorough understanding of the scientific method as it applies to criminal justice. This combination is expected to sharpen the students' talents of reasoning and judgment, qualities imperative to rational functioning in criminal justice and related professions.

For a B.S. degree in Criminal Justice, a minimum of 120 credits is required.

**Admission Requirements for Transfer Students:**
Transfer applicants must have at least a 2.0 cumulative grade-point average (4.0 scale). The evaluation of prior college work is conducted on an individual basis by the Office of Enrollment Services at both campuses.

**Entry to Major Requirements:**
The student must have a 2.00 cumulative grade-point average and an average of C (2.00) or better in any course already taken in the major.

*Scheduling Recommendation by Semester Standing given like (Sem: 1-2)*

**GENERAL EDUCATION:** 45 credits
(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)

**FIRST-YEAR SEMINAR:**
(Included in ELECTIVES)

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**
(Included in REQUIREMENTS FOR THE MAJOR)

**WRITING ACROSS THE CURRICULUM:**
(Included in REQUIREMENTS FOR THE MAJOR)

**ELECTIVES:** 13-17 credits
REQUIREMENTS FOR THE MAJOR: 62 credits
(This includes 0-4 credits of General Education courses: 0-4 credits of GQ courses.)

PRESCRIBED COURSES (25 credits)[1]

(At least 9 credits in Additional Courses and/or Supporting Courses must be at the 400 level.)

ADDITIONAL COURSES (16 credits)
Select 4 credits from CRIMJ 260(3) or STAT 200 GQ(4) (Sem: 5-8)
Select 6 credits from the following: CRIMJ 201(3), CRIMJ 220(3), CRIMJ 221(3), CRIMJ 234(3), CRIMJ 241(3) (Sem 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)
Select 6 credits: 3 credits at the 200 level and 3 credits at the 300 and 400 level or 6 credits at the 300 and 400 level from the following: AFRAS, BE SC, PL SC, PUBPL, PSYCH, SOC (Sem: 5-8)
Select 15 credits in consultation with an academic adviser and in support of the student's interests. For information about specific courses in this area, contact the School of Public Affairs. (Sem: 5-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013
Blue Sheet Item #: 42-04-018

Review Date: 01/14/2014

UCA Revision #1: 8/20/06
UCA Revision #2: 7/27/07

B.S. Degree Portion:

For a B.S. degree in Criminal Justice, a minimum of 120 credits is required. (12 double-counted with the M.A. Requirements)

Admission Requirements for Transfer Students:
Transfer applicants must have at least a 2.0 cumulative grade-point average (4.0 scale). The evaluation of prior college work is conducted on an individual basis by the Office of Enrollment Services at both campuses.

Entry to Major Requirements:
The student must have a 2.00 cumulative grade-point average and an average of C (2.00) or better in any course already taken in the major.

_Scheduling Recommendation by Semester Standing given like (Sem: 1-2)_

GENERAL EDUCATION: 45 credits
(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 13-17 credits

REQUIREMENTS FOR THE MAJOR: 62 credits
(This includes 0-4 credits of General Education courses: 0-4 credits of GQ courses.)
PREScribed COURSES (25 credits)[1]

(At least 9 credits in Additional Courses and/or Supporting Courses must be at the 400 level.)

ADDITIONAL COURSES (16 credits)
Select 4 credits from CRIMJ 260(3) or STAT 200 GQ (4) (Sem: 5-8)
Select 6 credits from the following: CRIMJ 201(3), CRIMJ 220(3), CRIMJ 221(3), CRIMJ 234(3), CRIMJ 241(3) (Sem 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)
Select 6 credits: 3 credits at the 200 level and 3 credits at the 300 and 400 level or 6 credits at the 300 and 400 level from the following: AFRAS, BE SC, PL SC, PUBPL, PSYCH, SOC (Sem: 5-8)
Select 15 credits in consultation with an academic adviser and in support of the student's interests. For information about specific courses in this area, contact the School of Public Affairs. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Appendix D: Existing Graduate Program Bulletin

Criminal Justice (CRIMJ)
The Program

The program reflects the numerous complexities of the discipline. It provides academic leadership for students to work within corrections, institutionalized and non-institutionalized settings, victim services, adult and juvenile services, policing and law enforcement, private security, courts, and other human service organizations serving the clients of these institutions. It also helps develop research acumen for those students who may wish to consider doctoral studies.

Strong ties developed in state, local, and federal level law enforcement, corrections, drug treatment, victimization, and crime control policy organizations provide research and learning opportunities for interested students.

The degree may be earned by full or part-time study. Most courses will be offered in the evening, although some will be offered during the day or on weekends.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.
• A completed [Graduate School application for admission](#) with the application fee.
• Official transcripts from all post-secondary institutions attended.
• Three letters of recommendation.
• A brief (two-page) statement of purpose or a writing sample.
• Minimum GPA of a 3.0 for the last 60 credits of undergraduate study. Satisfactory scores on the Graduate Record Examination (GRE), Graduate Management Admissions Test (GMAT), or Law School Admissions Test (LSAT) are required if the GPA is less than 3.0. *Note: All students who seek funding must take one of these standardized tests, preferably the GRE.*
• 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.
• Some foundational course work may be required for those students who did not major in criminal justice as an undergraduate. This decision will be made by the MACJ Program Coordinator after a close review of the undergraduate transcript.
• In exceptional cases, the program may also approve admission by reason of special backgrounds, abilities, and interests.

**Degree Requirements**

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the Graduate Bulletin.

1. The thesis track requires 30 credits. Six of the credits (CRIMJ 600) will be for the thesis.
2. The master's paper track requires 30 credits. Three of these credits will be awarded for successful completion of a master's paper, for which a student will register for three credits of CRIMJ 594.
3. All credits must be at the 400, 500, 600, or 800 level, with a minimum of 18 credits at the 500 or 600 level. A minimum of 24 credits must be at the 500, 600, or 800 level.
4. A minimum grade-point average of a 3.0 must be earned for course work taken as a graduate student.
5. Students are required to take the following courses: CRIMJ 500, CRIMJ 501, CRIMJ 502, CRIMJ 503, and CRIMJ 504.
6. Students must complete a 9 credit concentration. Students in the non-thesis track will also be required to complete an additional 3-credit elective. A list of courses required for each concentration and additional approved elective courses is maintained by the graduate program office.
7. Students who believe they have completed a course substantially similar to one of the specific course requirements may apply to have their previous work evaluated for the purposes of exemption to that requirement. If approved, another course will be taken in place of that requirement.

8. A maximum of 10 credits of completed graduate work may be transferred in from another accredited institution, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

Appendix E: Proposed Graduate Program Bulletin (changes shown in bold and strikethrough)

Criminal Justice (CRIMJ)

DON HUMMER, Program Coordinator, Master of Arts in Criminal Justice
Penn State Harrisburg
777 W. Harrisburg Pike
Middletown, PA 17057-4898
Phone: 717-948-6042

Degrees Conferred:

M.A. in Criminal Justice

Integrated B.S./M.A. in Criminal Justice

The Graduate Faculty

- **Eileen M. Ahlin**, Ph.D. (UNIVERSITY OF MARYLAND COLLEGE PARK), Assistant Professor of Criminal Justice
- **Anne S. Douds**, Ph.D. (GEORGE MASON UNIVERSITY), Lecturer in Criminal Justice
- **Shaun L. Gabbidon**, Ph.D. (INDIANA UNIVERSITY OF PENNSYLVANIA), Distinguished Professor of Criminal Justice
- **Jennifer C. Gibbs**, Ph.D. (UNIVERSITY OF MARYLAND COLLEGE PARK), Assistant Professor of Criminal Justice
The MACJ Program

The program reflects the numerous complexities of the discipline. It provides academic leadership for students to work within corrections, institutionalized and non-institutionalized settings, victim services, adult and juvenile services, policing and law enforcement, private security, courts, and other human service organizations serving the clients of these institutions. It also helps develop research acumen for those students who may wish to consider doctoral studies.

Strong ties developed in state, local, and federal level law enforcement, corrections, drug treatment, victimization, and crime control policy organizations provide research and learning opportunities for interested students.

The degree may be earned by full or part-time study. Most courses will be offered in the evening, although some will be offered during the day or on weekends.

Admission Requirements

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

- A completed Graduate School application for admission with the non-refundable application fee.
• **Official transcripts from all post-secondary institutions attended.**
• Three letters of recommendation.
• A brief (two-page) statement of purpose or a writing sample.
• Minimum GPA of a 3.0 for the last 60 credits of undergraduate study. Satisfactory scores on the Graduate Record Examination (GRE), Graduate Management Admissions Test (GMAT), or Law School Admissions Test (LSAT) are required if the GPA is less than 3.0. *Note: All students who seek funding must take one of these standardized tests, preferably the GRE.*
• 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.
• Some foundational course work may be required for those students who did not major in criminal justice as an undergraduate. This decision will be made by the MACJ Program Coordinator after a close review of the undergraduate transcript.
• In exceptional cases, the program may also approve admission by reason of special backgrounds, abilities, and interests.

**Degree Requirements**

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the Graduate Bulletin.

1. The thesis track requires 30 credits. Six of the credits (CRIMJ 600) will be for 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 a thesis defense.
2. The master's paper track requires 30 credits. Three of these credits will be awarded for successful completion of a master's paper, for which a student will register for three credits of CRIMJ 594.
3. For students completing the thesis track, all credits must be at the 400, 500, 600, or 800 level, with a minimum of 18 credits at the 500 or 600 level. For students completing the master’s paper track, all credits must be at the 400, 500, or 800 level, with a minimum of 18 credits at the 500 level.
4. A minimum grade-point average of a 3.0 must be earned for course work taken as a graduate student.
5. Students are required to take 15 credits in the following core courses: CRIMJ 500, CRIMJ 501, CRIMJ 502, CRIMJ 503, and CRIMJ 504.
6. Students must complete a 9 credit concentration. Students in the non-thesis track will also be required to complete an additional 3-credit elective. A list of courses
required for each concentration and additional approved elective courses is maintained by the graduate program office.

7. Students who believe they have completed a course substantially similar to one of the specific course requirements may apply to have their previous work evaluated for the purposes of exemption to that requirement. If approved, another course will be taken in place of that requirement.

8. A maximum of 10 credits of completed graduate work may be transferred in from another accredited institution, subject to restrictions outlined in the Transfer Courses section of the Graduate Bulletin.

*Integrated B.S./M.A. in Criminal Justice*

The Criminal Justice Program offers an integrated B.S./M.A. program that is designed to allow academically superior baccalaureate students enrolled in the Criminal Justice major to obtain both the B.S. and the M.A. degrees in Criminal Justice within five years of study. The first two years of undergraduate coursework typically include the University General Education requirements and lower-level courses. In the third year, students typically take upper-division coursework in Criminal Justice and define areas of interest. The fourth year involves graduate-level Criminal Justice coursework including required courses in Criminal Justice Theory and Policy (CRIMJ 500; CRIMJ 502). The fifth and final year of the program typically consists of graduate coursework in Criminal Justice including Advanced Research Methods and Statistics in Criminal Justice (CRIMJ 501; CRIMJ 503) and identification of an original research project that will culminate in the completion of a thesis (CRIMJ 600) or master’s paper (CRIMJ 594).

If students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

*Admission Requirements*

The number of openings in the integrated B.S./M.A. program is limited. Admission is selective based on specific criteria and the unqualified recommendation of faculty. Applicants to the integrated program:
1. Must be enrolled in the B.S. program in Criminal Justice and meet the admission requirements of the Criminal Justice M.A. program at Harrisburg.
2. Must apply to the program via the Graduate School application for admission, and must meet the admission requirements of the Graduate School.
3. Shall be admitted 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, as specified in the proposed IUG plan of study.
4. Must submit transcript(s) of undergraduate work taken outside of Penn State, recommendations from two faculty members, writing sample, and statement of goals.
5. Must have an overall GPA at or above 3.0 (on a 4.0 scale) in undergraduate coursework and a GPA at or above 3.25 in all coursework completed for their major.
6. Must present a plan of study approved by the student’s adviser in the application process. 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.

**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 Criminal Justice are listed in the Undergraduate Bulletin. Degree requirements for the M.A. degree are listed in the Degree Requirements section above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees; a minimum of 50% of the double-counted courses must be at the 500 or 800 level. Credits associated with the culminating experience for the graduate degree cannot be double-counted. The courses that are eligible to double count for both degrees are: CRIMJ 450W, CRIMJ 465, CRIMJ 500, CRIMJ 501, CRIMJ 502, and CRIMJ 504.
Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count towards the graduate degree. If students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

**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.

**Appendix F: List of Courses to be Added, Modified, or Dropped in the Proposed Curriculum**

No changes

**Appendix G: Justification for Changes**

None Applicable

**Appendix H: Written Evidence of Disciplinary Consultation**

Programs potentially affected by the CRIMJ IUG include units offering undergraduate majors in Criminal Justice, Administration of Justice, and Criminology (program coordinators listed below) and the Criminology M.A./Ph.D. program at University Park.
<table>
<thead>
<tr>
<th>Name and Affiliation</th>
<th>Date Received</th>
<th>Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicki L. Hewitt, Director of Graduate Education Administration, The Graduate School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peter B. Idowu, Assistant Dean for Graduate Studies, Penn State Harrisburg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Iceland, Department Head, Department of Sociology and Criminology</td>
<td>2-20-2017</td>
<td>Yes</td>
</tr>
<tr>
<td>Jeffery T. Ulmer, Associate Department Head, Department of Sociology and Criminology</td>
<td>2-20-2017</td>
<td>Yes</td>
</tr>
<tr>
<td>Pamela Black, Program Coordinator, Administration of Justice, Penn State Hazelton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ronald Kelly, Program Coordinator, Administration of Justice, Penn State Schuylkill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary Ann Probst, Program Coordinator, Criminal Justice, Penn State Altoona</td>
<td>4-6-2017</td>
<td></td>
</tr>
<tr>
<td>Patricia Collins, Program Chair, Criminal Justice, Penn State Abington</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jennifer Murphy, Program Coordinator, Criminal Justice, Penn State Berks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carolyn Jacobson, Associate Director of Academic Affairs and Outreach, Penn State Dubois</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judy Sturges, Program Coordinator, Administration of Justice, Penn State Fayette</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Katherine J. McLean, Program Coordinator, Administration of Justice, Penn State Greater Allegheny</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marshall Davis, Program Coordinator, Administration of Justice, Penn State Wilkes-Barre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mari B. Pierce, Associate Professor of Administration of Justice, Penn State Beaver</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeffrey J. Roth, Assistant Professor of Administration of Justice, Penn State New Kensington</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steven L. Brewer, Assistant Professor of Administration of Justice, Penn State Shenango</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hello Colleagues,

Please find attached for your review/consultation a proposal for implementing an Integrated Undergraduate/Graduate program in Criminal Justice at Penn State Harrisburg. The program is geared primarily toward undergraduate CRIMJ majors at Harrisburg who would then continue on to our MACJ program, but could also be of interest to students who are majoring in Administration of Justice or Criminology at another Penn State campus.

Thanks you in advance for your consideration.

Don Hummer, Ph.D.
CRIMJ Graduate Programs Coordinator
Associate Professor of Criminal Justice Managing Editor, Victims & Offenders
Penn State Harrisburg School of Public Affairs W157K Olmsted Building
777 W. Harrisburg Pike
Hello Don,

I am supportive of this proposal. International Affairs here at University Park has a similar Integrated Undergraduate/Graduate program, which I'm guessing you've already seen.

Best wishes for this program,

Jeff

Jeffery T. Ulmer, Ph.D.
Professor and Associate Head
Department of Sociology and Criminology
211 Oswald Tower
Penn State University
University Park, PA 16802
office: 814-865-6429
fax: 814-863-7216
http://sociology.la.psu.edu/people/jtu100

Dear Don,

I don't have any questions or concerns about the program. I hope the approval process goes smoothly.

Best,
John

---

John Iceland
Professor and Head
Department of Sociology and Criminology
Penn State University
Hi Don,

I realize this email comes well beyond the time of formal consultation, but given some of the contact from WC and the issues Altoona was concerned with, we were waiting to submit our response. The issues were never able to be answered and Shaun and I are meeting on that matter at the end of April.

Simply stated is this, Penn State Altoona, wishes Harrisburg prosperity with their endeavors regarding the IUG program proposal, however we are very concerned the Capital Campus program will continue to take students away from Penn State Altoona with this latest endeavor considering the optimum time to begin to enroll in 500 level courses is year three. Obviously, this means our students would be leaving Penn State Altoona. In this economic climate, when every campus is having serious discussions about recruitment and retention, it feels as if we are competing with ourselves between campuses for students.

This thought comes after the serious concern expressed to me after discussions with other Penn State Commonwealth Campuses. Our faculty at Penn State Altoona has always been and will continue to work with other campuses, but we have been trying to track the enrollment of our RI students in WC courses, and now the concerns with additional departures due to the IUG program just add to that concern.

Again, I apologize for the delay, but this is as succinctly and delicately as I can state our position. Any insight, concerns or questions you may have for me, please do not hesitate to contact me.

Best regards,
Mary Ann Probst, Esquire  
Program Coordinator/Instructor Criminal Justice  
Penn State Altoona  
103 Cypress Building  
3000 Ivyside Park  
Altoona, PA 16601  
phone 814-949-5352  
fax 814-949-5774  
email map141@psu.edu  
Office Hours  
T & R 4:30pm-5:30pm  
Other T, R & F hours by appointment only
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: School of Graduate Professional Studies
Department or Instructional Area: 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
Drop

Current designation of graduate program: Master of Professional Studies in Data Analytics
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing): Master of Professional Studies and Master of Science in Data Analytics
New designation of existing graduate option (if changing): Master of Professional Studies in Data Analytics - Marketing Analytics Option
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above): Adding a Master of Science in Data Analytics and an Option in Marketing Analytics

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

---

Submitted by Graduate Program Head
Colin J. Neill
Printed name
Signature
Date: 6/23/17

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
David Russell
Printed name
Signature
Date: 6/25/17

Approved by College/School Dean/Chancellor (or Designee):
James A. Nemes
Printed name
Signature
Date: 6/26/17
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole  
Printed name  
Signature  
Date: 11/1/2017

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

On Behalf of M. Kathleen Heid  
Printed name  
Signature  
Date: 11/1/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken  
Printed name  
Signature  
Date: 11/1/2017
Program Change Proposal

Master of Professional Studies in Data Analytics

Contact:
Colin J. Neill,
Director of Engineering Programs,
School of Graduate Professional Studies,
Penn State Great Valley,
(cjn6@psu.edu)

September 18, 2017
# Table of Contents

## Contents

Description of Changes ........................................................................................................... 3

Justification for new option in Marketing Analytics ................................................................. 3

Justification for M.S. in Data Analytics .................................................................................... 3
   M.S. Program Size and Duration ......................................................................................... 4
   M.S. Program Objectives ..................................................................................................... 4
   Ability to Offer a Quality Program .................................................................................... 4
   Program Operation and Maintenance ................................................................................. 4

Evidence of Consultation ........................................................................................................ 5

Revised Graduate Bulletin Listing .......................................................................................... 6

New Graduate Bulletin Listing ............................................................................................... 12

Appendix A ............................................................................................................................. 18
   Consultation responses ...................................................................................................... 18
Description of Changes

There are two proposed changes to the program.

The program was originally designed to allow for the addition of new options as units developed them and this change is to add a new option in Marketing Analytics to complement the existing base program and option in Business Analytics in the online M.P.S. in Data Analytics offered through World Campus.

The second change is to add a research-oriented M.S. in Data Analytics to be offered in resident instruction at the Great Valley campus.

Justification for new option in Marketing Analytics

The purpose of the M.P.S. in Data Analytics is to provide professionally oriented technical education that enables graduates to design, implement, and apply data analysis techniques to the broad array of application domains often referred to as “Big Data.” It was always the intention that the M.P.S. in Data Analytics could expand through the addition of new options to broaden its coverage of those application domains and the first of those new options has been proposed by the Smeal College of Business in the domain of marketing analytics.

The World Campus and Smeal College of Business examined the possibility of including an online option in marketing analytics in the M.P.S. in Data Analytics. Market research and feasibility studies indicated the reception for this offering would be very positive. In addition, the World Campus has provided partial funding for the hiring of the lead faculty person responsible for building this program.

The aim of the courses would be to convey how marketing analytics are (1) applied within organizations, (2) conducted, and (3) meaningfully communicated and applied to business decision-making and strategy. The target market would be college graduates that desire to build their skills in marketing analytics functions, but may have little or no formal training in marketing analytics. The option will be highly industry applicable, since it is aimed at giving students the core marketing analytics knowledge they will need to successfully apply marketing analytics in today’s data-driven organizations.

Justification for M.S. in Data Analytics

While the M.P.S. in Data Analytics is intended to provide professionally-oriented technical education, there is a segment of the student population interested in pursuing a research-oriented education focused on advancing the techniques and tools of data analytics as well as the application of new and existing techniques to previously unexplored domains and
situations. It is the objective of the Master of Science in Data Analytics to prepare those students for entry into doctoral programs in data analytics.

**M.S. Program Size and Duration**
An initial enrollment of 15 students is anticipated with growth over three years to approximately 40 students.

**M.S. Program Objectives**
The overall objective of the M.S.-DAAN program is to educate students to become technically outstanding experts in the data sciences and the application of analytics techniques to problems involving high volumes of data, both structured and unstructured.

The specific learning objectives of the M.S.-DAAN program are for students to:

- Develop an understanding of technologies used to develop, optimize, and deploy data analytics systems.
- Demonstrate fundamental understanding of data mining principles.
- Demonstrate fundamental understanding of statistical techniques including hypothesis testing, estimation, confidence intervals, and regression,
- Discriminate between descriptive, diagnostic, predictive, and prescriptive analytics and the techniques used in each.

**Ability to Offer a Quality Program**
The M.S.-DAAN program is proposed by the Engineering Division of Penn State Great Valley which currently offers the M.P.S. in Data Analytics as well as a Master of Science degree program in Information Science, Master of Software Engineering degree program in Software Engineering, a Master of Engineering degree program in Systems Engineering, and a Master of Engineering Management degree program in Engineering Management. The Division faculty include experts in data mining, statistics, information retrieval and storage, text mining, social network analytics, and statistical programming. Courses already offered by the Division that support the proposed M.S.-DAAN are: IE 575: Foundations of Predictive Analytics; SWENG 545: Data Mining; STAT 500: Applied Statistics; IN SC 521: Database Design Concepts; IN SC 846: Network and Predictive Analytics for Socio-Technical Systems; DAAN 822: Data Collection & Cleaning; DAAN 825: Large Scale Databases & Warehouses; DAAN 871: Data Visualization; DAAN 881: Data-Driven Decision Making.

**Program Operation and Maintenance**
The Program Chair will be Dr. Colin Neill, Director of Engineering Programs at Penn State Great Valley. Dr. Neill is also the current chair for the program offered through World Campus and in resident instruction. As is the case for our other on-campus programs incoming M.S. students will be assigned a faculty advisor at the time of acceptance into the program. Penn State Great
Valley has the faculty expertise and capacity to offer the program. It is anticipated that core courses and base program-specific courses will be offered once per year. These courses can also serve as elective courses for other programs – predominately students in the Master of Science in Information Science and Master of Software Engineering Programs. Additional DAAN electives will be offered at least every two years.

**Evidence of Consultation**

Consultation on the proposed program change was sought from a wide range of units across the university as shown below. Responses received are included in Appendix A.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Respondent</th>
<th>Remarks</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Graduate Professional Studies</td>
<td>James Nemes, Chancellor and Chief Academic Officer</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>Penn State World Campus</td>
<td>Karen Pollack, Assistant Vice Provost for Online and Blended Programs</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>College of Engineering</td>
<td>Peter Butler, Associate Dean</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>Smeal College of Business</td>
<td>Brian Cameron, Associate Dean for Professional Master’s Programs</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>College of Information Science and Technology</td>
<td>Mary Beth Rosson, Associate Dean of Graduate and Undergraduate Studies</td>
<td>Full support</td>
<td>We agreed that the Great Valley M.S. does not preclude UP-located M.S. programs.</td>
</tr>
<tr>
<td>Eberly College of Science</td>
<td>David Hunter, Chair of Department of Statistics</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>College of Liberal Arts</td>
<td>Avis Kunz, Assistant Dean for Online Education and Outreach</td>
<td>Full support</td>
<td>We agreed that the Great Valley M.S. does not preclude UP-located M.S. programs.</td>
</tr>
<tr>
<td>Penn State Harrisburg</td>
<td>Peter Idowu, Assistant Dean for Graduate Studies</td>
<td>Full support</td>
<td></td>
</tr>
<tr>
<td>Penn State Erie, The Behrend College</td>
<td>Ivor Knight, Associate Dean for Research and Graduate Studies</td>
<td>Full support</td>
<td></td>
</tr>
</tbody>
</table>
Revised Graduate Bulletin Listing

GRADUATE BULLETIN STATEMENT

Program Chair

Colin J. Neill  
Associate Professor, Software Engineering and Systems Engineering  
School of Graduate Professional Studies  
Penn State Great Valley  
30 E. Swedesford Road  
Malvern, PA 19355-1443  
610-725-5285  
cjneill@psu.edu

Degree Conferred:

M.P.S, M.S.

Graduate Faculty

- Adrian Barb, Ph.D. (University of Missouri) Assistant Professor of Information Science
- Russell R. Barton, Ph.D. (Cornell) Professor of Supply Chain and Information Systems
- Nathan Bastian, Ph.D. (Penn State) Instructor of Supply Chain and Information Systems  
  Chia-Jung Chang, Ph.D. (Georgia Tech) Assistant Professor of Industrial and Manufacturing Engineering
- Mosuk Chow, Ph.D. (Cornell) Senior Scientist and Professor of Statistics
- Mohamad Darayi, Ph.D. (Oklahoma) Assistant Professor of Systems Engineering
- Joanna DeFranco, Ph.D. (New Jersey Institute of Technology) Assistant Professor of Software Engineering  
  Enrique del Castillo, Ph.D. (Arizona State) Professor of Industrial and Manufacturing Engineering
- Paul Griffin, Ph.D. (Texas A&M) Professor of Industrial and Manufacturing Engineering
- Chelsea C. Hammond, Ph.D. (Connecticut) Clinical Assistant Professor of Marketing
The Program

The M.P.S. in Data Analytics (M.P.S.-DAAN) degree is a 30-credit, interdisciplinary master's program that provides students the skills required to collect, classify, analyze, and model data at large and ultra-large scales and across domains using statistics, computer science, machine learning, and software engineering.

The curriculum consists of 30 credits, delivered both in residence at the School of Graduate Professional Studies (Great Valley) and online through the Penn State World Campus. The program provides broad coverage of topics related to predictive analytics while provide in-depth coverage of topics such as data collection and quality, large scale data storage and retrieval, and business and enterprise analytics.

Students select to follow either the base program, which prepares them to design and deploy predictive analytics systems, or a specialized options in Business Analytics or Marketing Analytics. The base program is available both in residence and online; the options is only available online.

The M.S. in Data Analytics (M.S.-DAAN) degree is a 30-credit graduate degree program that provides students the skills required to collect, classify, analyze, and model data at large and ultra-large scales and
across domains using statistics, computer science, machine learning, and software engineering.

**M.P.S. (DAAN)**

**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.

Admission to the M.P.S. in Data Analytics program will be based on baccalaureate academic records, applicable work experience, and two letters of recommendation from a previous professor or supervisor who can attest to the applicant’s academic potential. Applicants with undergraduate degree in a quantitative discipline such as science, engineering, or business may apply. Students from other disciplines will be considered based on prior coursework and/or standardized test scores. Applications must include a statement of professional goals, a curriculum vita or resume, and two letters of recommendation. Test scores from the GMAT or GRE exams are also required. An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale in the final two years of undergraduate studies is required.

**Degree Requirements**

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

The M.P.S.-DAAN degree is conferred upon students who earn a minimum of 30 credits of coursework while maintaining an average grade-point average of 3.0 or better in all coursework, including at least 18 credits at the 500 or 800 level (with at least 6 credits at the 500 level). The program curriculum includes 9 credits of core courses, 9 credits of either a selected option or the base program, 9 credits of electives, and a 3-credit capstone course.

**Required Courses**

Prescribed courses for the degree include the following 9 credits of core courses

- STAT 500: Applied Statistics (3 credits)
- IE 575: Foundations in Predictive Analytics (3 credits)
- SWENG 545: Data Mining (3 credits) or STAT 557: Data Mining 1 (3 credits)

**Base Program**

(Offered at Penn State Great Valley and through World Campus)

Director: Colin Neill, Associate Professor of Software Engineering and Systems Engineering
The base program will create graduates who can design, deploy, and manage the technology infrastructure and data analytical processes of predictive analytics including data aggregation, cleaning, storage, and retrieval. These graduates will work in positions that require them to design and maintain data analytics systems and tools such as Data Modeler, Data Architect, Extraction, Transformation, Loading (ETL) Developer, Business Intelligence (BI) Developer, Data Warehouse Developer and Data Analyst.

**Base program required courses**

- IN SC 521: Database Design Concepts (3 credits)
- DAAN 825: Large-Scale Databases & Warehouses (3 credits)
- DAAN 881: Data-Driven Decision Making (3 credits)

**Additional Courses**

An additional 9 credits of elective courses must be selected from the approved list. The list of approved elective courses is maintained by the graduate program office.

**Business Analytics Option**

(Offered through World Campus)

Director: Terry A. Harrison, Professor of Supply Chain and Information Systems

This option prepares graduates to explore and analyze large data sets to support data-driven business decisions. Target audiences include business analysts, analytic system designers and the data scientists who have a focus on problems arising in the context of business decision-making. The BAN option is organized around the industry-standard rubric of the spectrum of analytics activities: descriptive (what happened), diagnostic (why did it happen), predictive (what will happen) and prescriptive (what should happen).

- BAN 530: Business Strategies for Data Analytics (3 credits)
- BAN 540: Marketing Analytics (3 credits)
- BAN 550: Prescriptive Analytics for Business (3 credits)

**Marketing Analytics Option**

(Offered through World Campus)

Director: Chelsea Hammond, Clinical Assistant Professor of Marketing

The aim of this option is to convey how marketing analytics are (1) applied within organizations, (2) conducted, and (3) meaningfully communicated and applied to business decision-making and strategy. The target market would be college graduates that desire to build their skills in marketing analytics
functions, but may have little or no formal training in marketing analytics. The MAN option will be highly industry applicable, since it is aimed at giving students the core marketing analytics knowledge they will need to successfully apply marketing analytics in today’s data-driven organizations.

- MKTG 811: Driving Business Success with Marketing Analytics (3 credits).
- MKTG 813: Data-Driven Customer Acquisition & Retention (3 credits).

Culminating Experience

All students will complete their program of study with the capstone course corresponding to their chosen option. While each capstone course focuses on problems relevant to their specific domains, they all provide students with an opportunity to apply their knowledge of the theories, methods, processes, and tools of data analytics, learned throughout their program, in a culminating and summative experience. DAAN 888 is the culminating experience for the base program, and BAN 888 for the Business Analytics Option, and MKTG 814 for the Marketing Analytics Option. The choice of project topic and exact form will be mutually determined by the instructor and each student. A written paper based on the applied project is required and must contain project description, analysis, and interpretation of its findings. Students are encouraged to upload their capstone projects to be available publicly via ScholarSphere and to participate in the Graduate Exhibition.

M.S. (DAAN)

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.

Admission to the M.S. in Data Analytics program will be based on baccalaureate academic records, applicable work experience, and two letters of recommendation from a previous professor or supervisor who can attest to the applicant’s academic potential. Applicants with undergraduate degree in a quantitative discipline such as science, engineering, or business may apply. Students from other disciplines will be considered based on prior coursework and/or standardized test scores. Test scores from the GMAT or GRE exams are required. An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale in the final two years of undergraduate studies is required.

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.
Degree Requirements

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

The M.S. degree is an academic degree, which is strongly oriented toward research. To receive the Master of Science degree in Data Analytics, a student must complete at least 30 credits beyond the baccalaureate degree at the 400, 500, 600, or 800 level. At least 18 credits in the 500 and 600 series, combined, must be included in the program.

The program curriculum includes 15 credits of core courses, 9 credits of elective courses, and 6 credits of supervised research. 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.

Required Courses

Prescribed courses for the degree include the following 15 credits of core courses

- STAT 500: Applied Statistics (3 credits)
- IE 575: Foundations in Predictive Analytics (3 credits)
- SWENG 545: Data Mining (3 credits)
- DAAN 501: Analytics Research and Problem Framing (3 credits)
- DAAN 871: Data Visualization (3 credits)

Additional Courses

An additional 9 credits of elective courses must be selected from the approved list of elective courses maintained by the graduate program office. Students must take 6 credits of DAAN 600: Thesis Research. The thesis work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. For thesis guidelines and time lines, students are referred to the Penn State Graduate School website.

Student Aid

Graduate Assistantships available to students in the program and other forms of student aid are described in the STUDENT AID section of 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.
New Graduate Bulletin Listing

GRADUATE BULLETIN STATEMENT

Program Chair

Colin J. Neill
Associate Professor, Software Engineering and Systems Engineering
School of Graduate Professional Studies
Penn State Great Valley
30 E. Swedesford Road
Malvern, PA 19355-1443
610-725-5285
cjneill@psu.edu

Degree Conferred:

M.P.S, M.S.

Graduate Faculty

- Adrian Barb, Ph.D. (University of Missouri) Assistant Professor of Information Science
- Russell R. Barton, Ph.D. (Cornell) Professor of Supply Chain and Information Systems
- Nathan Bastian, Ph.D. (Penn State) Instructor of Supply Chain and Information Systems
- Mosuk Chow, Ph.D. (Cornell) Senior Scientist and Professor of Statistics
- Mohamad Darayi, Ph.D. (Oklahoma) Assistant Professor of Systems Engineering
- Joanna DeFranco, Ph.D. (NJIT) Assistant Professor of Software Engineering
- Chelsea C. Hammond, Ph.D. (Connecticut) Clinical Assistant Professor of Marketing
- Terry P. Harrison, Ph.D. (Tennessee) Strong Professor of Supply Chain and Information Systems
- Mohammed Kassab, Ph.D. (Concordia) Assistant Professor of Software Engineering
- Soundar Kumara, Ph.D. (Purdue) Pearce Professor of Industrial and Manufacturing Engineering
- Phillip A. Laplante, Ph.D. (Stevens Institute of Tech) Professor of Software Engineering
- John I. McCool, Ph.D. (Temple) Distinguished Professor of Systems Engineering
- Ashkan Negahban, Ph.D. (Auburn) Assistant Professor of Engineering Management
- Colin J. Neill, Ph.D. (Wales) Associate Professor of Software Engineering & Systems Engineering
- Chun-Kit Ngan, Ph.D. (George Mason) Assistant Professor of Information Science
- J. Andrew Petersen, Ph.D. (Connecticut) Associate Professor of Marketing
- Guanghua Qiu, Ph.D. (Penn State) Professor of Information Science
The Program

The M.P.S. in Data Analytics (M.P.S.-DAAN) degree is a 30-credit, interdisciplinary master’s program that provides students the skills required to collect, classify, analyze, and model data at large and ultra-large scales and across domains using statistics, computer science, machine learning, and software engineering.

The curriculum consists of 30 credits, delivered both in residence at the School of Graduate Professional Studies (Great Valley) and online through the Penn State World Campus. The program provides broad coverage of topics related to predictive analytics while provide in-depth coverage of topics such as data collection and quality, large scale data storage and retrieval, and business and enterprise analytics.

Students select to follow either the base program, which prepares them to design and deploy predictive analytics systems, or specialized options in Business Analytics or Marketing Analytics. The base program is available both in residence and online; the options are only available online.

The M.S. in Data Analytics (M.S.-DAAN) degree is a 30-credit graduate degree program that provides students the skills required to collect, classify, analyze, and model data at large and ultra-large scales and across domains using statistics, computer science, machine learning, and software engineering.

M.P.S. (DAAN)

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.

Admission to the M.P.S. in Data Analytics program will be based on baccalaureate academic records, applicable work experience, and two letters of recommendation from a previous professor or supervisor who can attest to the applicant’s academic potential. Applicants with undergraduate degree in a quantitative discipline such as science, engineering, or business may apply. Students from other disciplines will be considered based on prior coursework and/or standardized test scores. Applications must include a statement of professional goals, a curriculum vita or resume, and two letters of recommendation. Test scores from the GMAT or GRE exams are required. An undergraduate cumulative
grade-point average of 3.0 or better on a 4.0 scale in the final two years of undergraduate studies is required.

Degree Requirements

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

The M.P.S.-DAAN degree is conferred upon students who earn a minimum of 30 credits of coursework while maintaining an average grade-point average of 3.0 or better in all course work, including at least 18 credits at the 500 or 800 level (with at least 6 credits at the 500 level). The program curriculum includes 9 credits of core courses, 9 credits of either a selected option or the base program, 9 credits of electives, and a 3-credit capstone course.

Required Courses

Prescribed courses for the degree include the following 9 credits of core courses

- STAT 500: Applied Statistics (3 credits)
- IE 575: Foundations in Predictive Analytics (3 credits)
- SWENG 545: Data Mining (3 credits) or STAT 557: Data Mining 1 (3 credits)

Base Program

(Offered at Penn State Great Valley and through World Campus)

Director: Colin Neill, Associate Professor of Software Engineering and Systems Engineering

The base program will create graduates who can design, deploy, and manage the technology infrastructure and data analytical processes of predictive analytics including data aggregation, cleaning, storage, and retrieval. These graduates will work in positions that require them to design and maintain data analytics systems and tools such as Data Modeler, Data Architect, Extraction, Transformation, Loading (ETL) Developer, Business Intelligence (BI) Developer, Data Warehouse Developer and Data Analyst.

Base program required courses

- IN SC 521: Database Design Concepts (3 credits)
- DAAN 825: Large-Scale Databases & Warehouses (3 credits)
- DAAN 881: Data-Driven Decision Making (3 credits)

Business Analytics Option

(Offered through World Campus)
Director: *Terry A. Harrison, Professor of Supply Chain and Information Systems*

This option prepares graduates to explore and analyze large data sets to support data-driven business decisions. Target audiences include business analysts, analytic system designers and the data scientists who have a focus on problems arising in the context of business decision-making. The BAN option is organized around the industry-standard rubric of the spectrum of analytics activities: descriptive (what happened), diagnostic (why did it happen), predictive (what will happen) and prescriptive (what should happen).

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

**Marketing Analytics Option**

(Offered through World Campus)

Director: *Chelsea Hammond, Clinical Assistant Professor of Marketing*

The aim of this option is to convey how marketing analytics are (1) applied within organizations, (2) conducted, and (3) meaningfully communicated and applied to business decision-making and strategy. The target market would be college graduates that desire to build their skills in marketing analytics functions, but may have little or no formal training in marketing analytics. The MAN option will be highly industry applicable, since it is aimed at giving students the core marketing analytics knowledge they will need to successfully apply marketing analytics in today’s data-driven organizations.

- **MKTG 811: Driving Business Success with Marketing Analytics** (3 credits).
- **MKTG 812: Evaluating Marketing Communication in the Digital World** (3 credits).
- **MKTG 813: Data-Driven Customer Acquisition & Retention** (3 credits).

**Additional Courses**

An additional 9 credits of elective courses must be selected from the approved list. The list of approved elective courses is maintained by the graduate program office.

**Culminating Experience**

All students will complete their program of study with the capstone course corresponding to their chosen option. While each capstone course focuses on problems relevant to their specific domains, they all provide students with an opportunity to apply their knowledge of the theories, methods, processes, and tools of data analytics, learned throughout their program, in a culminating and summative experience. DAAN 888 is the culminating experience for the base program, BAN 888 for the Business Analytics Option, and MKTG 814 for the Marketing Analytics Option. The choice of project topic and exact form will be mutually determined by the instructor and each student. A written paper based on the applied project is
required and must contain project description, analysis, and interpretation of its findings. Students are encouraged to upload their capstone projects to be available publically via ScholarSphere and to participate in the Graduate Exhibition.

M.S. (DAAN)

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.

Admission to the M.S. in Data Analytics program will be based on baccalaureate academic records, applicable work experience, and two letters of recommendation from a previous professor or supervisor who can attest to the applicant’s academic potential. Applicants with undergraduate degree in a quantitative discipline such as science, engineering, or business may apply. Students from other disciplines will be considered based on prior coursework and/or standardized test scores. An applicant must hold either (1) a bachelor's degree from a U.S. regionally accredited institution or (2) a postsecondary degree that is equivalent to a U.S. baccalaureate degree earned from an officially recognized degree-granting international institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates. Applications must include a statement of professional goals, a curriculum vita or resume, and two letters of recommendation. Test scores from the GMAT or GRE exams are not also required. An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale in the final two years of undergraduate studies is required.

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.

Degree Requirements

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

The M.S. degree is an academic degree, which is strongly oriented toward research. To receive the Master of Science degree in Data Analytics, a student must complete at least 30 credits beyond the baccalaureate degree at the 400, 500, 600, or 800 level. At least 18 credits in the 500 and 600 series, combined, must be included in the program.

The program curriculum includes 15 credits of core courses, 9 credits of elective courses, and 6 credits of supervised research. 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.

**Required Courses**

Prescribed courses for the degree include the following 15 credits of core courses

- STAT 500: Applied Statistics (3 credits)
- IE 575: Foundations in Predictive Analytics (3 credits)
- SWENG 545: Data Mining (3 credits)
- DAAN 501: Analytics Research and Problem Framing (3 credits)
- DAAN 871: Data Visualization (3 credits)

**Additional Courses**

An additional 9 credits of elective courses must be selected from the approved list of elective courses maintained by the graduate program office.

Students must take 6 credits of DAAN 600: Thesis Research. The thesis work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. For thesis guidelines and timelines, students are referred to the Penn State Graduate School website.

**Student Aid**

Graduate Assistantships available to students in the program and other forms of student aid are described in the STUDENT AID section of 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.
Appendix A
Consultation responses
Colin J. Neill

From: JAMES A NEMES <jan16@psu.edu>
Sent: Monday, June 05, 2017 9:59 AM
To: Colin J. Neill
Subject: RE: Consultation Request: MPS Data Analytics change proposal

Colin,

Penn State Great Valley supports the addition of a marketing analytics option to the online MPS in data Analytics program through the Smeal College of Business. In addition, we support the addition of an M.S. in Data Analytics to the resident program at Great Valley. The proposed M.S., which will be a true research degree with students completing a Master’s thesis, gives those students interested in pursuing a research-oriented program the opportunity to do so. Leveraging existing courses from the MPS at both the 500 and 800 levels and faculty research depth in the field, Penn State Great Valley is well poised to offer a quality program. The campus is committed to providing the necessary resources to ensure its success.

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: Colin J. Neill [mailto: cjn6@psu.edu]
Sent: Friday, May 12, 2017 8:48 AM
To: JAMES A NEMES <jan16@psu.edu>; AVIS LYNN KUNZ <alm2@psu.edu>; DAVID RUSSELL HUNTER <dhunter@psu.edu>; KAREN IRENE POLLACK <kiw1@psu.edu>; mur13@psu.edu; 'Brian Cameron' <bcameron@smail.psu.edu>; pjb28@psu.edu
Subject: Consultation Request: MPS Data Analytics change proposal

Dear Colleagues:

I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
Hi All,

A Marketing Analytics option would leverage the courses and increase the viability of the Marketing Analytics graduate certificate from the Smeal College of Business that will be delivered via World Campus.

We do think the program will need to keep up with changes in the field, as a new technology, tools, and analysis methods emerge in this area over time. The program will need to consider faculty capacity to support program enrollment and the need for regular course revisions to stay current with the market.

Best,
Karen Pollack

On May 12, 2017, at 1:14 PM, Peter J. Butler <pjbbio@engr.psu.edu> wrote:

Colin,

This looks good from Engineering’s perspective.

-Peter

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: pbutler@psu.edu

On May 12, 2017, at 8:47 AM, Colin J. Neill <cjn6@psu.edu> wrote:
Colin J. Neill

From: Peter J. Butler <pjbbio@engr.psu.edu>
Sent: Friday, May 12, 2017 1:14 PM
To: Colin J. Neill
Cc: JAMES A NEMES; AVIS LYNN KUNZ; DAVID RUSSELL HUNTER; KAREN IRENE POLLACK; mur13@psu.edu; Brian Cameron
Subject: Re: Consultation Request: MPS Data Analytics change proposal

Colin,

This looks good from Engineering’s perspective.

-Peter

_______________________
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
e-mail: pbutler@psu.edu

On May 12, 2017, at 8:47 AM, Colin J. Neill <cjn6@psu.edu> wrote:

Dear Colleagues:

I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,

Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
Hi Colin

The change proposal is consistent with our prior discussions and we only have one small change:

Under the faculty listing we should drop John Jordan and add Chris Solo and Nathan Bastian.

Bridget can send you their academic titles.

Thanks

Brian

---

Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University

From: Colin J. Neill <cjn6@psu.edu>
Sent: Friday, May 12, 2017 8:47 AM
To: JAMES A NEMES; AVIS LYNN KUNZ; DAVID RUSSELL HUNTER; KAREN IRENE POLLACK; mur13@psu.edu; Brian Cameron; pjb28@psu.edu
Subject: Consultation Request: MPS Data Analytics change proposal

Dear Colleagues:

I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
Colin.

IST has a similar response. We support the changes as long as they will not interfere with our plan to add a resident (UP) MS or PhD in Data Sciences in the future. The focus in such program would be more on computational approaches, so we should be able to make these distinctions (and with SoDA as well).

Cheers,

Mary Beth

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

From: Avis Kunz <alm2@psu.edu>
Date: Friday, May 12, 2017 at 12:14 PM
To: "Colin J. Neill" <cjn6@psu.edu>
Cc: JAMES A NEMES <jan16@psu.edu>, DAVID RUSSELL HUNTER <dhunter@psu.edu>, Karen Pollack <kiw1@psu.edu>, "mur13@psu.edu" <mur13@psu.edu>, Brian Cameron <bcameron@smeal.psu.edu>, "pj28@psu.edu" <pj28@psu.edu>, DAVID SCOTT BENNETT JR <dsb10@psu.edu>
Subject: Re: Consultation Request: MPS Data Analytics change proposal

Hello Colin:

Thank you for the opportunity to review.

Liberal Arts supports the changes as long as they would not interfere with our ability to add a resident (UP) MS in Social Data Analytics in the future. SoDA adds a social science component, and see it as distinguishable.

I imagine there will be no conflict here -- but just need to be sure.

Best Regards,

Avis

From: "Colin J. Neill" <cjn6@psu.edu>
To: "JAMES A NEMES" <jan16@psu.edu>, "AVIS LYNN KUNZ" <alm2@psu.edu>, "DAVID RUSSELL HUNTER" <dhunter@psu.edu>, "Karen Irene Pollack" <kiw1@psu.edu>, mur13@psu.edu, "Brian Cameron" <bcameron@smeal.psu.edu>, pj28@psu.edu
Sent: Friday, May 12, 2017 8:47:48 AM
Subject: Consultation Request: MPS Data Analytics change proposal
Hi, all. Sorry for the slow reply, and thanks to Jim for reminding me about this pending proposal.

These program changes sound fine, and I have no objections. I would like to say that we’re open to keeping lines of communication open between the UP Department of Statistics and all instructors of STAT courses at campuses other than UP. We’ve been trying to establish this communication primarily with STAT 200 instructors since that’s the most common STAT course taught across the university, but with this proposal there will obviously be the need for at least one section of STAT 500 taught at Great Valley—and we’d simply like to offer an open invitation to support whoever teaches this course through conversations, sharing of materials, and so forth.

As a minor point, the list of graduate faculty in the proposal is out of date:
— Mosuk Chow has been promoted to senior scientist, with a dual title of professor.
— Jim Rosenberger is retiring at the end of this month; if he is to remain on the list then his title should change to emeritus.
— Durland Shumway has been promoted to senior research associate, with a dual title of associate professor.
— Laura Simon is no longer a member of our faculty.
— Aleksandra Slavkovic has been promoted to professor.

If you’d like to list other STAT faculty members, I’m happy to suggest a couple possibilities and contact those people.

Best wishes,
Dave
Hello Colin:

Thank you for the opportunity to review.

Liberal Arts supports the changes as long as they would not interfere with our ability to add a resident (UP) MS in Social Data Analytics in the future. SoDA adds a social science component, and see it as distinguishable.

I imagine there will be no conflict here -- but just need to be sure.

Best Regards,
Avis

---

Dear Colleagues:

I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,
Colin
Dear Colin,
Thanks for sharing the proposal with us. We support your new initiatives and wish you well.

Sincerely,
Peter

Peter Idowu, Ph.D., P.E.
Assistant Dean of Graduate Studies, Penn State Harrisburg
Professor of Electrical Engineering

Penn State Harrisburg
W-102 Olmsted Building
777 W. Harrisburg Pike, Middletown PA 17057
(717) 948-6315 - Phone
(717) 948-6737 - Fax
idowu@psu.edu
http://sites.psu.edu/microgridtestbedpsh/
http://harrisburg.psu.edu/graduate-studies

Dear Dr. Idowu:

I was wondering if I could answer any questions you might have about the change proposal I sent you last month. I would be happy to speak on the phone if that would be easier.

Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
www.personal.psu.edu/cjn6
Dear Colleagues:

I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
www.personal.psu.edu/cjn6
Yes, no objections.

Sent from my iPhone

On Oct 17, 2017, at 1:16 PM, Colin J. Neill <cjn6@psu.edu> wrote:

Thanks, Ivor. I take it that you have no objections to the proposal.

Cheers,
Colin

No concerns.

Sent from my iPhone

On Oct 17, 2017, at 11:08 AM, Colin J. Neill <cjn6@psu.edu> wrote:

Hi Ivor:

Do you or your colleagues have any questions about the change proposal that I may be able to answer?

Cheers,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
www.personal.psu.edu/cjn6
Dear Colin
Please accept my apologies for letting this proposal slip from my radar. I am consulting with appropriate colleagues this week and will have my comments to you early next week.
Kind regards,
Ivor

Ivor T. Knight, Ph.D.
Associate Dean, Research and Graduate Studies
Penn State Behrend
4701 College Dr.
Erie, PA 16563
Tel: 814-898-6160
Email: itk2@psu.edu

Dear Dr. Knight:

I was wondering if I could answer any questions you might have about the change proposal I sent you last month. I would be happy to speak on the phone if that would be easier.

Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
www.personal.psu.edu/cjn6
I am seeking your consultation on the attached program change proposal for the MPS in Data Analytics. In collaboration with the Smeal College of Business we are proposing the addition of a new online option in Marketing Analytics. In addition, we are proposing a residential MS program at the Great Valley campus.

Best Regards,
Colin

Dr. Colin J. Neill
Director of Engineering Programs
Associate Professor of Software & Systems Engineering
School of Graduate Professional Studies
Penn State University
www.personal.psu.edu/cjn6
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: Engineering
Department or Instructional Area: Mechanical and Nuclear 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  ☒ Drop

Current designation of graduate program: B.S./M.S. IUG 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): DROP B.S./M.S. IUG PROGRAM; DROP OR DUAL TITLE ADOPTION

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

Submitted by Graduate Program Head
Mary L. Frecker
Printed name
Signature Date: 10/26/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Matthew Parkinson
Printed name
Signature Date: 10/27/16

Approved by College/School Dean/Chancellor (or Designee):
Peter J. Butler
Printed name
Signature Date: 11/1/16
<table>
<thead>
<tr>
<th>Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of C. Andrew Cole</td>
</tr>
<tr>
<td>Printed name</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Date: 11/1/2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended by Chair, Graduate Council Committee on Programs and Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of M. Kathleen Heid</td>
</tr>
<tr>
<td>Printed name</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Date: 11/1/2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Noted by Dean of the Graduate School:</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Behalf of Regina Vasilatos-Younken</td>
</tr>
<tr>
<td>Printed name</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Date: 11/1/2017</td>
</tr>
</tbody>
</table>
DATE: October 3, 2016

FROM: Mary Frecker

TO: The Graduate Council and University Faculty Senate

SUBJ: Removal of Integrated BS-MS degree in Mechanical Engineering

The Department of Mechanical & Nuclear Engineering proposes dropping the Integrated BS-MS degree in Mechanical Engineering for the following reasons:

1. There has been very little student participation in the Integrated BS-MS degree program. Over the past ten years, only four students have completed the degree, with a fifth student entering the program but not completing the MSME degree.

2. Following the BSME degree, it is difficult for students to finish the requirements for the MSME degree in only one year. The coursework and research components of the MSME degree typically require two years.

3. It is difficult for students to find an MS advisor to support them in thesis research since they are a graduate student for only one year.

This change does not affect other units, therefore no consultation has been done.
Mechanical Engineering (ME)

KAREN A. THOLE, Head of the Department of Mechanical and Nuclear Engineering
137 Reber Building
814-865-2519

Degrees Conferred:

- Ph.D., M.S.

The Graduate Faculty

The Program

Graduate programs and research facilities are available in combustion, heat transfer, fluid mechanics, energy storage, dynamic system analysis, robotics, mechanical design, energy systems, biomedical applications, and micro-nano applications. Air pollution control, automotive safety, tribology, designing for noise control and for reliability also provide many research and design opportunities.

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.

Applicants must have a Bachelor of Science degree in a suitable engineering field from an ABET accredited institution. Admission decisions will be based upon relevant work experience, official GRE scores, and three recommendation letters.

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.
Degree Requirements

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

Master of Science (M.S.)

The M.S. degree program is designed for students to gain advanced knowledge for research, analysis, and design in mechanical engineering. Resident students pursuing an M.S. degree may choose one of two tracks: completion of 24 course credits and the submission of a thesis (6 credits) to the Graduate School, or 30 course credits and the submission of a scholarly paper to the graduate program. The M.S. degree program is also offered online for the scholarly paper track only. The requirements for the M.S. ME degree program are:

1. Minimum of 30 course credits at the 400, 500, 600, or 800 level, of which 20 course credits must be earned at Penn State. The required course credits must be completed with a grade point average of 3.00 or higher.

2. All students must successfully complete two credits of ME 590 Colloquium preferably in their first two semesters in the program. These two colloquium credits do not count toward the 30 course credits in Requirement 1 above.

3. For the thesis track, at least 18 credits in 500- and 600-level courses and a minimum of 6 credits of thesis research (600 or 610) is required. For the scholarly paper track, at least 18 credits must be at the 500 level.

4. A minimum of 12 credits in 400- and 500-level courses in Mechanical Engineering, excluding ME 410, 440, 441, 442, 443, 450, and any other required undergraduate courses. ME 596 cannot be used to fulfill this requirement.

5. The MSME requires three credits of mathematics. These credits must be taken from the following group of courses:
   EMCH 524A, EMCH 524B, ME 512, ME 550, and all 400- and 500-level MATH courses (MATH 4XX, MATH 5XX) except MATH 419, 427, 428, 435, 451, 455, 456, 461, 470, 471, 475, 475W, 482 and 484. Courses with a specific focus on numerical analysis will not count toward the mathematics requirement.

6. A thesis or paper must be presented to meet the specific requirement of the culminating experience type selected; the paper may take the form of a doctoral research proposal if agreed upon in advance by the student and the graduate adviser. Online students seeking an MSME degree must select the scholarly paper track.

7. Preparatory course(s) required for teaching assistants (such as ENGR 888), remedial courses, and any courses required in our undergraduate program are not counted toward degree requirements.
8. All students must complete SARI/CITI (Scholarship and Research Integrity) training.

**CULMINATING EXPERIENCE TRACK A - M.S. THESIS**
Candidate registers for a minimum of six credits of ME 600 or ME 610 and submits a thesis following the procedures specified by the Graduate School. 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. This program will consist of at least 24 course credits and six thesis credits. At least 12 credits must be at the 500-level (excluding ME 596). At least 12 credits must be 400- or 500-level Mechanical Engineering courses.

**CULMINATING EXPERIENCE TRACK B - M.S. PAPER**
Candidate registers for 30 course credits of which 18 credits must be at the 500 level. A maximum of three credits of ME 596 can be counted in the total of 30 credits. At least 12 credits must be 400- or 500-level Mechanical Engineering courses. While enrolled in ME 596, candidates write a paper on a topic mutually agreed upon by the adviser suitable for publication in a professional journal or presentation at a national or international conference.

**Doctor of Philosophy (Ph.D.)**
The Ph.D. program emphasizes scholarly research and helps students prepare for research and related careers in industry, government, and academe. Students are admitted to candidacy after passing written and oral examinations. The Ph.D. program is quite flexible, with minimal formal requirements. The Ph.D. is awarded upon completion of a program of advanced study that includes a minimum period of residence, a satisfactory dissertation, and the passing of comprehensive and final oral examinations as determined by the student's doctoral committee. Generally, a Ph.D. student must have 30 credits above a master's degree before taking the comprehensive examination. 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 graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

Resident graduate students are typically supported by a variety of government and industry fellowships, traineeships, and research and teaching assistantships. Stipends vary depending on the source. Competition for support is extremely keen; however, outstanding students are considered for attractive offers of support, including various fellowships specifically for new students in the College of Engineering. By completing the department's application for admission to the graduate program, applicants will automatically be considered for a graduate assistantship. To receive full consideration for financial aid, all application materials must be submitted by December 15.

**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.

**MECHANICAL ENGINEERING (ME) course list**

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-07-005

Review Date: 8/8/2013

Faculty linked: 6/27/14
Mary,

I’ve accepted the changes and the final version is attached. We will update the program proposal form to note that this proposal is also dropping the Operations Research dual-title.

If you haven’t already done so, you will also need to submit a program change proposal to the Faculty Senate in order to drop the IUG.

Thanks,

Vicki

--
Vicki L. Hewitt, Ed.D.
Director of Graduate Education Administration
The Graduate School
Office of the Dean
210A Kern Graduate Building
The Pennsylvania State University
University Park, PA 16802
814-865-2518
vlh16@psu.edu

From: Mary Frecker [mailto:mxf36@engr.psu.edu]
Sent: Wednesday, October 04, 2017 5:21 PM
To: VICKI L HEWITT <vlh16@psu.edu>; Julie Coons <jmc82@engr.psu.edu>
Cc: JASON NACHMAN <JPN127@PSU.EDU>; JULIE COONS <JMC82@PSU.EDU>
Subject: RE: Mechanical Engineering Program Change Proposal

Vickie, thanks for getting back to us. We accept your revisions, as noted in the attached document.
Thanks again.
Mary

Mary I. Frecker, Ph.D.
Professor of Mechanical & Biomedical Engineering
Associate Dept. Head for Graduate Programs
Mechanical & Nuclear Engineering
Penn State University

From: VICKI L HEWITT [mailto:vlh16@psu.edu]
Sent: Wednesday, October 04, 2017 12:03 PM
To: Julie Coons; Mary Frecker
Cc: JASON NACHMAN; JULIE COONS
Subject: RE: Mechanical Engineering Program Change Proposal

Julie,

I am returning this proposal with some additional revisions and comments, marked with changes tracked.

Please review these revisions and let me know if you have any questions. If these changes are acceptable, we can move the proposal forward.

Thanks,
Hi Vicki,

The revised program proposal for ME is attached.

Thank you,
Julie

Mary,

In that case, in the Justification section of the proposal, include a sentence saying that the proposal will also drop the adoption of the dual-title in Operations Research. We will also make that change to the program proposal form.

Thanks,
Vicki
Vicki, we do not have any record of participating in the dual title in Operations Research, so I don’t think it makes sense to include it in the bulletin. We would like to drop the dual title adoption. Thanks.

Mary

Vicki, we do not have any record of participating in the dual title in Operations Research, so I don’t think it makes sense to include it in the bulletin. We would like to drop the dual title adoption. Thanks.

Mary

Julie,

We have the dual-title in Operations Research adopted by Mechanical Engineering for the Ph.D. and M.S. effective Spring 1991. I don’t have any record of the adoption being dropped, and it is currently listed in LionPATH.

Thanks,

Vicki

--
Vicki L. Hewitt, Ed.D.
Director of Graduate Education Administration
The Graduate School
Office of the Dean
210A Kern Graduate Building
The Pennsylvania State University
University Park, PA 16802
814-865-2518
vlh16@psu.edu

Hi Vicki,

Thanks for the email. I just wanted to double check that ME has a dual-title with Operations Research:

- Operations Research is not included in the current ME degree description in the University Bulletin at: http://bulletins.psu.edu/graduate/programs/M/GRAD%20M%20E
- ME is not listed as a participating program on the Operations Research webpage at: http://sites.psu.edu/ieor/participating-programs/

Thanks,

Julie
Julie Coons
MNE Graduate Programs
Department of Mechanical and Nuclear Engineering
The Pennsylvania State University
127 Reber Building
University Park, PA 16802
814-865-1345

From: VICKI L HEWITT [mailto:vlh16@psu.edu]
Sent: Tuesday, September 12, 2017 1:21 PM
To: Julie Coons <jmc82@engr.psu.edu>
Cc: JASON NACHMAN <JPN127@PSU.EDU>; JULIE COONS <JMC82@PSU.EDU>
Subject: RE: Mechanical Engineering Program Change Proposal

Julie,

Right now, ME has an approved dual-title with Operations Research on the books.

If the program wants to continue to offer that dual-title, the Bulletin section below must be included.

If the program wants to drop the dual-title adoption, you don’t need to include the section below, but in the Justification section of the proposal, include a sentence saying that the proposal will also drop the adoption of the dual-title in Operations Research. We can also make that change to the program proposal form, with your concurrence.

Thanks,

Vicki

--
Vicki L. Hewitt, Ed.D.
Director of Graduate Education Administration
The Graduate School
Office of the Dean
210A Kern Graduate Building
The Pennsylvania State University
University Park, PA 16802
814-865-2518
vlh16@psu.edu

From: Julie Coons [mailto:jmc82@engr.psu.edu]
Sent: Tuesday, September 12, 2017 12:54 PM
To: vlh16@psu.edu
Cc: JASON NACHMAN <JPN127@PSU.EDU>; JULIE COONS <JMC82@PSU.EDU>
Subject: FW: Mechanical Engineering Program Change Proposal

Hi Vicki,

If ME does not offer a Dual-title in Operations Research”, do we still need to include this information?

- On page 3 of the Graduate Bulletin, a section must be added on the dual-title in Operations Research. The minimum required sections are below; more detail specific to the program can be added:
“Dual-title Ph.D. and M.S. in Operations Research

Admissions Requirements
Students must apply and be admitted to the graduate program in Mechanical 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 Mechanical Engineering.

Degree Requirements
To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Mechanical 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 Mechanical 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 Mechanical 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 Mechanical 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 Mechanical 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.”

Thank you,
Julie

Ms. Julie Coons
MNE Graduate Programs
Department of Mechanical and Nuclear Engineering
The Pennsylvania State University
127 Reber Building
University Park, PA 16802
814-865-1345
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: Nursing
Department or Instructional Area: Nursing

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: Change- PhD: Course and program; DNP: Course requirement; MSN: Capstone;
Current designation of graduate option: Nurse Administrator option: Course requirment. Drop -Clinical Nurse Specialist 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  X
Second semester following approval

Submitted by Graduate Program Head
Judith Hupcey
Printed name
Signature
Date: 08/14/17

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Kelly Wolgast
Printed name
Signature
Date: 08/14/17

Approved by College/School Dean/Chancellor (or Designee):
Janice Penrod
Printed name
Signature
Date: 08/14/17
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole
Printed name
Signature
Date: 11/1/2017

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

On Behalf of M. Kathleen Heid
Printed name
Signature
Date: 11/1/2017

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken
Printed name
Signature
Date: 11/1/2017
## College of Nursing
### Graduate Program in Nursing

**Program Revisions:** M.S.N. Capstone, Nurse Administrator Option, Clinical Nurse Specialist Option, Ph.D., Doctor of Nursing Practice (D.N.P.)

<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>M.S.N.</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>A-1 JUSTIFICATION FOR PROPOSED CHANGES</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Overview of Changes</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>B-1 REVISED VERSION OF THE AFFECTED AREAS SHOWING THE OLD PROGRAM REQUIREMENTS</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>A. M.S.N. Core (9–12 credits)</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>B. Advanced Nursing Practice Courses (9–10 credits) [NP and Nurse Educator Options]</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>C. Option-Specific Courses</strong></td>
<td>2</td>
</tr>
<tr>
<td>- Family Nurse Practitioner Option (23 credits)</td>
<td>2</td>
</tr>
<tr>
<td>- Adult Gerontology Primary Care Nurse Practitioner Option (20 credits)</td>
<td>2</td>
</tr>
<tr>
<td>- Adult Gerontology Acute Care Nurse Practitioner Option (22 credits)</td>
<td>2</td>
</tr>
<tr>
<td>- Nurse Administrator Option (14–16 credits)</td>
<td>3</td>
</tr>
<tr>
<td>- Nurse Educator Option (13 credits)</td>
<td>3</td>
</tr>
<tr>
<td><strong>CLINICAL NURSE SPECIALIST OPTION</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>A-2 JUSTIFICATION FOR PROPOSED CHANGES</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>B-2 REVISED VERSION OF THE AFFECTED AREAS SHOWING THE OLD PROGRAM REQUIREMENTS</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Present Curriculum with Strikethrough of Deletions</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Ph.D.</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>A-3 JUSTIFICATION FOR PROPOSED CHANGES</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>B-3 REVISED VERSION OF THE AFFECTED AREAS SHOWING THE OLD PROGRAM REQUIREMENTS</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>M.S.N. to Ph.D. (45 credit minimum)</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>A. Nursing Science Core (16 minimum credits)</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>B. Research Methodology and Statistics (15 credits minimum)</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>C. Courses for Individual Specialty (9–12 credits minimum, 15 credits –minor)</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>D. Dissertation (2 credits minimum)</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>E. Teaching with Faculty (3 credits- not counted toward degree- if needed)</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>F. Research with Faculty (3 credits- only if the student has not been an RA)</strong></td>
<td>5</td>
</tr>
<tr>
<td>- B.S.N. (to M.S.) or directly to Ph.D. (72 credit minimum)</td>
<td>5</td>
</tr>
<tr>
<td>- Nursing Science Core (28 minimum credits)</td>
<td>5</td>
</tr>
<tr>
<td>- Research Methodology and Statistics (18 credits minimum)</td>
<td>6</td>
</tr>
</tbody>
</table>
(C) Courses for Individual Specialty (21 credits minimum) 6
(D) Dissertation (2 credits minimum) 6
(E) Research with Faculty (3 credits) 6
(F) Teaching with Faculty (3 credits – not counted toward degree) 6
D.N.P. 6

A-4 JUSTIFICATION FOR PROPOSED CHANGES 6
  Overview 6
  Rationale 6

B-4 REVISED VERSION OF THE AFFECTED AREAS SHOWING THE OLD PROGRAM REQUIREMENTS AND NEW PROGRAM REQUIREMENTS 6
  Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions 6
  B.S.N. to D.N.P. Curriculum 6
  (A) Master’s Core: 9 credits 6
  (B) Nurse Administrator Option Courses: 13 credits 7
  (C) D.N.P. Core Courses: 12 credits 7
  (D) Other Required Courses: $8 credits 7
  (E) Advanced Practice Practicum: 5 credits (needed to meet the 1000 hour requirement) 7
  (F) Electives: 8 credits 7
  M.S.N. to D.N.P. Curriculum 7
  (A) D.N.P. Core Courses: 12 credits 7
  (B) Other Required Courses: 14 credits 7
  (C) Advanced Practice Practicum: 0-8 credits (depending on the number of practicum hours in a M.S.N. program) 8
  (D) Capstone Requirement: project: minimum - 6 credits 8
  (F) Electives: 6 credits 8

C. DEPARTMENTS AFFECTED 8

D. CONSULTATION WITH ORP 8

E. GRADUATE BULLETIN 8
Introduction

This proposal addresses: (1) Capstone course changes for the M.S.N. degree and a course requirement change in the Nurse Administrator option, (2) Dropping the Clinical Nurse Specialist option, (3) Course and program requirement changes for the Ph.D. degree program, (4) Course requirement changes in the D.N.P degree program.

M.S.N.

a-1 Justification for proposed changes

Overview of Changes

- Designation of the final practicum as the capstone course for each option
- Name change of NURS 513 from Capstone course to Evidence-Based Practice in Professional Nursing (is being reviewed in CRCS); course designated as an additional M.S.N. core course
- Addition of NURS 836: Healthcare Informatics as a required course for Nurse Administrator option

Rationale

The M.S.N. Council in the College of Nursing has been working on updating the M.S.N. core curriculum. The presently designated “Capstone” course, NURS 513, does not meet the needs of the students; a capstone experience as part of the final practicum/clinical is more appropriate for this student population. Thus, we plan to rename NURS 513 to descriptively align with the course’s focus, which is an understanding evidence-based practice. The final practicum/clinical course in all of the options was developed and submitted for approval as the “capstone experience”. We plan to strengthen the capstone portion of these experiences by having all the students write a capstone paper/project (e.g., for nurse practitioner students, it would be a case study; nurse educator, a curricular plan or student project; and nurse administrator, a paper addressing a clinical problem) and also do a formal class presentation.

Healthcare Informatics has been added as a required course for the Nurse Administrator option. The required informatics competencies for nurse administrators, as suggested by the American Association of Nurse Executives, are included in this course.

b-1 Revised version of the affected areas showing the old program requirements and new program requirements

Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions

(A) M.S.N. Core (9 12 credits)
- NURS 501: Issues in Nursing and Health Care (3 credits)
• NURS 510: Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits)
• NURS 512: Nursing Research (3 credits)
• NURS 513: Evidence-Based Practice in Professional Nursing

(B) Advanced Nursing Practice Courses (9–10 credits) [NP and Nurse Educator Options]

• NURS 802: Advanced Health Assessment of Adult Populations (NP options, 3 credits)
• NURS 802A: Advanced Health Assessment of Pediatric Populations (FNP, 1 credit)
• NURS 802B: Physical Assessment Through the Lifespan (Nurse Educator option 3 credits)
• NURS 803: Pathophysiology (3 credits)
• NURS 804: Pharmacologic Therapy (3 credits)

(C) Option-Specific Courses

Family Nurse Practitioner Option (23 credits)
• NURS 870: Nurse Practitioner Role with Healthy Individuals and Families (3 credits)
• NURS 871: Nurse Practitioner Role with Individuals and Families with Complex and/or Chronic Health Problems (3 credits)
• NURS 872: Family Nurse Practitioner Practicum I (3 credits)
• NURS 873: Family Nurse Practitioner Practicum II (FNP, 4 credits)
• NURS 874: Family Nurse Practitioner Integrative Practicum (6 credits) CAPSTONE COURSE
• NURS 875: Nurse Practitioner Role with Children and Families (2 credits)
• NURS 876: Family Nurse Practitioner Practicum with Pediatric Populations (2 credits)

Adult Gerontology Primary Care Nurse Practitioner Option (20 credits)
• NURS 870: Nurse Practitioner Role with Healthy Individuals and Families (3 credits)
• NURS 871: Nurse Practitioner Role with Individuals and Families with Complex and/or Chronic Health Problems (3 credits)
• NURS 872A: Adult Gerontology Primary Care Nurse Practitioner Practicum I (4 credits)
• NURS 873A: Adult Gerontology Primary Care Nurse Practitioner Practicum II (4 credits)
• NURS 874A: Adult Gerontology Primary Care Nurse Practitioner Integrative Practicum (6 credits) CAPSTONE COURSE

Adult Gerontology Acute Care Nurse Practitioner Option (22 credits)
• NURS 860: Adult Gerontology Acute Care Nurse Practitioner Role I (3 credits)
• NURS 861: Adult Gerontology Acute Care Nurse Practitioner Role II (3 credits)
• NURS 862: Adult Gerontology Acute Care Nurse Practitioner Practicum I (4 credits)
• NURS 863: Adult Gerontology Acute Care Nurse Practitioner Practicum II (4 credits)
• NURS 864: Adult Gerontology Acute Care Nurse Practitioner Integrative Practicum (6 credits) CAPSTONE COURSE
• NUR 865: Pharmacology for Acute Care Nurse Practitioners (1 credit)
• NURS 866: Health Assessment of the Adult Gerontology Population in Acute Care (1 credit)

**Nurse Administrator Option (13-16 credits)**

• NURS 836: Healthcare Informatics (3 credits)
• NURS 845: Healthcare Economics and Policy for Nurse Administrators (3 credits)
• NURS 846: Leadership Concepts and Theories for Nurse Administrators (3 credits)
• NURS 847: Human Resource and Workforce Issues for Nurse Administrators (3 credits)
• NURS 848: Synthesis and Application of the Nurse Administrator Role (4 credits) CAPSTONE COURSE

Elective Courses (9 credits)

**Nurse Educator Option (13 credits)**

• NURS 840: Nursing Education Theories and Strategies (3 credits)
• NURS 841: Assessment and Evaluation in Nursing Education (3 credits)
• NURS 842: Curriculum and Program Development in Nursing Education (3 credits)
• NURS 843: Synthesis and Application of the Nurse Educator Role (4 credits) CAPSTONE COURSE

Elective Course (3 credits)

(E) M.S.N. Capstone Course (3 credits)

NURS 513: M.S.N. Capstone (3 credits)

**Clinical Nurse Specialist Option**

a-2 Justification for proposed changes

**Overview**

- Discontinuation of the three Clinical Nurse Specialist option-specific courses and the option (all are in review for being dropped in CRCS).

**Rationale**

We have not admitted students and have not offered the options-specific courses in last 4 or 5 years. This specialty, although still very popular in some states, has been on the decline in Pennsylvania. We had trouble enrolling and keeping students in this option, so we put admissions on hold about 5 years ago, with the hope that the CNS role would return to Pennsylvania. At this time, with changes in the national guidelines for graduate education for nurses, it appears, that on the master’s level, this program is no longer a viable one. We therefore plan to formally discontinue offering this option.
b-2 Revised version of the affected areas showing the old program requirements and new program requirements

Present Curriculum with Strikethrough of Deletions

- NURS 818: Clinical Nurse Specialist I: Concepts and Theory (3 credits)
- NURS 819: Clinical Nurse Specialist II: Analysis and Application (3 credits)
- NURS 821: Nurse Practicum: Clinical Nurse Specialist (4-8 credits)

Ph.D.

a-3 Justification for proposed changes

Overview
- M.S.N. to Ph.D. increase from 42 to 45 credits minimum
- Changes to Nursing Science Core Course Requirements
  - NURS 582 has already been revised and increased to 4 credits
  - NURS 581 is being deleted in CRCS
  - NURS 588 is under review in CRCS

Rationale
Over the last couple of years, there has been new national recommendations related to the core curriculum for Ph.D. students in nursing. The Ph.D. Council in the College of Nursing has been meeting and reviewing the curriculum over the past two years and as a result has approved course revisions: deleting NURS 581 (under review in CRCS); increasing NURS 582 to 4 credits (approved) to add some content; adding a NURS 588 Healthcare Policy for Nursing and Healthcare Scholars (under review in CRCS); increasing the credits for support courses from 9 to 12, and revising the suggested plan of study for the B.S.N. to Ph.D. (with or without an M.S. enroute to the Ph.D.)

b-3 Revised version of the affected areas showing the old program requirements and new program requirements

Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions

M.S.N. to Ph.D. (45 credit minimum)

(A) Nursing Science Core (16 minimum credits)
- NURS 580: Epistemology of Nursing Science (3 credits)
- NURS 581: Developing Theoretical Constructs Relevant to Nursing (3 credits)
- NURS 582: Scientific Basis for Nursing Practice (3 4 credits)
• NURS 583: Advanced Seminar in Nursing Science (3 credits, repeatable)
• NURS 587: Ethics in Nursing Research (1 credit) (SARI requirement met)
• NURS 588: Healthcare Policy for Nurse and Healthcare Scholars (3 credits)
• NURS 590: Colloquium—Nursing Research Seminar (minimum 3 2 credits)

(B) Research Methodology and Statistics (15 credits minimum)

Research Methods (6 credits)
• NURS 585: Qualitative Methods in Health Research (3 credits)
• NURS 586: Quantitative Methods in Health Research (3 credits)

Statistics/Methods (9 credits)

(C) Courses for Individual Specialty (9 12 credits minimum, 15 credits –minor)

(D) Dissertation (2 credits minimum)

(E) Teaching with Faculty (3 credits- not counted toward degree- if needed)

(F) Research with Faculty (3 credits- only if the student has not been an RA)

B.S.N. (to M.S.) or directly to Ph.D. (72 credit minimum)

Nursing Science Core (28 minimum credits)

M.S. Core (12 credits)
• NURS 501: Issues in Nursing and Health Care (3 credits)
• NURS 510: Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits)
• NURS 512: Nursing Research (3 credits)
• NURS 596: M.S. Capstone (manuscript or pre-doctoral fellowship proposal) (3 credits)
• NURS 808: Population Health Perspectives (3 credits)
• NURS 836: Healthcare Informatics (3 credits)

Ph.D. Core (16 credits)
• NURS 580: Epistemology of Nursing Science (3 credits)
• NURS 581: Developing Theoretical Constructs Relevant to Nursing (3 credits)
• NURS 582: Scientific Basis for Nursing Practice (3 4 credits)
• NURS 583: Advanced Seminar in Nursing Science (3 credits)
• NURS 587: Ethics in Nursing Research (1 credit) (SARI requirement met)
• NURS 588: Healthcare Policy for Nurse and Healthcare Scholars (3 credits)
• NURS 590: Colloquium—Nursing Seminar (3 2 credits)
(B) Research Methodology and Statistics (18 credits minimum)

*Research Methods (6 credits)*
- NURS 585: Qualitative Methods in Health Research (3 credits)
- NURS 586: Quantitative Methods in Health Research (3 credits)

*Statistics/Methods (12 credits minimum)*
- Statistics (6 credits)
- Research methods or statistics elective (6 credits)

(C) Courses for Individual Specialty (21 credits minimum)

(D) Dissertation (2 credits minimum)

(E) Research with Faculty (3 credits)

(F) Teaching with Faculty (3 credits – not counted toward degree)

**D.N.P.**

*a-4 Justification for proposed changes*

**Overview**
- Addition of NURS 836: Healthcare Informatics as a required course.

**Rationale**
The D.N.P. Council in the College of Nursing has been reviewing the program during its first three years. It was felt that healthcare informatics was a content area that was lacking and is needed for our students to achieve the end-of-program outcomes for this program. The faculty voted to require NURS 836 for all D.N.P. students.

**b-4 Revised version of the affected areas showing the old program requirements and new program requirements**

**Present Curriculum with Additions Underlined, Strikethrough of Changes/Deletions**

**B.S.N. to D.N.P. Curriculum**
The curriculum will be composed of seven components: 61 Credits

(A) Master’s Core: 9 credits
- NURS 501: Issues in Nursing and Health Care (3 credits)
• NURS 510: Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits)
• NURS 512: Nursing Research (3 credits)

(B) Nurse Administrator Option Courses: 13 credits
• NURS 845: Healthcare Economics and Policy for Nurse Administrators (3 credits)
• NURS 846: Leadership Concepts and Theories for Nurse Administrators (3 credits)
• NURS 847: Human Resource and Workforce Issues for Nurse Administrators (3 credits)
• NURS 848A: Synthesis and Application of the Nurse Administrator Role (4 credits)

(C) D.N.P. Core Courses: 12 credits
• NURS 830: Evidence Based-Practice I: Theory and Research Methods (3 Credits)
• NURS 831: Evidence Based-Practice II: Translation of Research (3 Credits)
• NURS 832: Doctor of Nursing Practice Leadership I (3 Credits)
• NURS 833: Doctor of Nursing Practice Leadership II (3 Credits)

(D) Other Required Courses: 8 credits
• NURS 590: Colloquium (1 credit) (1st year doctoral student research colloquium)
• NURS 587: Ethics in Nursing Research (1 credit) (SARI requirement met)
• NURS 808: Population Health Perspectives (3 credits)
• NURS 836: Healthcare Informatics (3 credits)

(E) Advanced Practice Practicum: 5 credits (needed to meet the 1000 hour requirement)
• NURS 834: Doctor of Nursing Practice Practicum (5 Credits) (variable 1-4; repeatable)

(E) Capstone Requirement: project: minimum - 6 credits
• NURS 835: Doctor of Nursing Practice Project (2-3 Credits) (repeatable)

(F) Electives: 8 credits

M.S.N. to D.N.P. Curriculum

(A) D.N.P. Core Courses: 12 credits
• NURS 830: Evidence Based-Practice I: Theory and Research Methods (3 Credits)
• NURS 831: Evidence Based-Practice II: Translation of Research (3 Credits)
• NURS 832: Doctor of Nursing Practice Leadership I (3 Credits)
• NURS 833: Doctor of Nursing Practice Leadership II (3 Credits)

(B) Other Required Courses: 14 credits
• NURS 510: Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits)
• NURS 590: Colloquium (1 credit) (first year doctoral student research colloquium; Ph.D. & D.N.P. students)
• NURS 587: Ethics in Nursing Research (1 credit) (SARI requirement met)
• NURS 845: Healthcare Economics and Policy for Nurse Administrators (3 credits)
• NURS 808: Population Health Perspectives (3 credits)
• NURS 836: Healthcare Informatics (3 credits)

(C) Advanced Practice Practicum: 0-8 credits (depending on the number of practicum hours in a M.S.N. program)

• NURS 834: Doctor of Nursing Practice Clinical Practicum: (0-8 Credits: variable 1-4; repeatable)

(D) Capstone Requirement: project: minimum - 6 credits

• NURS 835: Doctor of Nursing Practice Project: (2-3 Credits) (repeatable)

(F) Electives: 9 6 credits

c. Departments affected
No departments will be affected by these program revisions.

d. Consultation with ORP
Not needed; no changes to SARI requirements in any of the options/degrees.

e. Graduate Bulletin
A copy of the existing Graduate Bulletin description, with all changes marked, followed by a clean version of the bulleting.

Nursing (NURS)

Program Home Page

JANICE PENROD, Interim Dean, College of Nursing
JUDITH E. HUPCEY, Associate Dean for Graduate Education and Research
201 Nursing Sciences Building
814-863-0245

Degrees Conferred:

Ph.D., D.N.P., M.S., M.S.N.
Dual-Title Ph.D. in Nursing and Bioethics (BIOET)
Dual-Title Ph.D. in Nursing and Clinical and Translational Sciences

The Graduate Faculty

The Programs

The graduate programs emphasize productive scholarship and research in the development of nursing knowledge and the translation of knowledge into practice. Advanced study is in human health and development throughout the life span, and in nursing’s role in providing health services to individuals, families, and communities.
The Ph.D. program, the dual-title Ph.D. program in nursing and bioethics, and the dual-title Ph.D. program in nursing and clinical and translational sciences prepare nurse scientists to provide leadership in nursing education, practice and research. Individualized curricula prepare nursing graduates to assume positions as faculty, researchers and leaders in educational, community, governmental, or institutional settings.

The D.N.P. degree program prepares nurse administrators and advanced practice nurses to assume leadership roles in practice settings in the community, governmental agencies, or healthcare institutions.

The M.S. degree program with a major in nursing prepares nurse scientists and clinical scholars who plan to complete a Ph.D. in nursing or dual-title Ph.D. in nursing and bioethics or a dual-title Ph.D. in nursing and clinical and translational sciences.

The M.S.N. degree in Nursing consists of a base program and six-five options. The options include: Clinical Nurse Specialist, Family Nurse Practitioner, Adult Gerontology Primary Care Nurse Practitioner, Adult Gerontology Acute Care Nurse Practitioner, Nurse Administrator, and Nurse Educator.

The M.S., M.S.N., and D.N.P. degree programs in Nursing are accredited by the Commission on Collegiate Nursing Education.

The Nurse Practitioner options are designed to help prepare the professional nurse to function in an expanded nursing role providing direct care to specific groups of clients in a variety of health care settings. Since that practice is inherently interdisciplinary in nature, advanced knowledge and research from nursing is combined with knowledge from science, medicine, and related disciplines. The Nurse Practitioner may also function in supervisory, consultative, education, and research roles.

The Clinical Nurse Specialist option prepares advanced practice nurses in Adult Gerontology or Community Health to plan, implement, and evaluate care in a variety of settings. They function in direct care, supervisory, consultative, education, and research roles serving individuals, families, and communities.

The Nurse Administrator option enables the student to acquire advanced knowledge of organizational leadership, health policy, and evidence-based health care delivery. The program is designed to prepare students for leadership and administrative roles in a variety of health care settings.

The Nurse Educator option enables the student to acquire advanced knowledge of evidence-based teaching and learning principles, curriculum development, and evaluative techniques. The program is designed to prepare students for educator roles in a variety of academic and health care settings.

Admission Requirements for M.S., M.S.N., D.N.P., and Ph.D. Programs

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

1. For admission to the Nursing program, an applicant must hold either (1) a bachelor's degree in Nursing from a U.S. regionally accredited institution or (2) a postsecondary degree in Nursing that is equivalent to a U.S. baccalaureate degree earned from an officially recognized degree-granting international institution. Students entering the doctoral program via the traditional post-master's route must have earned a master's degree with a major in nursing from a program accredited by a national accrediting agency for nursing. Well-qualified Ph.D. applicants with a baccalaureate degree in nursing and master's degree in a related discipline (e.g., public health) will be evaluated individually to assess the need for prerequisite master's-level course work in nursing for doctoral program admission.

2. Applicants must submit official transcripts from all post-secondary institutions attended. For M.S.N. applicants, a cumulative grade-point average of 3.3 (on a 4.0 scale) for the baccalaureate degree is expected with a B or better in all science and nursing courses. For M.S. applicants, a cumulative grade-point average of 3.5 (on a 4.0 scale) for the baccalaureate degree is expected with a B or better in all science and nursing courses. College chemistry and statistics are also required (chemistry is not required for the nurse administrator option). B.S.N. to D.N.P. applicants are expected to have a cumulative undergraduate grade-point average of 3.5 (on a 4.0 scale). For master's to Ph.D. or D.N.P. applicants, a cumulative grade-point average 3.5 (on a 4.0 scale) for master's and subsequent course work is expected.
3. Two letters of reference are required for the M.S.N. degree program and three letters of reference are required for the M.S., D.N.P., and Ph.D. degree programs. The letters should be solicited from professional colleagues and faculty who can attest to the applicant's ability.

4. All applicants must submit a statement of purpose. In addition, M.S., D.N.P., and Ph.D. degree applicants must also submit a published or unpublished scientific paper, thesis, or other scholarly writing sample and a complete curriculum vitae.

5. GRE scores are required for admission to the M.S. and Ph.D. programs. GRE scores are not required for the M.S.N. or D.N.P. applicants, but if the scores are submitted to Penn State they will be reviewed as part of the application.

6. 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 Nursing program must have a minimum TOEFL score of 580 on the paper-based test, or a total score of 80 with a 25 on the speaking section for the Internet-based test (iBT). The minimum composite score for the IELTS for applicants to the Nursing program is 7.

7. Applicants to the M.S.N. options and D.N.P. degree offered online via the World Campus must hold a current license to practice professional nursing in at least one U.S. state or in a foreign country. All other applicants to the M.S. and M.S.N. degree programs must hold a current Pennsylvania license to practice professional nursing. Applicants to the Ph.D. degree program must be licensed to practice professional nursing in at least one state or in a foreign country.

8. Applicants to the Adult Gerontology Acute Care Nurse Practitioner Option are required to have two years of acute care hospital experience.

9. Applicants to the M.S.N. degree program are encouraged to discuss program options with the faculty; however, an interview is not required. Doctoral (B.S.N, Ph.D., B.S.N, D.N.P., D.N.P., and Ph.D.) applicants will be contacted by the College of Nursing to schedule a required interview (either in person or via internet-based video conferencing).

**M.S. and M.S.N. Degree Requirements**

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

Candidates in the Master of Science (M.S.) degree program in nursing (B.S.N., D.N.P., Ph.D.) are required to complete a minimum of 30 credits, with at least 18 credits in the 500 and 600 series combined, to be awarded an M.S. degree. A minimum of 12 credits in course work (400, 500, and 800 series), as contrasted with research, must be completed in the major program. There are 9 core required courses/credits required in M.S. core coursework, including NURS 510 Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits); NURS 808: Population Health Perspectives (3 credits); and NURS 836: Healthcare Informatics (3 credits). In addition, 3-12 credits are required in the research and statistics courses approved in advance by the student’s advisor (0-12 credits). NURS 501: Issues in Nursing and Health Care (3 credits); NURS 510 Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits); and NURS 512: Nursing Research (3 credits). Additional courses that will count as electives towards this degree can be chosen from a list of approved elective courses maintained by the graduate program office.

If the M.S. student chooses to complete a thesis, at least 6 credits in thesis research (600 or 610) must be taken in conjunction with 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 a thesis defense. If the student chooses the non-thesis track, the students must submit a satisfactory scholarly paper or an NIH pre-doctoral fellowship application while enrolled in NURS 596 (3 credits). If no thesis is required, at least 18 credits of course work must be in 500-level courses.

The Master of Science in Nursing (M.S.N.) requires a minimum of 30 credits, with at least 612 credits at the 500 level, including 12 credits of Master’s M.S.N. Program Core courses, 158 credits of electives, and at least 3 credits in a capstone course, and 3 credits in the Capstone Course. NURS 513: The Master’s M.S.N. Program Core Courses are: NURS 501: Issues in Nursing and Health Care (3 credits), NURS 510 Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits), and NURS 512: Nursing Research (3 credits). Additional courses that will count as electives towards this degree can be chosen from a list of approved elective courses maintained by the graduate program office. Students in the M.S.N. degree program are required to complete a capstone project, which demonstrates the application of theory and research to a clinical problem based on review of the literature and research utilization for that problem. For M.S.N. students who do not choose to complete an option, the capstone project is completed while enrolled in NURS 596 (3 credits).

The six-five advanced role options offered in the M.S.N. degree program include nurse educator, nurse administrator, family nurse practitioner, adult gerontology primary care nurse practitioner, and adult gerontology acute care nurse practitioner, and clinical nurse specialist (CNS). Students in these options complete the 12 credits of Master’s M.S.N.
Program Courses and 3 credits of the Capstone Course NURS 513, as described above. The option-specific course requirements described below replace the requirement for 158 credits of electives.

Students must earn a minimum of 41 credits for the M.S.N. with the Clinical Nurse Specialist option. The option-specific course requirements total 29 credits, including: NURS 802 (3), NURS 803 (3), NURS 804 (3), NURS 818 (4), NURS 819 (4), NURS 821 (6), and NURS 823 (4).

Students must earn a minimum of 45 credits for the M.S.N. with the Family Nurse Practitioner option. The option-specific course requirements total 2733 credits, including: NURS 802 (3), NURS 802A (1), NURS 803 (3), NURS 804 (3), NURS 870 (3), NURS 871 (3), NURS 872 (3), NURS 873 (4), NURS 874 (6), NURS 875 (2), and NURS 876 (2). The capstone course for students completing this option is NURS 874 (6).

Students must earn a minimum of 41 credits for the M.S.N. with the Adult Gerontology Primary Care Nurse Practitioner option. The option-specific course requirements total 229 credits, including: NURS 802 (3), NURS 803 (3), NURS 804 (3), NURS 870 (3), NURS 871 (3), NURS 872A (4), and NURS 873A (4). The capstone course for students completing this option is NURS 874A (6).

Students must earn a minimum of 43 credits for the M.S.N. with the Adult Gerontology Acute Care Nurse Practitioner option. The option-specific course requirements total 2531 credits, including: NURS 802 (3), NURS 803 (3), NURS 804 (3), NURS 860 (3), NURS 861 (3), NURS 862 (4), NURS 863 (4), NURS 864 (6), NURS 865 (1), and NURS 866 (1). The capstone course for students completing this option is NURS 864 (6).

Students must earn a minimum of 37 credits for the M.S.N. with the Nurse Administrator option. The option-specific course requirements total 223 credits, including: NURS 836 (3), NURS 845 (3), NURS 846 (3), and NURS 847 (3), and NURS 848 (4). The capstone course for students completing this option is NURS 848 (4). Students in this option are required to take 942 additional elective credits chosen from a list of approved elective courses maintained by the graduate program office.

Students must earn a minimum of 37 credits for the M.S.N. with the Nurse Educator option. The option-specific course requirements total 1822 credits, including: NURS 802B (3), NURS 803 (3), NURS 804 (3), NURS 840 (3), NURS 841 (3), and NURS 842 (3). The capstone course for students completing this option is NURS 843 (4). Students in this option are required to take 3 additional elective credits chosen from a list of approved elective courses maintained by the graduate program office.

**D.N.P. Degree Requirements**

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

Students may enter the program directly from-with a B.S. in Nursing or following completion of a Master’s degree in nursing.

For the B.S. in Nursing to the D.N.P. for nurse administrators, a core of master’s courses is required. A minimum of 61 credits, 1000 hours of practicum time, and a DNP project is required. The 61 credits include:

- 9 credits of Master’s Core Courses: NURS 501(3), NURS 510(3), and NURS 512(3)
- 13 credits of Nurse Administrator Option Courses: NURS 845(3), NURS 846(3), NURS 847(3), and NURS 848A(4).
- 12 credits of D.N.P. Core Courses: NURS 830(3), NURS 831(3), NURS 832(3), and NURS 833(3).
- 8 credits of Other Required Courses: NURS 590(1), NURS 587(1), NURS 808(3), and NURS 836(3).
- 5 credits of Advanced Practice Clinical (needed to meet the 1000 hour practicum requirement): NURS 834(5)
- 6 credits of DNP Project: NURS 835(6)
- 8 credits of electives chosen from a list of approved elective courses maintained by the graduate program office

The Master of Science in Nursing (M.S.N.) to D.N.P. program requires a minimum of 30 post-master’s degree credits completed at Penn State. The curriculum is individualized based on previous course work and number of practicum hours completed during the master’s program. A maximum of 550 practicum hours from the previous master’s program will be
accepted to fulfill to 1000 hours of required practicum hours. The curriculum is composed of 5 components, for a minimum of 38 credits:

- 12 credits of D.N.P. Core Courses: NURS 830 (3), NURS 831 (3), NURS 832 (3), and NURS 833 (3).
- 14 credits of Other Required Courses: NURS 510 (3), NURS 590 (1), NURS 587 (1), NURS 808 (3), NURS 836 (3), and NURS 845 (3).
- 6 credits of DNP Project: NURS 835 (6)
- 6 credits of electives chosen from a list of approved elective courses maintained by the graduate program office

In addition to the minimum 38 credits, up to 8 credits of NURS 834 may be required for M.S.N. to D.N.P. students, depending on the number of practicum hours completed in the student’s M.S.N. program.

For both entry options, students are required to participate in 3 intensives offered at the University Park or Hershey Medical Center campus. For full-time students, the first intensive is August of semester I for M.S.N. to D.N.P. and Semester III for B.S.N. to D.N.P. students. Intensive 2 is the beginning of the subsequent semester, Intensive 3 is at the end of semester II for M.S.N. to D.N.P. and semester IV for B.S.N. to D.N.P. students.

In addition to course work, all students are required to complete a series of three benchmarks, Candidacy Examination, Comprehensive Examination, and a Final Oral Presentation.

D.N.P. Doctoral Committee Composition: The doctoral committee will consist of the student's academic adviser, the DNP project course (NURS 835) instructor, and a third member of the graduate faculty, all from the graduate program in Nursing. The academic adviser will be the chair of the committee.

Candidacy Examination: All students must satisfactorily complete the candidacy examination, which is designed to evaluate the student's past performance and potential for successfully completing the program. Candidacy typically occurs prior to the 2nd intensive, which follows completion of one semester of full-time study for the M.S.N. to D.N.P. student and after three semesters of full-time study for the B.S.N. to D.N.P. student. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

Comprehensive Examination: The comprehensive examination marks the student’s progression into their D.N.P. project. This occurs during the 3rd intensive, when students present their D.N.P. project proposal. The comprehensive examination needs to be successfully completed prior to the submission of the proposal for human subjects' review or carrying out the project (if it does not require a review). Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

Final Oral Presentation: Upon completion of the project, the Final Oral Presentation is scheduled. Students are required to present the project for approval by their doctoral committee. The Associate Dean for Graduate Education & Research will sign off on the final paper, following completion of the paper during NURS 835 and the student’s passing of the oral presentation. Students who fail the presentation on the first attempt may repeat it once. The student’s final paper will be made publically available through ScholarSphere.

Ph.D. Degree Requirements

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

Students may enter the program directly from a B.S.N. degree in nursing (and may receiveing an M.S. degree en route to the Ph.D. or a concurrent M.S.N. (nurse practitioner option) or following completion of a B.S.N. in nursing and a Master's degree (either in Nursing or non-Nursing). A dual-title Ph.D. degree in Nursing and Bioethics and a dual-title Ph.D. degree in Nursing and Clinical and Translational Sciences are also available, and a graduate minor in Nursing are also available.

Students entering with a M.S.N. degree in Nursing will complete a minimum of 430 credits. The curriculum is composed of 3 components:

1. Nursing Science Core: minimum of 16 credits, consisting of NURS 580 (3), NURS 581 (3), NURS 582 (43), NURS 583 (3), NURS 587 (1), NURS 588 (3), and NURS 590 (23). NURS 596 (3) will also be required of students who are not research assistants on an active faculty research study.
2. Research Methodology and Statistics: minimum of 15 credits approved by the student’s adviser and/or doctoral committee.

3. Courses for Individual Specialty: minimum of 129 credits; minimum of 15 credits for a minor.

In addition to course work, all students are required to complete a series of examinations: the Candidacy Examination, the Comprehensive Examination (written and oral components), the Dissertation Proposal Defense, and Final Oral Examination. Students are required to pass the Final Oral Examination, have the dissertation approved and submitted, and graduate within five years of passing the candidacy examination. Students also are required to fulfill a residency requirement. This entails being registered as a full-time student (9 credits minimum) engaged in academic work over the courses of two semesters within a twelve-month period (summer sessions are not included).

**Candidacy Examination:** All students must satisfactorily complete the candidacy examination, which is designed to confirm the student’s mastery of basic nursing theory and research methods. For students entering the doctoral program with a master’s degree, the candidacy examination must be taken at the end of the first year of full-time study or the equivalent. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

**Comprehensive Examination:** The comprehensive examination is designed to test the student’s mastery of and ability to synthesize and integrate the theoretical basis for nursing science, advanced research methods, and the chosen specialty area. This examination is taken upon completion of all when a candidate has substantially completed all course work. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

**Dissertation and Final Oral Examination (the Dissertation Defense):** Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Each student is required to conduct an original and independent research project which adds to nursing’s body of knowledge, and to communicate the research report in a written dissertation. A written dissertation proposal is required and must be approved at a proposal hearing by a majority vote of the student's dissertation doctoral committee. A majority vote is also required for approval of the completed written dissertation at the Final Oral Examination (the dissertation defense). The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

**Dual-Title Ph.D. in Bioethics Degree Requirements**

Nursing Ph.D. students may pursue additional training in bioethics through the dual-title Ph.D. program in Bioethics. Students must apply and be admitted to the graduate program in Nursing and the Graduate School before they can apply for admission to the dual-title degree program. Admission to the dual-title is determined upon review of all application materials (forwarded from the College of Nursing) by the admissions committee in Bioethics. Students must apply and be admitted to the dual-title degree program in Bioethics prior to taking the candidacy exam.

To qualify for the dual-title degree, students must satisfy the requirements of the Nursing Ph.D. program. In addition, they must satisfy the requirements described below, as established by the Bioethics program committee. Within this framework, final course selection is determined by the student, their Nursing adviser, and their Bioethics program adviser.

The dual-title Ph.D. in Nursing and Bioethics requires a minimum of 12 credits of course work beyond the requirements for the Ph.D. in Nursing (176 credits of the 18 Bioethics credits are part of the current degree requirements in Nursing), as follows:

- 10 credits: 7 required credits (BIOET 501 (3), BIOET 502 (3), and BIOET 590 (1)), plus at least 3 additional BIOET credits at the 500 level. These credits can be applied to the courses for the individual specialty requirement for the Nursing Ph.D.
- 8 additional credits from a list of approved electives at the 400 or 500 level, at least two of these courses of which must be at the 500 level. Many of the available electives that students may wish to take are 3-credit courses, so 9 additional credits may be a more typical number for most students. The list of elective courses will be maintained by the Director of the Bioethics Graduate Program in consultation with the Bioethics Program Committee. The Nursing Science core constitutes 7 of these elective credits.

**Candidacy Examination.** In order to be admitted to Ph.D. candidacy in the dual-title degree program, students must meet the Ph.D. candidacy requirements specified by Nursing; a single candidacy examination will be administered that includes assessment of both Nursing and Bioethics. At least one member of the candidacy committee must have a Graduate faculty appointment in Bioethics. Because students must first be admitted to a graduate major program of study before they
may apply to and be considered for admission into a dual-title graduate degree program, 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.

**Comprehensive Examination:** In addition to the general Graduate Council requirements for doctoral committees, the doctoral committee of a Nursing and Bioethics dual-title Ph.D. student must include at least one member of the Bioethics Graduate Faculty. Graduate faculty members who hold appointments in both programs may serve in a combined role. If the chair of the committee representing Nursing is not also a member of the Graduate Faculty in Bioethics, the member of the committee representing Bioethics must be appointed as co-chair. The faculty member (or members) affiliated with the Bioethics Program will be responsible for administering a portion of the comprehensive exam that will require the student to demonstrate an understanding of various theoretical and methodological approaches to bioethics, and an ability to apply them to issues and problems (including, where appropriate, practical problems) in their nursing.

**Dissertation and Final Oral Examination (the Dissertation Defense):** Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Students enrolled 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 expertise in Nursing and Bioethics. The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

**Dual-Title Ph.D. in Clinical and Translational Sciences**

Nursing Ph.D. students may pursue additional training in CTS through the dual-title Ph.D. program in CTS. Students must apply and be admitted to the graduate program in Nursing and the Graduate School before they can apply for admission to the dual-title degree program. Admission to the dual-title is determined upon review of all application materials (forwarded from the College of Nursing) by the admissions committee in CTS. Students must apply and be admitted to the dual-title degree program in CTS prior to taking the candidacy exam.

To qualify for the dual-title degree, students must satisfy the requirements of the Nursing Ph.D. program. In addition, they must satisfy the requirements described below, as established by the CTS program committee. Within this framework, final course selection is determined by the student, their Nursing adviser, and their CTS program adviser.

The CTS dual-title requires 26 credits: 18 credits from a list of approved electives in each of the following areas (at least half of which must be at the 500 or 800 level): Statistics (3 cr.), Epidemiology (3 cr.), Bioinformatics (3 cr.), Experimental Design and Interpretation (3 cr.), The Regulatory Environment (3 cr.), and Scientific Communication (3 cr.); 2 credits of CTS 590; and 6 credits of CTS 595 or BMS 571. Of the 18 elective credits required, 12 credits can be double-counted from the required courses for the Ph.D. in Nursing: STAT 500/PHS 520 meets the 3-credit requirement for Statistics, and an additional 9 credits of Individual Specialization Coursework required for Nursing can be selected from the list of CTS approved electives to meet the 3-credit requirements in Epidemiology, Bioinformatics, and The Regulatory Environment. Therefore, dual-title Ph.D. students in Nursing and CTS may require a minimum of 14 credits of additional course work, consisting of approved electives in Experimental Design and Interpretation (3 cr.) and Scientific Communication (3 cr.), 2 credits of CTS 590; and 6 credits of CTS 595 or BMS 571.

**Candidacy Examination:** In order to be admitted to Ph.D. candidacy in the dual-title degree program, students must meet the Ph.D. candidacy requirements specified by Nursing; a single candidacy examination will be administered that includes assessment of both Nursing and CTS. At least one member of the candidacy committee must have a graduate faculty appointment in CTS. Because students must first be admitted to a graduate major program of study before they may apply to and be considered for admission into a dual-title graduate degree program, 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.

**Comprehensive Examination:** In addition to the general Graduate Council requirements for doctoral committees, the doctoral committee of a Nursing and CTS dual-title Ph.D. student must include at least one member of the CTS Graduate Faculty. Graduate faculty members who hold appointments in both programs may serve in a combined role. If the chair of the committee representing Nursing is not also a member of the Graduate Faculty in CTS, the member of the committee representing CTS must be appointed as co-chair. The faculty member (or members) affiliated with the CTS Program will be responsible for administering a portion of the comprehensive exam that will require the student to demonstrate an understanding of various theoretical and methodological approaches to CTS, and an ability to apply them to issues and problems (including, where appropriate, practical problems) in their nursing.

**Dissertation and Final Oral Examination (the Dissertation Defense):** Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Students enrolled 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 dissertation research and expertise in Nursing and CTS. 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 graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

In addition to the STUDENT AID section of the Graduate Bulletin, the following awards typically have been available to graduate students in this program:

U.S. PUBLIC HEALTH SERVICE TRAINEESHIPS IN NURSING
Open to selected registered nurse, full-time students in nursing; stipend may be available plus tuition. Apply to Associate Dean for Graduate Education & Research, College of Nursing.

**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 but 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.

**NURSING (NURS) course list**
Nursing (NURS)

Program Home Page

JANICE PENROD, Interim Dean, College of Nursing
JUDITH E. HUPCEY, Associate Dean for Graduate Education and Research
201 Nursing Sciences Building
814-863-0245

Degrees Conferred:

Ph.D., D.N.P., M.S., M.S.N.
Dual-Title Ph.D. in Nursing and Bioethics (BIOET)
Dual-Title Ph.D. in Nursing and Clinical and Translational Sciences

The Graduate Faculty

The Programs

The graduate programs emphasize productive scholarship and research in the development of nursing knowledge and the translation of knowledge into practice. Advanced study is in human health and development throughout the life span, and in nursing's role in providing health services to individuals, families, and communities.

The Ph.D. program, the dual-title Ph.D. program in nursing and bioethics, and the dual-title Ph.D. program in nursing and clinical and translational sciences prepare nurse scientists to provide leadership in nursing education, practice and research. Individualized curricula prepare nursing graduates to assume positions as faculty, researchers and leaders in educational, community, governmental, or institutional settings.

The D.N.P. degree program prepares nurse administrators and advanced practice nurses to assume leadership roles in practice settings in the community, governmental agencies, or healthcare institutions.

The M.S. degree program with a major in nursing prepares nurse scientists and clinical scholars who plan to complete a Ph.D. in nursing or dual-title Ph.D. in nursing and bioethics or a dual-title Ph.D. in nursing and clinical and translational sciences.

The M.S.N. degree in Nursing consists of a base program and five options. The options include: Family Nurse Practitioner, Adult Gerontology Primary Care Nurse Practitioner, Adult Gerontology Acute Care Nurse Practitioner, Nurse Administrator, and Nurse Educator.

The M.S., M.S.N., and D.N.P. degree programs in Nursing are accredited by the Commission on Collegiate Nursing Education.

The Nurse Practitioner options are designed to help prepare the professional nurse to function in an expanded nursing role providing direct care to specific groups of clients in a variety of health care settings. Since that practice is inherently interdisciplinary in nature, advanced knowledge and research from nursing is combined with knowledge from science, medicine, and related disciplines. The Nurse Practitioner may also function in supervisory, consultative, education, and research roles.

The Nurse Administrator option enables the student to acquire advanced knowledge of organizational leadership, health policy, and evidence-based health care delivery. The program is designed to prepare students for leadership and administrative roles in a variety of health care settings.

The Nurse Educator option enables the student to acquire advanced knowledge of evidence-based teaching and learning principles, curriculum development, and evaluative techniques. The program is designed to prepare students for educator roles in a variety of academic and health care settings.
Admission Requirements for M.S., M.S.N., D.N.P., and Ph.D. Programs

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

1. For admission to the Nursing program, an applicant must hold either (1) a bachelor's degree in Nursing from a U.S. regionally accredited institution or (2) a postsecondary degree in Nursing that is equivalent to a U.S. baccalaureate degree earned from an officially recognized degree-granting international institution. Students entering the doctoral program via the traditional post-master's route must have earned a master's degree with a major in nursing from a program accredited by a national accrediting agency for nursing. Well-qualified Ph.D. applicants with a baccalaureate degree in nursing and master’s degree in a related discipline (e.g., public health) will be evaluated individually to assess the need for prerequisite master’s-level course work in nursing for doctoral program admission.

2. Applicants must submit official transcripts from all post-secondary institutions attended. For M.S.N. applicants, a cumulative grade-point average of 3.3 (on a 4.0 scale) for the baccalaureate degree is expected with a B or better in all science and nursing courses. For M.S. applicants, a cumulative grade-point average of 3.5 (on a 4.0 scale) for the baccalaureate degree is expected with a B or better in all science and nursing courses. College chemistry and statistics are also required (chemistry is not required for the nurse administrator option). B.S.N. to D.N.P. applicants are expected to have a cumulative undergraduate grade-point average of 3.5 (on a 4.0 scale). For master's to Ph.D. or D.N.P. applicants, a cumulative grade-point average 3.5 (on a 4.0 scale) for master's and subsequent course work is expected.

3. Two letters of reference are required for the M.S.N. degree program and three letters of reference are required for the M.S., D.N.P., and Ph.D. degree programs. The letters should be solicited from professional colleagues and faculty who can attest to the applicant's ability.

4. All applicants must submit a statement of purpose. In addition, M.S., D.N.P., and Ph.D. degree applicants must also submit a published or unpublished scientific paper, thesis, or other scholarly writing sample and a complete curriculum vitae.

5. GRE scores are required for admission to the M.S. and Ph.D. programs. GRE scores are not required for the M.S.N. or D.N.P. applicants, but if the scores are submitted to Penn State they will be reviewed as part of the application.

6. 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 Nursing program must have a minimum TOEFL score of 580 on the paper-based test, or a total score of 80 with a 25 on the speaking section for the Internet-based test (iBT). The minimum composite score for the IELTS for applicants to the Nursing program is 7.

7. Applicants to the M.S.N. options and D.N.P. degree offered online via the World Campus must hold a current license to practice professional nursing in at least one U.S. state or in a foreign country. All other applicants to the M.S. and M.S.N. degree programs must hold a current Pennsylvania license to practice professional nursing. Applicants to the Ph.D. degree program must be licensed to practice professional nursing in at least one state or in a foreign country.

8. Applicants to the Adult Gerontology Acute Care Nurse Practitioner Option are required to have two years of acute care hospital experience.

9. Applicants to the M.S.N. degree program are encouraged to discuss program options with the faculty; however, an interview is not required. Doctoral (B.S.N. - Ph.D., B.S.N. - D.N.P., D.N.P., and Ph.D.) applicants will be contacted by the College of Nursing to schedule a required interview (either in person or via internet-based video conferencing).

M.S. and M.S.N. Degree Requirements

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

Candidates in the Master of Science (M.S.) degree program in nursing (B.S.N.- Ph.D.) are required to complete a minimum of 30 credits, with at least 18 credits in the 500 and 600 series combined, to be awarded an M.S. degree. A minimum of 12 credits in course work (400, 500, and 600 series), as contrasted with research, must be completed in the major program. There are 9 credits required in M.S. core coursework, including NURS 510 Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits); NURS 808: Population Health Perspectives (3 credits); and NURS 836: Healthcare Informatics (3 credits). In addition, 9-12 credits are required in research and statistics courses approved in advance by the student’s adviser. Additional courses that will count as electives towards this degree can be chosen from a list of approved elective courses maintained by the graduate program office.
If the M.S. student chooses to complete a thesis, at least 6 credits in thesis research (600 or 610) must be taken in conjunction with 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 a thesis defense. If the student chooses the non-thesis track, the students must submit a satisfactory scholarly paper while enrolled in NURS 596 (3 credits). If no thesis is required, at least 18 credits of course work must be in 500-level courses.

The Master of Science in Nursing (M.S.N.) requires a minimum of 30 credits, with at least 6 credits at the 500 level, including 12 credits of M.S.N. Program Core courses, 15 credits of electives, and at least 3 credits in a capstone course. The M.S.N. Program Core Courses are: NURS 501: Issues in Nursing and Health Care (3 credits), NURS 510 Theoretical and Scientific Foundations of Advanced Nursing Practice (3 credits), NURS 512: Nursing Research (3 credits), and NURS 513 Evidence-Based Practice in Professional Nursing (3 credits). Additional courses that will count as electives towards this degree can be chosen from a list of approved elective courses maintained by the graduate program office. Students in the M.S.N. degree program are required to complete a capstone project, which demonstrates the application of theory and research to a clinical problem based on review of the literature and research utilization for that problem. For M.S.N. students who do not choose to complete an option, the capstone project is completed while enrolled in NURS 596 (3 credits).

The five advanced role options offered in the M.S.N. degree program include nurse educator, nurse administrator, family nurse practitioner, adult gerontology primary care nurse practitioner, and adult gerontology acute care nurse practitioner. Students in these options complete the 12 credits of M.S.N. Program Courses as described above. The option-specific course requirements described below replace the requirement for 15 credits of electives.

Students must earn a minimum of 45 credits for the M.S.N. with the Family Nurse Practitioner option. The option-specific course requirements total 27 credits, including: NURS 802 (3), NURS 802A (1), NURS 803 (3), NURS 804 (3), NURS 870 (3), NURS 871 (3), NURS 872 (3), NURS 873 (4); NURS 875 (2), and NURS 876 (2). The capstone course for students completing this option is NURS 874 (6).

Students must earn a minimum of 41 credits for the M.S.N. with the Adult Gerontology Primary Care Nurse Practitioner option. The option-specific course requirements total 23 credits, including: NURS 802 (3), NURS 803 (3), NURS 804 (3), NURS 870 (3), NURS 871 (3), NURS 872A (4), and NURS 873A (4). The capstone course for students completing this option is NURS 874A (6).

Students must earn a minimum of 43 credits for the M.S.N. with the Adult Gerontology Acute Care Nurse Practitioner option. The option-specific course requirements total 25 credits, including: NURS 802 (3), NURS 803 (3), NURS 804 (3), NURS 860 (3), NURS 861 (3), NURS 862 (4), NURS 863 (4), NURS 865 (1), and NURS 866 (1). The capstone course for students completing this option is NURS 864 (6).

Students must earn a minimum of 37 credits for the M.S.N. with the Nurse Administrator option. The option-specific course requirements total 12 credits, including: NURS 836 (3), NURS 845 (3), NURS 846 (3), and NURS 847 (3). The capstone course for students completing this option is NURS 848 (4). Students in this option are required to take 9 additional elective credits chosen from a list of approved elective courses maintained by the graduate program office.

Students must earn a minimum of 37 credits for the M.S.N. with the Nurse Educator option. The option-specific course requirements total 18 credits, including: NURS 802B (3), NURS 803 (3), NURS 804 (3), NURS 840 (3), NURS 841 (3), and NURS 842 (3). The capstone course for students completing this option is NURS 843 (4). Students in this option are required to take 3 additional elective credits chosen from a list of approved elective courses maintained by the graduate program office.

D.N.P. Degree Requirements

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

Students may enter the program directly with a B.S.N. degree or following completion of a Master’s degree in nursing.

For the B.S.N. to the D.N.P., a core of master’s courses is required. A minimum of 61 credits, 1000 hours of practicum time, and a DNP project is required. The 61 credits include:

- 9 credits of M.SN. Program Courses: NURS 501(3), NURS 510(3), and NURS 512(3).
- 13 credits of Nurse Administrator Option Courses: NURS 845(3), NURS 846(3), NURS 847(3), and NURS 848A(4).
• 12 credits of D.N.P. Core Courses: NURS 830(3), NURS 831(3), NURS 832(3), and NURS 833(3).
• 8 credits of Other Required Courses: NURS 590(1), NURS 587(1), NURS 808(3), and NURS 836(3).
• 5 credits of Advanced Practice Clinical (needed to meet the 1000 hour practicum requirement): NURS 834(5).
• 6 credits of DNP Project: NURS 835(6).
• 8 credits of electives chosen from a list of approved elective courses maintained by the graduate program office.

The Master of Science in Nursing (M.S.N.) to D.N.P. program requires a minimum of 30 post-master's degree credits completed at Penn State. The curriculum is individualized based on previous course work and number of practicum hours completed during the master's program. A maximum of 550 practicum hours from the previous master’s program will be accepted to fulfill to 1000 hours of required practicum hours. The curriculum is composed of 5 components, for a minimum of 38 credits:

• 12 credits of D.N.P. Core Courses: NURS 830 (3), NURS 831 (3), NURS 832 (3), and NURS 833 (3).
• 14 credits of Other Required Courses: NURS 510 (3), NURS 590 (1), NURS 587 (1), NURS 808 (3), NURS 836 (3), and NURS 845 (3).
• 6 credits of DNP Project: NURS 835 (6).
• 6 credits of electives chosen from a list of approved elective courses maintained by the graduate program office.

In addition to the minimum 38 credits, up to 8 credits of NURS 834 may be required for M.S.N. to D.N.P. students, depending on the number of practicum hours completed in the student’s M.S.N. program.

For both entry options, students are required to participate in 3 intensives offered at the University Park or Hershey Medical Center campus. For full-time students, the first intensive is August of semester I for M.S.N. to D.N.P. and Semester III for B.S.N. to D.N.P. students. Intensive 2 is the beginning of the subsequent semester, Intensive 3 is at the end of semester II for M.S.N. to D.N.P. and semester IV for B.S.N. to D.N.P. students.

In addition to course work, all students are required to complete a series of three benchmarks, Candidacy Examination, Comprehensive Examination, and a Final Oral Presentation.

D.N.P. Doctoral Committee Composition: The doctoral committee will consist of the student’s academic adviser, the DNP project course (NURS 835) instructor, and a third member of the graduate faculty, all from the graduate program in Nursing. The academic adviser will be the chair of the committee.

Candidacy Examination: All students must satisfactorily complete the candidacy examination, which is designed to evaluate the student’s past performance and potential for successfully completing the program. Candidacy typically occurs prior to the 2nd intensive, which follows completion of one semester of full-time study for the M.S.N. to D.N.P. student and after three semesters of full-time study for the B.S.N. to D.N.P. student. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

Comprehensive Examination: The comprehensive examination marks the student’s progression into their D.N.P. project. This occurs during the 3rd intensive, when students present their D.N.P. project proposal. The comprehensive examination needs to be successfully completed prior to the submission of the proposal for human subjects’ review or carrying out the project (if it does not require a review). Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

Final Oral Presentation: Upon completion of the project, the Final Oral Presentation is scheduled. Students are required to present the project for approval by their doctoral committee. The Associate Dean for Graduate Education & Research will sign off on the final paper, following completion of the paper during NURS 835 and the student’s passing of the oral presentation. Students who fail the presentation on the first attempt may repeat it once. The student’s final paper will be made publically available through ScholarSphere.

Ph.D. Degree Requirements

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

Students may enter the program directly with a B.S.N. degree (and may receive an M.S. degree en route to the Ph.D. or a concurrent M.S.N. (nurse practitioner option) or following completion of a B.S.N. and a Master's degree (either in Nursing or
A dual-title Ph.D. degree in Nursing and Bioethics and a dual-title Ph.D. degree in Nursing and Clinical and Translational Sciences are also available.

Students entering with an M.S.N. will complete a minimum of 43 credits. The curriculum is composed of 3 components:

4. Nursing Science Core: minimum of 16 credits, consisting of NURS 580 (3), NURS 582 (4), NURS 583 (3), NURS 587 (1), NURS 588 (3), and NURS 590 (2). NURS 596 (3) will also be required of students who are not research assistants on an active faculty research study.
5. Research Methodology and Statistics: minimum of 15 credits approved by the student’s adviser and/or doctoral committee.
6. Courses for Individual Specialty: minimum of 12 credits; minimum of 15 credits for a minor.

In addition to course work, all students are required to complete a series of examinations: the Candidacy Examination, the Comprehensive Examination (written and oral components), the Dissertation Proposal Defense, and Final Oral Examination. Students are required to pass the Final Oral Examination, have the dissertation approved and submitted, and graduate within five years of passing the candidacy examination.

**Candidacy Examination:** All students must satisfactorily complete the candidacy examination, which is designed to confirm the student's mastery of basic nursing theory and research methods. For students entering the doctoral program with a master's degree, the candidacy examination must be taken at the end of the first year of full-time study or the equivalent. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

**Comprehensive Examination:** The comprehensive examination is designed to test the student’s mastery of and ability to synthesize and integrate the theoretical basis for nursing science, advanced research methods, and the chosen specialty area. This examination is taken when a candidate has substantially completed all course work. Students who fail the examination on the first attempt may repeat it once. Students who fail the examination the second time are terminated from the program.

**Dissertation and Final Oral Examination (the Dissertation Defense):** Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Each student is required to conduct an original and independent research project which adds to nursing's body of knowledge, and to communicate the research report in a written dissertation. A written dissertation proposal is required and must be approved at a proposal hearing by a majority vote of the student's doctoral committee. A majority vote is also required for approval of the completed written dissertation at the Final Oral Examination (the dissertation defense). The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

**Dual-Title Ph.D. in Bioethics**

Nursing Ph.D. students may pursue additional training in bioethics through the dual-title Ph.D. program in Bioethics. Students must apply and be admitted to the graduate program in Nursing and the Graduate School before they can apply for admission to the dual-title degree program. Admission to the dual-title is determined upon review of all application materials (forwarded from the College of Nursing) by the admissions committee in Bioethics. Students must apply and be admitted to the dual-title degree program in Bioethics prior to taking the candidacy exam.

To qualify for the dual-title degree, students must satisfy the requirements of the Nursing Ph.D. program. In addition, they must satisfy the requirements described below, as established by the Bioethics program committee. Within this framework, final course selection is determined by the student, their Nursing adviser, and their Bioethics program adviser.

The dual-title Ph.D. in Nursing and Bioethics requires a minimum of 1 credit of course work beyond the requirements for the Ph.D. in Nursing (17 credits of the 18 Bioethics credits are part of the current degree requirements in Nursing), as follows:

- 10 credits: 7 required credits (BIOET 501 (3), BIOET 502 (3), and BIOET 590 (1)), plus at least 3 additional BIOET credits at the 500 level. These credits can be applied to the Courses for Individual Specialty requirement for the Nursing Ph.D.
- 8 additional credits from a list of approved electives at the 400 or 500 level; at least two of these courses must be at the 500 level. Many of the available electives that students may wish to take are 3-credit courses, so 9 additional credits may be a more typical number for most students. The list of elective courses will be maintained by the Director of the Bioethics Graduate Program in consultation with the Bioethics Program Committee. The Nursing Science core constitutes 7 of these elective credits.
Candidacy Examination: In order to be admitted to Ph.D. candidacy in the dual-title degree program, students must meet the Ph.D. candidacy requirements specified by Nursing; a single candidacy examination will be administered that includes assessment of both Nursing and Bioethics. At least one member of the candidacy committee must have a Graduate Faculty appointment in Bioethics. Because students must first be admitted to a graduate major program of study before they may apply to and be considered for admission into a dual-title graduate degree program, 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.

Comprehensive Examination: In addition to the general Graduate Council requirements for doctoral committees, the doctoral committee of a Nursing and Bioethics dual-title Ph.D. student must include at least one member of the Bioethics Graduate Faculty. Graduate faculty members who hold appointments in both programs may serve in a combined role. If the chair of the committee representing Nursing is not also a member of the Graduate Faculty in Bioethics, the member of the committee representing Bioethics must be appointed as co-chair. The faculty member (or members) affiliated with the Bioethics Program will be responsible for administering a portion of the comprehensive exam that will require the student to demonstrate an understanding of various theoretical and methodological approaches to bioethics, and an ability to apply them to issues and problems (including, where appropriate, practical problems) in their nursing.

Dissertation and Final Oral Examination (the Dissertation Defense): Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Students enrolled 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 expertise in Nursing and Bioethics. The dissertation must be accepted by the doctoral committee, the head of the graduate program, and the Graduate School.

Dual-Title Ph.D. in Clinical and Translational Sciences

Nursing Ph.D. students may pursue additional training in CTS through the dual-title Ph.D. program in CTS. Students must apply and be admitted to the graduate program in Nursing and the Graduate School before they can apply for admission to the dual-title degree program. Admission to the dual-title is determined upon review of all application materials (forwarded from the College of Nursing) by the admissions committee in CTS. Students must apply and be admitted to the dual-title degree program in CTS prior to taking the candidacy exam.

To qualify for the dual-title degree, students must satisfy the requirements of the Nursing Ph.D. program. In addition, they must satisfy the requirements described below, as established by the CTS program committee. Within this framework, final course selection is determined by the student, their Nursing adviser, and their CTS program adviser.

The CTS dual-title requires 26 credits: 18 credits from a list of approved electives in each of the following areas (at least half of which must be at the 500 or 800 level): Statistics (3 cr.), Epidemiology (3 cr.), Bioinformatics (3 cr.), Experimental Design and Interpretation (3 cr.), The Regulatory Environment (3 cr.), and Scientific Communication (3 cr.); 2 credits of CTS 590; and 6 credits of CTS 595 or BMS 571. Of the 18 elective credits required, 12 credits can be double-counted from the required courses for the Ph.D. in Nursing: STAT 500/PHS 520 meets the 3-credit requirement for Statistics, and an additional 9 credits of Individual Specialization Coursework required for Nursing can be selected from the list of CTS approved electives to meet the 3-credit requirements in Epidemiology, Bioinformatics, and The Regulatory Environment. Therefore, dual-title Ph.D. students in Nursing and CTS may require a minimum of 14 credits of additional course work, consisting of approved electives in Experimental Design and Interpretation (3 cr.) and Scientific Communication (3 cr.), 2 credits of CTS 590; and 6 credits of CTS 595 or BMS 571.

Candidacy Examination: In order to be admitted to Ph.D. candidacy in the dual-title degree program, students must meet the Ph.D. candidacy requirements specified by Nursing; a single candidacy examination will be administered that includes assessment of both Nursing and CTS. At least one member of the candidacy committee must have a graduate faculty appointment in CTS. Because students must first be admitted to a graduate major program of study before they may apply to and be considered for admission into a dual-title graduate degree program, 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.

Comprehensive Examination: In addition to the general Graduate Council requirements for doctoral committees, the doctoral committee of a Nursing and CTS dual-title Ph.D. student must include at least one member of the CTS Graduate Faculty. Graduate faculty members who hold appointments in both programs may serve in a combined role. If the chair of the committee representing Nursing is not also a member of the Graduate Faculty in CTS, the member of the committee representing Nursing must be appointed as co-chair. The faculty member (or members) affiliated with the CTS Program will be responsible for administering a portion of the comprehensive exam that will require the student to demonstrate an understanding of various theoretical and methodological approaches to CTS, and an ability to apply them to issues and problems (including, where appropriate, practical problems) in their nursing.
Dissertation and Final Oral Examination (the Dissertation Defense): Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. Students enrolled 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 dissertation research and expertise in Nursing and CTS. 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 graduate assistantships must adhere to the course load limits set forth in the Graduate Bulletin.

In addition to the STUDENT AID section of the Graduate Bulletin, the following awards typically have been available to graduate students in this program:

U.S. PUBLIC HEALTH SERVICE TRAINEESHIPS IN NURSING
Open to selected registered nurse, full-time students in nursing; stipend may be available plus tuition. Apply to Associate Dean for Graduate Education & Research, College of Nursing.

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 but 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.
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: Education
Department or Instructional Area: Learning and Performance Systems

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: M.P.S. in Corporate Training
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

Roy Clariano [Signature] Date: 9/5/17
Printed name

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

Gwendolyn Lloyd [Signature] Date: 7/26/17
Printed name

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

David H. Monk [Signature] Date: 9/15/17
Printed name
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

<table>
<thead>
<tr>
<th>On Behalf of C. Andrew Cole</th>
<th>Signature</th>
<th>Date: 11/1/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td></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>Signature</th>
<th>Date: 11/1/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td></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>Signature</th>
<th>Date: 11/1/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed name</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TO: Graduate Council Curricular Review Committee

FROM: Roy Clariana, Department Head

RE: Dropping MPS in Corporate Training

DATE: August 29, 2017

The online MPS in the Corporate Training program is slated for closure because the Penn State World Campus' recent market analysis has determined that the potential market is not sufficient to sustain the development, marketing, implementation, and delivery costs of this degree.

Our Penn State Harrisburg partners are briefed and agree on this program drop. Also, the Registrar has had the Corporate Training MPS program on an Enrollment Hold, and so there are no current students or applicants to this degree.

If you have any other questions, please do not hesitate to contact me.

attachment
Hi Carol, be sure to keep the message below to attach to the drop form

From: CATHARINE ANN SURRA [mailto:cas87@psu.edu]
Sent: Friday, June 30, 2017 1:52 PM
To: Roy Clariana <rbc4@psu.edu>
Cc: Jo Tyler <jat235@psu.edu>; Raffy Luquis <orl100@psu.edu>; Doris Lee <ydl1@psu.edu>; Omid Ansary <axa8@psu.edu>; JANICE LYNN ARANA <jza3@psu.edu>; Carol Fantaskey <caf17@psu.edu>; Holly Angellique <hxai11@psu.edu>
Subject: Re: drop Corp Train MPS from the Grad School bulletin

We agree with the request to remove the Corporate Training MPS from the Graduate School Bulletin.

Catherine A. Surra, Ph. D.
Director, School of Behavioral Sciences and Education
Professor, Human Development and Family Studies, and Emeritus Professor,
University of Texas at Austin
Penn State Harrisburg
W-319 Olmsted Bldg
777 W Harrisburg Pike
Middletown, PA 17057-4898
717.948.6205

From: "Roy Clariana" <rbc4@psu.edu>
To: "Cathy Surra" <cas87@psu.edu>
Cc: "Jo Tyler" <jat235@psu.edu>, "Raffy Luquis" <orl100@psu.edu>, "Doris Lee" <ydl1@psu.edu>, "Omid Ansary" <axa8@psu.edu>, "JANICE LYNN ARANA" <jza3@psu.edu>, "Carol Fantaskey" <caf17@psu.edu>
Sent: Friday, June 30, 2017 11:59:10 AM
Subject: drop Corp Train MPS from the Grad School bulletin

Hi Colleagues,

I plan to start the paperwork to drop the Corp Training MPS from the grad school bulletin. I need a faculty member from HBG campus who can email me a one line email that you agree with this decision, so that I can attach the email to the drop request.

Who would that person be?

Thanks...Roy
The six core Penn State Values form the fundamental principles underlying our institutional mission of teaching, research and service. These values are: *Integrity, Respect, Responsibility, Discovery, Excellence* and *Community*. All of our students, faculty and staff are expected to embody these values throughout their time at Penn State. The Graduate Council believes that these core values are central components of effective advising and mentoring of graduate students across the University and that they contribute to ensuring that the climate within all of our graduate programs is one of inclusion and respect. Successful and productive advising relationships with students require that both students and faculty promote and demonstrate the highest ethical and professional standards, while maintaining open communication and a shared sense of community and accountability.

The following guidelines for advising graduate students are representative of best practices for creating and sustaining these important developmental relationships between faculty and students within our graduate programs. The Graduate Council strongly recommends that every graduate degree program disseminates these guidelines, or develops similar guidelines to disseminate, to all graduate students and faculty members at the start of each academic year to outline their expectations for all student-faculty interactions, which include but are not limited to, advising, mentoring, teaching, research and training.

In each of the following areas, *faculty members* are expected to act in accordance with the guidelines below:

**Climate:**
1. Serve as a role model by demonstrating ethical, professional, and courteous behavior toward all students, staff, and faculty.
2. Be supportive, equitable, accessible, and respectful.
3. Promote an environment that is intellectually stimulating, collaborative, respectful, and collegial.
4. Recognize and respect the diversity within our student population consistent with Penn State’s overall commitment to diversity and inclusion ([http://equity.psu.edu/diversity-statement](http://equity.psu.edu/diversity-statement)).
5. Be sensitive to the power imbalance in the faculty-student relationship.
6. Be mindful of students’ need to manage competing demands while maintaining timely progress towards their degree.
7. Be available to meet with students to discuss topics such as climate, collegial relations, etc. should the need arise.
8. Refer students to appropriate University resources to provide support as early as possible (e.g. financial, physical/emotional health, career development).

**Academic:**
1. Promote excellence in all areas of students’ academic pursuits.
2. Advise students on the selection of appropriate course work, thesis/dissertation committee and topic, or capstone project and assist them with completing other benchmarks.
3. Set clear expectations and goals for students regarding their academic performance and progress toward degree completion.
4. Discuss policies and expectations for assistantship hours, responsibilities, and absences related to University closure, holidays, illness, etc.
5. Develop an appropriate schedule to meet with students to provide feedback on scholarly activities and progress.
6. Provide students with oversight as appropriate to the discipline in all relevant aspects of research, training and scholarship.
7. Guide and recommend training, study, and other resources to develop or enhance students’ skills and competencies.
8. Devise effective ways of providing students with guidance and supervision during a prolonged absence should the need arise.
9. Provide and discuss clear criteria for authorship and acknowledgement of contributions at the beginning of all collaborative projects.

**Career Development:**
1. Encourage participation in professional meetings, associations, collaborations, and opportunities beyond the University. Assist students with identifying resources to fund such activities.
2. Provide career advice, offer help with interview and application preparation, and write letters of recommendation in a timely manner.
3. Ensure that students receive assistance with developing the skills needed for a successful career in their field/discipline, including oral and written communication and grant preparation as appropriate.
4. Recognize that students will pursue a variety of careers, including those outside of academia and/or their discipline, and assist them in achieving their chosen career goals.
5. Schedule meetings to discuss topics such as professional development, career objectives and opportunities, etc.
6. Align assigned responsibilities and activities with students’ academic/professional career development as appropriate.

In each of the following areas, **graduate students** are expected to act in accordance with the guidelines below:

**Climate:**
1. Demonstrate ethical, professional, and courteous behavior toward students, staff, and faculty.
2. Be proactive about communicating needs, concerns, etc. with faculty and staff, understanding that communication is a two-way endeavor.
3. Be mindful, in interactions with faculty and staff, of competing constraints on their time.
4. Inform relevant faculty of potential and/or existing conflicts, and work toward their resolution. In the event that a solution cannot be reached, students should seek assistance from graduate program chairs, department heads, college administrators of graduate education, program or college ombudsperson (if applicable) or the Graduate School.
5. Be knowledgeable about University and community resources available to graduate students.

**Academic:**
1. Recognize that while faculty and staff are there to assist and guide students, the student bears the primary responsibility for the successful completion of their degree.
2. Discuss expectations and goals regarding academic performance and progress toward degree completion with advisers, committees and other relevant faculty members.
3. Maintain the highest ethical standards and academic integrity in all aspects of scholarship, teaching, research and other responsibilities.
4. Be familiar with program and Graduate School policies (gradschool.psu.edu/policies) governing graduate education and adhere to all program and Graduate School policies and deadlines.
5. Discuss policies and expectations for assistantship hours, responsibilities, and absences related to University closure, holidays, illness, etc. with the relevant faculty advisers.
6. Be proactive about improving research and scholarship skills (e.g. writing, presenting, teaching, etc.).

**Career Development:**
1. Take an active role in identifying and pursuing professional development opportunities.
2. Communicate with faculty members regarding career goals.
3. Seek mentoring and support/resources beyond faculty adviser (e.g. other faculty members, peers, and organizations).
In each of the following areas, academic departments and programs are expected to act in accordance with the guidelines below:

**Climate:**
1. Maintain an open, inclusive, and respectful environment that is free from harassment and discrimination, in accordance with University policies and initiatives.
2. Refer students to appropriate University resources to address potential issues as early as possible (e.g. financial, physical/emotional health, career development).
3. Provide students with contacts and resources for potential conflict resolution (e.g. graduate program chairs, department heads, college administrators of graduate education, program or college ombudsperson (if applicable), the Graduate School, Office of Sexual Misconduct, Prevention and Response, Affirmative Action Office, Office of Ethics and Compliance, etc.).

**Academic:**
1. Provide students with up-to-date information that includes policies, practices, degree requirements, and resources.
2. Assist students with selection of their adviser as needed.
3. Provide pedagogical training and regular assessment of their teaching and other assistantship activities.
4. Monitor and document graduate student progress toward their degrees and professional development, including committee meetings, exam completions and other benchmarks appropriate to their discipline.
5. Provide and monitor training in academic integrity and the ethical conduct of research.
6. Provide appropriate infrastructure to allow students to complete their education and research/scholarship in a timely and productive manner.
7. Establish, communicate and adhere to policies for absences, emergencies and unplanned situations that may disrupt the work of students and/or faculty.
8. Ensure that University policies related to graduate assistantships (e.g. assistantship hours, responsibilities, and absences related to University closure, holidays, illness, etc.) are followed.
9. Incorporate these guidelines and recommendations in readily accessible departmental policies or handbooks and actively promote their observance.

**Career Development:**
1. Encourage participation in professional meetings, associations, collaborations, and opportunities beyond the University. Assist students with identifying resources to fund such activities.
2. Ensure that students receive assistance with developing the skills needed for a successful career in their field/discipline, including oral and written communication and grant preparation as appropriate.
3. Recognize that students will pursue a variety of careers, including those outside of academia and/or their discipline, and assist them in achieving their chosen career goals (e.g. provide and/or refer students to appropriate professional development activities/resources).

In each of the following areas, the Graduate School is expected to act in accordance with the guidelines below:

**Climate:**
1. Maintain an open, inclusive, and respectful environment that is free from harassment and discrimination, in accordance with University policies and initiatives.
2. Collaborate with academic programs, University offices/committees, and student organizations to address issues and concerns related to the well-being of graduate students.
3. Refer students to appropriate University resources to address potential issues as early as possible (e.g. financial, physical/emotional health, career development).
4. Provide students with contacts and resources for potential conflict resolution (e.g. graduate program chairs, department heads, college administrators of graduate education, program or college
Academic:
1. Provide students, faculty and staff with up-to-date information regarding graduate education that includes policies, practices, degree requirements, and resources.
2. Monitor and document graduate student progress towards their degrees and professional development, including exam completions and other formal benchmarks.
3. Provide resources to support the development or enhancement of students’ skills and competencies.

Career Development:
1. Provide and/or refer students to a broad range of professional development activities/resources to prepare them for careers upon degree completion.
2. Connect students with the Graduate School alumni network to facilitate the establishment of mentoring relationships and career development opportunities.

Proposed by Graduate Council Committee on Graduate Student and Faculty Issues September 13, 2017