2014-2015 Graduate Council
Meeting Agenda: December 10, 2014 | 3:30 p.m.–5:00 p.m. | 102 Kern Graduate Building
Coffee available: 3:10 p.m.

1. Minutes of the November 12, 2014, Meeting

2. Communications to Graduate Council

3. Announcements/Remarks by the Chair - Regina Vasilatos-Younken, Interim Dean of the Graduate School, Chair of Graduate Council

4. Reports of Standing Committees of Graduate Council
   a) Committee on Committees and Procedures – David Spencer, Chair
   b) Committee on Programs and Courses – Joan Redwing, Chair
      Informational item (Appendix A):
      1) Graduate Council Curriculum Report, 12/3/2014
   c) Committee on Academic Standards – James Kasting, Chair
   d) Committee on Fellowships and Awards – Krista Wilkinson, Chair
   e) Committee on Graduate Research – David Spencer, Chair
   f) Committee on Graduate Student and Faculty Issues – Roger Finke, Chair

5. Reports of Special Committees
   a) Graduate School’s Graduate Exhibition Committee – Richard St. Clair, Chair

6. Special Reports
   a) Graduate and Professional Student Association

7. Unfinished Business

8. New Business

9. Comments and Recommendations for the Good of the Graduate Community
2014–2015 Graduate Council  
Minutes of the Meeting: November 12, 2014

Graduate Council met on Wednesday, November 12, 2014, at 3:30 p.m. in 102 Kern Graduate Building. Dr. Regina Vasilatos-Younken, Interim Dean of the Graduate School, chaired the meeting. The minutes of the meeting of October 15, 2014, were approved.

Communications to Graduate Council
None.

Announcements/Remarks by the Chair
Dr. Vasilatos-Younken reminded Council members that she will provide regular progress updates regarding Project LionPATH (the new student information system being implemented to replace ISIS), and call on Lori Anne Stania, Director of Graduate Student Services who is a member of the LionPATH Steering Committee representing the Graduate School, and Dr. David Spencer, Graduate Council representative from the College of Engineering and a member of the LionPATH Faculty Advisory Committee representing graduate faculty advisers, to share any updates they each may have, as appropriate. There were no updates to share today.

Reports of Standing Committees of Graduate Council

Committee on Committees and Procedures
Dr. Vasilatos-Younken recognized Dr. David Spencer, Chair, Committee on Committees and Procedures.

Dr. Spencer indicated that the Committee had nothing to report.

Committee on Programs and Courses
Dr. Vasilatos-Younken recognized Dr. Joan Redwing, Chair, Committee on Programs and Courses.

Dr. Redwing presented an informational item to Council on behalf of the Committee on Programs and Courses:

Graduate Council Curriculum Report, 11/05/2014

Committee on Academic Standards
Dr. Vasilatos-Younken recognized Dr. James Kasting, Chair, Committee on Academic Standards.

Dr. Kasting reported that the Committee held an extended meeting earlier that day and discussed a draft of a proposed policy regarding graduate student assistance with graduate courses. Dr. Vasilatos-Younken noted that the Graduate Student and Professional Association representatives to Council had been invited to provide feedback via email and/or to attend this morning’s Committee meeting; Mr. Jeffrey Masko attended the meeting and gave valuable student input for the Committee’s consideration. Following discussion, the Committee voted to approve the proposed policy pending minor editorial revisions and anticipates presenting it to Graduate Council for discussion/vote at the December Council meeting.
Dr. Kasting was unable to stay for the duration of the extended Committee meeting and asked Dr. L. Samuel Finn to recap for Council members the remainder of the Committee’s business earlier in the day.

Dr. Finn reported that the Committee continued its discussion of proposed changes to the existing criteria and policy/guidelines for membership in the Graduate Faculty with expansions to address, among other topics, the increasing portfolio of professional master’s programs at Penn State. Following review of the latest draft of revisions and a lengthy discussion, the Committee voted to approve the proposed revisions subject to minor editorial revisions and the Committee either will present the proposed revisions to Graduate Council for discussion/vote at the December Council meeting or will continue to refine the proposed revisions in Committee in December and anticipate presenting the proposed revisions to Council in January for discussion/vote.

Committee on Fellowships and Awards

Dr. Vasilatos-Younken recognized Dr. Krista Wilkinson, Chair, Committee on Fellowships and Awards.

Dr. Wilkinson reported that the Committee had not met since the October Graduate Council meeting but has been working remotely to make recommendations for revisions to the rules and eligibility for University Graduate Fellowships in order to increase clarity and to increase their consistency with policy. The Committee anticipates submitting its recommendations to Dr. Vasilatos-Younken before the end of the semester.

Committee on Graduate Research

Dr. Vasilatos-Younken recognized Dr. David Spencer, Chair, Committee on Graduate Research.

Dr. Spencer reported that Dr. Neil Sharkey, Vice President for Research, will be delivering the annual State of Research at the University address at an upcoming meeting of the University Faculty Senate. He also reported that data breaches at other universities have prompted the University Faculty Senate Committee on Libraries, Information Systems, and Technology to begin work on a draft of a new policy and guidelines on a University-wide software risk assumption to assure compliance with FERPA (Family Educational Rights and Privacy Act) regulations and policy.

Dr. Vasilatos-Younken reminded members of Council that GRADS (the GRaduate Admissions Decision System) was designed by the Graduate School’s Network Operations unit for the review of application materials and that access to GRADS requires FERPA training and approval from the appropriate unit heads. She noted, however, that some graduate programs have been downloading application materials from GRADS and uploading them to ANGEL so that faculty/staff who do not have access to GRADS can view the materials. She reminded Council members that this process is not secure and is a violation of FERPA regulations and policy, and she asked the group to help spread this message to assure that all programs are compliant with policy. If any programs are unfamiliar with the many features available in GRADS and feel that downloading application materials out of GRADS is the only way they can accomplish a particular task, they are strongly advised to contact Lori Cottrill, Director of the Graduate School’s Network Operations & Data Systems department, who will provide a demonstration of GRADS and all of its features.

Committee on Graduate Student and Faculty Issues
Dr. Vasilatos-Younken recognized Dr. Roger Finke, Chair, Committee on Graduate Student and Faculty Issues.

Dr. Finke reported that the Graduate School hosted a career exploration workshop on Saturday, October 18 and that the event has received excellent feedback from students. He indicated that the Committee hopes to substantially expand the event in coming years and asked members of Council to pass along any ideas for future events or any feedback that they hear from their students. He also reported that Dr. Suzanne Adair introduced the Committee to ORCID, but did not elaborate as members of Council would be seeing a presentation on this topic later in today’s meeting.

Reports of Special Committees

Graduate School’s Graduate Exhibition Committee

Dr. Vasilatos-Younken recognized Dr. Suzanne Adair, who was reporting on behalf of Dr. Richard St. Clair, Co-Chair of the Committee.

Dr. Adair reported that the Graduate Exhibition planning process is progressing well and reminded members of Council that a video option has been added as a new category to this year’s Exhibition. She noted that details on the Exhibition’s website are being finalized and should be made public within a week. Dr. Adair also encouraged the group to begin promoting the Exhibition to graduate students as exhibitors and to faculty as judges.

Dr. Vasilatos-Younken reminded members of Council that the purpose of the Graduate Exhibition is not a professional meeting, but that its purpose is for student exhibitors to convey in an “elevator speech” their research to a general audience and to capture the core of their work and the impact it will have. Guidance is available to students who are interested in participating through information sessions.

In addition to planning the annual Exhibition, the Committee is working to bring outside audiences to this event and to expose the community to the phenomenal research that is being conducted at Penn State.

Special Reports

Graduate and Professional Student Association (GPSA)

Dr. Vasilatos-Younken recognized Mr. Douglas Whalen, representing the GPSA.

Mr. Whalen indicated that the GPSA had nothing to report.

ORCID

Dr. Vasilatos-Younken introduced Jim Leous, Program Manager with Information Technology Services and the Penn State Institutional Contact for the CID ORCID Consortium, to give a demonstration of ORCID. Mr. Leous explained that ORCID (Open Researcher and Contributor ID) is an emerging initiative currently being used by eight of our CIC peer institutions that can
track graduate students after graduation and throughout their careers using a unique digital identifier rather than their names. This unique identifier, which remains constant, accounts for name changes, disambiguation, editorial styles, and institutional changes and can track publications, scholarly works, funding opportunities, employment history, etc. Mr. Leous displayed an ORCID profile and noted that the information in the profile is harvested, so the researcher is not required to manually add information other than his/her education. He acknowledged that there are several other applications similar to ORCID, but many are limited to certain disciplinary sectors, while ORCID covers a very broad range of disciplines. Dr. Vasilatos-Younken shared that among CIC graduate deans, the idea of assigning ORCID IDs to new graduate students upon admission was being advocated, with the need to have its use inculcated in students so that they would voluntarily utilize the identifier both for any products of their graduate studies (e.g., their dissertation; journal papers; books; inventions; creative works, etc.), as well as throughout their professional life. The potential benefits would include the ability to better track graduate placements, career impact, etc., as well as potentially better assess contributions to economic development in the Commonwealth, and remain connected with graduate alums. Council members asked questions and expressed some concern regarding the need to balance individuals’ privacy with the benefits to the University of being able to track them; the discussion about how best to implement this tool will continue within Council, among University administrators, and across the CIC.

Unfinished Business
None.

New Business
None.

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

There being no further comments or discussion, the meeting was adjourned at 5:03 p.m.

Next meeting:
Wednesday, December 10, 3:30 p.m. – 5:00 p.m., 102 Kern Graduate Building
Graduate Council Curriculum Report

The Graduate Council Curriculum Report (GCCR), which includes all graduate program 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 Executive Director of Graduate Education Administration, Elizabeth Price.

December 3, 2014

1. **Program Change**: Bioinformatics graduate minor (Penn State Great Valley), page 2

2. **Program Change**: Electrical Engineering—creation of an integrated undergraduate-graduate (IUG) degree program: Master of Engineering (M.Eng.) in Electrical Engineering and Bachelor of Science (B.S.) in Electrical Engineering (Penn State Harrisburg), page 9

3. **Program Change**: English—adoption of the dual-title graduate degree program in African Studies for the Doctor of Philosophy (Ph.D.) degree (College of the Liberal Arts), page 50

Note: Graduate course proposals approved through the Graduate Council curricular review process, as well as information about postbaccalaureate/graduate credit certificates approved by college/school administrators for graduate education, are published in the Senate Curriculum Report.
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: School of Graduate Professional Studies, Penn State Great Valley
Department or Instructional Area: Engineering Division

New Graduate Program, Option, or Minor: Add
Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:
Designation of new graduate option:
Designation of new graduate minor:

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

Existing Graduate Program Option, or Minor: Change √ Drop
Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor: Bioinformatics 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): Dropping Minor

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

Submitted by Graduate Program Head
James A. Nemes
Printed name
Signature
Date: 10/17/14

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
John McCool
Printed name
Signature
Date: 10/17/14

Approved by College/School Dean/Chancellor (or Designee):
Craig Edelbrock
Printed name
Signature
Date: 10/24/14
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<tr>
<td>C. Andrew Cole</td>
<td>AndrewCole</td>
<td>11/24/2014</td>
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<td>Joan M. Redwing</td>
<td>Redwing</td>
<td>11/24/2014</td>
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<tr>
<td>Regina Vasileatos-Youkian</td>
<td>Vasileatos-Youkian</td>
<td>11/24/2014</td>
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For use by Graduate Council only
Proposal to Drop Bioinformatics Minor
October 17, 2014

James A. Nemes, D.Sc.
Director of Academic Affairs
School of Graduate Professional Studies
Penn State Great Valley

A. Justification

The graduate minor in bioinformatics was approved in July 2002. Since its launch, 13 students registered and 9 graduated with the minor, the last of which completed in spring 2008. Due to faculty turnover and declining student interest, a decision was made to cease active promotion of the minor in the fall of 2008. No students are currently registered for the minor. At this time we are formally requesting the minor to be dropped.

B. Consultation

Consultation has been sought from the following academic units:

- Eberly College of Science
- College of Engineering
- College of Medicine
- College of Information Sciences and Technology

No objections noted.
I have no objections
chuck

---
Charles Fisher
Professor of Biology
Associate Dean for Graduate Education
Office, 219 Mueller Laboratory
814 865-3365
Mailing Address:
208 Mueller Laboratory
The Pennsylvania State University
University Park, PA 16802

----- Original Message -----
From: "JAMES A NEMES" <jan16@psu.edu>
To: mxv8@psu.edu, "Catherine M. Harmonosky" <CMHIE@engr.psu.edu>, crf2@psu.edu, cmaitland@ist.psu.edu
Sent: Friday, October 3, 2014 3:05:36 PM
Subject: Proposal to Drop Bioinformatics Minor

Dear Colleagues,

Please find attached a proposal to drop the bioinformatics minor, for which I am seeking your consultation. We stopped actively recruiting students to the minor in 2008 and have no students currently registered. Therefore, we are now looking to drop it officially. If you have no objections, a simple email response is sufficient. If you do have questions, please feel free to contact me.

Thanks,

Jim
Hello Jim,

On behalf of the College of Engineering, I have no objections to dropping the bioinformatics minor.

Regards,

Catherine

Catherine M. Harmonosky, Ph.D.
Interim Associate Dean
Office of Undergraduate and Graduate Education
Associate Professor of Industrial Engineering
College of Engineering
Penn State University
102A Hammond Building
University Park, PA 16802
814-863-3750
cmhie@engr.psu.edu
www.engr.psu.edu

Dear Colleagues,

Please find attached a proposal to drop the bioinformatics minor, for which I am seeking your consultation. We stopped actively recruiting students to the minor in 2008 and have no students currently registered. Therefore, we are now looking to drop it officially. If you have no objections, a simple email response is sufficient. If you do have questions, please feel free to contact me.

Thanks,

Jim

James A. Nemes, D.Sc.
Director of Academic Affairs
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
Jim,

On behalf of the College of Medicine, I have no objections.

Michael

Michael F. Verderame, Ph.D.
Associate Dean for Graduate Studies
Professor of Medicine
Penn State College of Medicine
Office 717-531-8882

@DrValPSUCoM

On Oct 3, 2014, at 3:05 PM, JAMES A NEMES <jan16@psu.edu> wrote:

Dear Colleagues,

Please find attached a proposal to drop the bioinformatics minor, for which I am seeking your consultation. We stopped actively recruiting students to the minor in 2008 and have no students currently registered. Therefore, we are now looking to drop it officially. If you have no objections, a simple email response is sufficient. If you do have questions, please feel free to contact me.

Thanks,

Jim

James A. Nemes, D.Sc.
Director of Academic Affairs
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

<Proposal to Drop Bioinformatics Minor.docx>
Hi Jim,

I'm assuming this minor is associated with biology at Great Valley. If so, no objection at all. We have a new bioinformatics faculty member Vasant Hanovar, who might be interested in a joint minor in our in residence doctoral or master's programs, but I suppose (but I'm new to all this) this does not impact the desire to drop this for Great Valley.

Carleen

On Oct 14, 2014, at 10:47 AM, "JAMES A NEMES" <jan16@psu.edu> wrote:

    Hi Carleen,

    I just wanted to check back with you on this. It is a 'drop' so would hope it wouldn't have an impact, but if it does, please let me know.

    Jim

James A. Nemes, D.Sc.
Director of Academic Affairs
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: JAMES A NEMES [mailto:jan16@psu.edu]
Sent: Friday, October 03, 2014 3:06 PM
To: 'mxv8@psu.edu'; Catherine M. Harmonosky (CMHIE@engr.psu.edu); 'crf2@psu.edu'; 'cmaitland@ist.psu.edu'
Subject: Proposal to Drop Bioinformatics Minor

Dear Colleagues,

Please find attached a proposal to drop the bioinformatics minor, for which I am seeking your consultation. We stopped actively recruiting students to the minor in 2008 and have no students currently registered. Therefore, we are now looking to drop it officially. If you have no objections, a simple email response is sufficient. If you do have questions, please feel free to contact me.

Thanks,

Jim

James A. Nemes, D.Sc.
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hard copies 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.

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College/School: Penn State Harrisburg
Department or Instructional Area: School of Science, Engineering, and Technology

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 Science in Electrical Engineering
Current designation of graduate option: Creation of an integrated undergraduate-graduate (IUG) degree program with the B.S. in Electrical Engineering offered by Capital College
Current designation of graduate minor:
New designation of existing graduate program:
New designation of existing graduate option (if
New designation of existing graduate minor (if
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
Name: Bachnak
Printed name
Signature
Date: 7/28/14

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Name: Witwer
Printed name
Signature
Date: 7/28/14

Approved by College/School Dean/Chancellor (or Designee):
Name: Idowu
Printed name
Signature
Date: July 30, 2014
<table>
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<tr>
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<td>C. Andrew Cole</td>
<td>[Signature]</td>
<td>11/26/2014</td>
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<tr>
<td>Joanne Redwing</td>
<td>[Signature]</td>
<td>11/26/2014</td>
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<tr>
<td>Regina Vasilatos-Younken</td>
<td>[Signature]</td>
<td>12/1/2014</td>
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B.S. and M.S. in Electrical Engineering
Integrated Undergraduate-Graduate (IUG)
Degree Program Proposal

Electrical Engineering Program
School of Science, Engineering, and Technology
Penn State Harrisburg

December 3, 2014
B.S. and M.S. in Electrical Engineering Integrated Undergraduate-Graduate (IUG) Degree Program Proposal

Executive Summary

A. Objectives of the Proposed IUG Program

The objectives of the Integrated Undergraduate-Graduate Program in Electrical Engineering are to:

1. Offer qualified students the opportunity to earn two degrees in five years. In particular, IUG students may count up to 12 credits towards both their B.S. and M.S. degree requirements.
2. Allow coherent planning of studies through the graduate degree, by advising students not only on the requirements of the baccalaureate program, but also for the longer-range goals of the graduate degree.
3. Expose students earlier to the rigors of both graduate study and graduate faculty.
4. Make the resources of The Graduate School available to IUG students.
5. Permit students with IUG status to benefit from their association with graduate students whose level of work and intensity of interest and commitment parallel their own.
6. Enable students to coordinate and concurrently pursue two degree programs, thus allowing students to achieve greater depth and comprehension than if the degrees were pursued sequentially.

B. Summary of Changes

1. Undergraduate Bulletin description of the Electrical Engineering program at Penn State Harrisburg is revised to include the proposed IUG program.
2. Graduate Bulletin description of the Electrical Engineering program at Penn State Harrisburg is revised to include the proposed IUG program.

The integrated undergraduate/graduate program will be shown on the E ENG program website
http://harrisburg.psu.edu/programs/bachelor-science-electrical-engineering/proposal/
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I. INTRODUCTION

The Electrical Engineering program faculty would like to offer academically-talented Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science and the Master of Science in Electrical Engineering. The ability to coordinate as well as concurrently pursue the two degree programs will permit the students to earn the two degrees in five years, with 12 credits counting towards both degrees.

II. APPLICATION PROCESS

To initiate the application process, students must submit an Integrated Undergraduate-Graduate (IUG) Degree in Electrical Engineering Application Form, a transcript, three letters of professional recommendation from individuals who can evaluate the applicant’s potential, and a personal statement of technical interest and goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 81 credits; therefore, a typical student would apply after completing the fifth semester and before the end of the sixth semester. Students will be admitted 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. For consideration for acceptance into the program, students must have cumulative grade point average (GPA) of 3.4 or better and collective GPA of 3.4 or better in the following courses:

- CMPEN 271 Introduction to Digital Systems
- CMPEN 275 Digital Design Laboratory
- E E 315 Electrical Signals and Circuits with Lab (or equivalent courses)
- E E 341 Semiconductor Device Principles
- CMPEH 472 Microprocessors
• All the designated MATH, PHYS, and CMPSC courses

In order to apply, students must submit a completed Graduate School application. The student should mention in the notes section that the application is for the IUG program in Electrical Engineering.

Student applications will be evaluated based on overall academic performance, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Electrical Engineering.

**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. A minimum of 50 percent of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted. As shown in Table 1 below, the Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn these degrees from 165 to 153.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Total Credits Required</th>
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<tbody>
<tr>
<td>Bachelor of Science in Electrical Engineering</td>
<td>134</td>
</tr>
<tr>
<td>Master of Science in Electrical Engineering</td>
<td>31</td>
</tr>
<tr>
<td><strong>Separate Bachelor of Science and Master of Science in Electrical Engineering</strong></td>
<td><strong>165</strong></td>
</tr>
<tr>
<td><strong>Integrated Bachelor of Science and Master of Science in Electrical Engineering</strong></td>
<td><strong>153</strong></td>
</tr>
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</table>

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. degree. The GRE exam is not required for admission into the IUG program; however, if a student is interested in being considered for a graduate assistantship, GRE scores must be submitted before the beginning of the 8th semester.
III. IUG DEGREE REQUIREMENTS

Students in the IUG program must satisfy the requirements for both the Bachelor of Science and Master of Science degrees. 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 due to a change in the order in which courses are normally taken.

The M.S. in Electrical Engineering at Penn State Harrisburg has two emphasis areas: Electronics-Electromagnetics-Optics (EEO) and Systems. Therefore, in this proposal the course schedule is designed so that students fulfill the course requirements for the two concentrations, as shown in Table 2, page 5. The core courses for both areas of the graduate program are offered in such a way that an IUG student will be able to finish the degree requirements on time. The core and elective courses are shown in the schedule described in Master of Science degree requirements starting on page 6. In the schedule, courses shown in bold satisfy requirements for both the undergraduate and graduate programs. As described in Table 2 (page 5), in order to satisfy the Master of Science degree requirements, students must write a thesis.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be conducted at the end of the first semester of the senior year for a typical student in the program. Students who have not maintained a 3.4 GPA in their Math and Electrical Engineering courses will be put on probationary status with respect to the IUG program. Their ability to continue in the IUG program will be based on their academic performance in the last semester of the senior year. As a part of the review in the senior year, students will be counseled about thesis development.

A minimum grade point average of 3.4 must be earned in all Math and Electrical Engineering course work that is applied toward the graduate degree. This includes any courses that count toward both the undergraduate and graduate degrees, as well as all courses taken during the fifth year.

Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees.

If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree if all the undergraduate degree requirements have been satisfactorily completed. Students
who successfully complete courses listed in the recommended schedule will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

IV. JUSTIFICATION

By implementing the IUG program, Penn State Harrisburg would give students an opportunity to complete B.S. and M.S. degrees in five years instead of six. We predict that this program will also increase the attractiveness of master’s study prior to beginning a professional career. We anticipate approximately two to three students per semester to initially enroll for the IUG, with enrollment increasing as the number of students in the undergraduate Electrical Engineering program increases. The B.S./M.S. Electrical Engineering IUG Program should not affect the frequency of current course offerings or faculty load, with the exception of additional advising which can be easily accommodated. The M.S. in Electrical Engineering at PSH is a relatively new program, currently enrolling 19 students. This load is appropriately handled by our EE graduate faculty. The current graduate policy at PSH for thesis advising is such that for every six students a faculty member gets a 3 credit course release. Should graduate program enrollment approach class limits for current course offerings, the program faculty will request additional faculty lines to support the increase beyond the current capabilities.

V. ACCREDITATION

There are currently no accreditation bodies that issue credentials to electrical engineering integrated/undergraduate graduate programs. The undergraduate Electrical Engineering program has been ABET accredited since 2000.
### Table 2: BS E ENG/MS E ENG (Electronics - Electromagnetics -Optics or Systems emphasis area)

<table>
<thead>
<tr>
<th>Typical BS E ENG</th>
<th>IUG Electronics - Electromagnetics – Optics concentration</th>
<th>IUG Systems concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr</td>
<td>Semester VII (Fall)</td>
<td>Cr</td>
</tr>
<tr>
<td>3</td>
<td>E E 311</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>E E 461</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>E E 481</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>E E 405</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Technical Elective</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>GA/GH/GS V</td>
<td>3</td>
</tr>
<tr>
<td>Cr</td>
<td>Semester VIII (Spring)</td>
<td>Semester VIII</td>
</tr>
<tr>
<td>3</td>
<td>E E 406W</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>GA/GH/GS VI</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Technical –Elective</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>2-Techical - Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Semester IX</td>
<td>Semester IX</td>
<td>Semester IX</td>
</tr>
<tr>
<td>3</td>
<td>One from Systems</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>One from EEO Course Group</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>E E 600</td>
<td>3</td>
</tr>
<tr>
<td>Semester X</td>
<td>Semester X</td>
<td>Semester X</td>
</tr>
<tr>
<td>3</td>
<td>EEO 500 level Core</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>One from EEO Course Group</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>E E 600</td>
<td>3</td>
</tr>
</tbody>
</table>

B.S. E ENG can be conferred at the end of the 8th semester and 12 of 31 credits towards M.S. E ENG have been completed leaving 18 credits to complete. Course titles are in Table 3 on page 8.

B.S. E ENG technical electives should satisfy the EEO or Systems courses in the integrated program. Bolded courses will double count towards B.S. and M.S. ENG degrees.

No more than three 400 level courses can be taken to satisfy the 31 credits MS requirement.
MASTER OF SCIENCE DEGREE REQUIREMENTS

The M.S. E ENG program at Penn State Harrisburg is structured into two areas of concentration to fully take advantage of the specialty areas represented by the EE graduate faculty. The areas are Electronics-Electromagnetics-Optics (EEO) and Systems. The program requires 31 credits, including 24 course credits with at least 15 credits at the 500 level, 1 colloquium credit (E E 500), and 6 thesis credits (E E 600). All students are required to take a 500-level analysis course (EMCH 524A) in addition to prescribed courses in one of the two concentration areas. The prescribed courses are intended to establish the fundamentals of the technical areas. To incorporate some breadth into the program, students are required to take at least one course in the second concentration area.

Original research, usually requiring at least two semesters of work (nominally 6 credits), is expected for a thesis. The work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. The EE program has established a six-year time limit for completion of the M.S. degree. Any extension beyond six years requires the approval of the EE program Graduate Faculty.

Students must maintain a minimum grade point average (GPA) of 3.00 or better on a 4.00 scale in 500- and 400-level courses listed on their Plan of Study.

Penn State Harrisburg’s MS E ENG program is distinct and independent of the MSEE program offered at the University Park campus.

As part of the degree requirements, students must complete the Scholarship and Research Integrity (SARI) requirement as described below.

Scholarship and Research Integrity (SARI) Requirement

The SARI program at Penn State is designed to offer graduate students comprehensive, multilevel training in the responsible conduct of research, in a way that is tailored to address the issues faced by individual disciplines. The program is implemented by PSU colleges and graduate programs in a way that meets the particular needs of students in each unit. In general, SARI programs have two parts: an online program to be completed in the first year of graduate study; to be followed by five hours of discussion-based Responsible Conduct of Research (RCR) education prior to degree completion. The SARI Resource Portal provides information, teaching tools, and links to other resources to support SARI program activities, as well as access to an online training program provided by the Collaborative Institutional Training Initiative (CITI), which most programs will use for first-year training.
<table>
<thead>
<tr>
<th>Program Requirements</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Concentration Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Electronics, Electromagnetics and Optics (EEO)</strong></td>
<td></td>
</tr>
<tr>
<td>Two from the following:</td>
<td>Two from the following:</td>
</tr>
<tr>
<td>E E 521, E E 531, E E 541</td>
<td>E E 560, E E 580, E E 588</td>
</tr>
<tr>
<td>E E 510</td>
<td>E E 551</td>
</tr>
<tr>
<td>E E 520</td>
<td>E E 553</td>
</tr>
<tr>
<td>E E 521</td>
<td>E E 556</td>
</tr>
<tr>
<td>E E 522</td>
<td>E E 560</td>
</tr>
<tr>
<td>E E 531</td>
<td>E E 561</td>
</tr>
<tr>
<td>E E 534</td>
<td>E E 562</td>
</tr>
<tr>
<td>E E 537</td>
<td>E E 568</td>
</tr>
<tr>
<td>E E 538</td>
<td>E E 580</td>
</tr>
<tr>
<td>E E 541</td>
<td>E E 581</td>
</tr>
<tr>
<td>E E 542</td>
<td>E E 587</td>
</tr>
<tr>
<td>Maximum of 6 Credits from:</td>
<td>Maximum of 6 Credits</td>
</tr>
<tr>
<td>E E 420</td>
<td>E E 453</td>
</tr>
<tr>
<td>E E 421</td>
<td>E E 456</td>
</tr>
<tr>
<td>E E 430</td>
<td>E E 458</td>
</tr>
<tr>
<td>E E 432</td>
<td>E E 460</td>
</tr>
<tr>
<td>E E 438</td>
<td>E E 480</td>
</tr>
<tr>
<td>E E 441</td>
<td>E E 481</td>
</tr>
<tr>
<td>E E 442</td>
<td>E E 488</td>
</tr>
<tr>
<td></td>
<td>Math 430</td>
</tr>
<tr>
<td></td>
<td>Math 444</td>
</tr>
<tr>
<td>Electives</td>
<td>3.0</td>
</tr>
<tr>
<td>Colloquium</td>
<td>1.0</td>
</tr>
<tr>
<td>Thesis Research</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total credits:</strong></td>
<td>31.0</td>
</tr>
</tbody>
</table>
Note: No more than three 400-level courses (9 credits) may be taken to satisfy the M.S. E ENG degree requirements.

At least one course must be taken in a different concentration area.

**Table 3. Complete List of Courses, including electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>E E 410</td>
<td>Linear Electronic Design</td>
<td>3</td>
</tr>
<tr>
<td>E E 413</td>
<td>Power Electronics</td>
<td>3</td>
</tr>
<tr>
<td>E E 420</td>
<td>Electro-optics: Principles and Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 421</td>
<td>Optical Fiber Communications</td>
<td>3</td>
</tr>
<tr>
<td>E E 430</td>
<td>Principles of Electromagnetic Fields</td>
<td>3</td>
</tr>
<tr>
<td>E E 432</td>
<td>UHF and Microwave Engineering</td>
<td>3</td>
</tr>
<tr>
<td>E E 438</td>
<td>Antenna Engineering</td>
<td>3</td>
</tr>
<tr>
<td>E E 441</td>
<td>Semiconductor Integrated Circuit Technology</td>
<td>3</td>
</tr>
<tr>
<td>E E 442</td>
<td>Solid State Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 453</td>
<td>Fundamentals of Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>E E 456</td>
<td>Introduction to Neural Networks</td>
<td>3</td>
</tr>
<tr>
<td>E E 458</td>
<td>Digital Image Processing and Computer Vision</td>
<td>3</td>
</tr>
<tr>
<td>E E 460</td>
<td>Communication Systems II</td>
<td>3</td>
</tr>
<tr>
<td>E E 480</td>
<td>Linear Systems: Time Domain and Transform Analysis</td>
<td>3</td>
</tr>
<tr>
<td>E E 481</td>
<td>Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>E E 483</td>
<td>Introduction to Automation and Robotics Systems</td>
<td>3</td>
</tr>
<tr>
<td>E E 484</td>
<td>Control System Design</td>
<td>3</td>
</tr>
<tr>
<td>E E 488</td>
<td>Power Systems Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>E E 489</td>
<td>Power Systems Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>E E 496</td>
<td>Independent Studies (1-18)</td>
<td></td>
</tr>
<tr>
<td>E E 497</td>
<td>Special Topics (courses vary from semester to semester)</td>
<td></td>
</tr>
<tr>
<td>MATH 414</td>
<td>Introduction to Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 430</td>
<td>Linear Algebra and Discrete Models I</td>
<td>3</td>
</tr>
<tr>
<td>E E 500</td>
<td>Colloquium</td>
<td>1</td>
</tr>
<tr>
<td>E E 510</td>
<td>Linear Integrated Circuits</td>
<td>3</td>
</tr>
<tr>
<td>E E 520</td>
<td>Electro Optics--Systems and Computing</td>
<td>3</td>
</tr>
<tr>
<td>E E 521</td>
<td>Fiber Optics and Integrated Optics</td>
<td>3</td>
</tr>
<tr>
<td>E E 531</td>
<td>Engineering Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>E E 534</td>
<td>Conformal Antennas</td>
<td>3</td>
</tr>
<tr>
<td>E E 537</td>
<td>Numerical and Asymptotic Methods of Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>E E 538</td>
<td>Antenna Engineering</td>
<td>3</td>
</tr>
<tr>
<td>E E 541</td>
<td>Manufacturing Methods in Microelectronics</td>
<td>3</td>
</tr>
<tr>
<td>E E 542</td>
<td>Semiconductor Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 551</td>
<td>Wavelets, Filter Banks and Multi-Resolution Analysis</td>
<td>3</td>
</tr>
<tr>
<td>E E 553</td>
<td>Topics in Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>E E 556</td>
<td>Graphs, Algorithms and Neural Networks</td>
<td>3</td>
</tr>
<tr>
<td>E E 560</td>
<td>Probability, Random Variables and Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>E E 561</td>
<td>Information Theory</td>
<td>3</td>
</tr>
</tbody>
</table>
VI. LIST OF COURSES TO BE ADDED, MODIFIED, OR DROPPED IN THE PROPOSED CURRICULUM

No changes

VII. JUSTIFICATION FOR CHANGES

While we are proposing an Integrated Undergraduate Graduate Program in Electrical Engineering, this change does not modify the requirements of the MS in Electrical Engineering Program itself.

VIII. WRITTEN EVIDENCE OF CONSULTATION

Departments affected by the change include the Electrical Engineering programs at University Park and Behrend College.

<table>
<thead>
<tr>
<th>College</th>
<th>Contact</th>
<th>Response</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Park</td>
<td>Victor Pasko</td>
<td>Concur</td>
<td></td>
</tr>
<tr>
<td>Behrend College</td>
<td>Thomas Lee Hemminger</td>
<td>Concur</td>
<td></td>
</tr>
</tbody>
</table>
Consultation with the Department of Electrical Engineering, University Park

Dear Sedig,

Thank you for your phone call earlier today. I have no further comments and I have no objections as to proposed program. Thanks.

Victor

On Nov 20, 2013, at 8:52 AM, SEDIG SALEM AGILI wrote:

Dear Victor,

I am awaiting on responses on the proposed IUG from you and your colleagues. As per the email below, even if you have no comments, we ask that you respond. We will make the change for the GPA requirement. Thanks.

Best.

Sedig

From: "Victor Pasko" <vpasko@psu.edu>
To: "SEDIG SALEM AGILI" <ssa10@psu.edu>
Cc: "Kultegin Aydin" <k-aydin@psu.edu>
Sent: Wednesday, November 6, 2013 12:50:05 PM
Subject: Re: Request for Consultation on Integrated Undergraduate Graduate Electrical Engineering Program at Penn State Harrisburg

Dear Sedig,

Thank you for your response. You have a good number of students with strong GPA. Just observing how IUG works in our our department my suggestion would be to increase the GPA requirement to 3.4 or perhaps even to 3.5. The IUG puts a significant stress and demand on students, and advisors too, so only best of the best should be formally allowed to pursue this path. You can consider this as my formal recommendation. I distributed your document to graduate committee members a long time ago but have not received any comments yet. I will let you know if I get any additional input. Thanks.

Victor

On Nov 6, 2013, at 9:07 AM, SEDIG SALEM AGILI wrote:
Dear Victor,
Thanks for your prompt response. Below are the answers to your questions:
1. For the period between fall 2010 and spring 2013 there were 21 students graduated from our BS in Electrical engineering with GPA of 3.4/4.0 or higher.
2. The MS program is relatively a new program and we have three students graduating this semester. Actually two of them are already enrolled in PhD. programs. One at Penn State UP. and the other at SUNY Binghamton University.
3. I have checked various IUG at PSU and the GPA requirement ranges from 3.2 to 3.5.

Hopefully this helps.

Best.

Sedig

---

From: "Victor Pasko" <vpasko@psu.edu>
To: "SEDIG SALEM AGILI" <ssa10@psu.edu>
Cc: "Kultegin Aydin" <k-aydin@psu.edu>
Sent: Friday, November 1, 2013 4:22:26 PM
Subject: Re: Request for Consultation on Integrated Undergraduate Graduate Electrical Engineering Program at Penn State Harrisburg

Dear Sedig,

I looked at the material and have a couple of questions mainly to understand the expected enrollment. Could you please let me know how many students graduated with BS in EE, and with MS in EE from your program during last three years? I noted that your GPA requirement is 3.3. IUG available through the Schreyer Honors College requires GPA 3.4. How many BS EE graduated during last three years had GPA 3.4 and above? Thanks.

Victor

On Nov 1, 2013, at 3:34 PM, SEDIG SALEM AGILI wrote:

Dear Colleagues,

As per the email below from Stephanie in regards to using ANGEL for proposal consultation, I am resending the Integrated Undergraduate Graduate (IUG) program in Electrical Engineering. This program would allow a student to complete both the BS and the MS degrees in Electrical Engineering at PSH in 5 years. Penn State already has a number of these programs in place:
http://www.senate.psu.edu/scca/iug_programs.htm
I am sending this email to request formal consultation from you on this proposal. We would appreciate your feedback by November 15, 2013. Even if you have no comments, we ask that you respond. We must have responses from everyone involved with formal consultation.

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

Best Regards,

Sedig

From: "Stephanie Ponnett" <slp29@psu.edu>
To: "Sedig Agili" <ssa10@psu.edu>
Sent: Friday, November 1, 2013 12:00:34 PM
Subject: Fwd: Request for Consultation on Integrated Undergraduate Graduate Electrical Engineering Program at Penn State Harrisburg

Here you go!

Stephanie

Dr. Pasko,

Dr. Agili forwarded your e-mail to me regarding the online Program Submission and Consultation System. The PSCS system in still in development and we are not "officially" able to use it to submit programs. Please continue to review and consult on programs in the same manner as you have done in the past.

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

Stephanie Ponnett
Administrative Support Coordinator
Office of the Chancellor
Faculty Senate
Penn State Harrisburg Honors Program
International Programs and External Relations
C114R Olmsted
717-948-6062
717-948-6100 (fax)
**Consultation with the Electrical Engineering Program, Behrend College**

Sedig,

I looked through your proposal during the week and it seems like it is reasonably complete. Are you asking for specific ideas or criticisms? I see that you have a thesis requirement. My only thought there is on how those are assigned to faculty in terms of teaching load.

Tom

From: SEDIG SALEM AGILI [mailto:ssa10@psu.edu]
Sent: Friday, December 06, 2013 1:31 PM
To: THOMAS LEE HEMMINGER
Subject: Fwd: Request for Consultation on Integrated Undergraduate Graduate Electrical Engineering Program at Penn State Harrisburg

Hello Dr Hemminger,

As per our phone conversation, I am forwarding the email that I sent to David Loker requesting a formal consultation on the proposed IUG. Please see the email below and the attached document. Thanks and have a nice weekend.

Best.

Sedig

From: "SEDIG SALEM AGILI" <ssa10@psu.edu>
To: drl3@psu.edu
Sent: Wednesday, November 20, 2013 9:08:24 AM
Subject: Fwd: Request for Consultation on Integrated Undergraduate Graduate Electrical Engineering Program at Penn State Harrisburg

Dear Dr. Loker,

I am awaiting for the response from you and your colleagues on the proposed IUG. As per the email below, even if you have no comments, we ask that you respond. Please respond ASAP. Thanks.

Best.

Sedig
IX. PROPOSED BULLETIN DESCRIPTION

Electrical Engineering

Home Page

SEDIG S. AGILI, Program Coordinator
Penn State Harrisburg
777 W. Harrisburg Pike
W211 Olmsted Building
Middletown, PA 17057
717-948-6109
ssa10@psu.edu

Degrees Conferred:

M.Eng., M.S.

The Graduate Faculty

M.Eng. (E E)

Admission Requirements

A prospective graduate student in Electrical Engineering at Penn State Harrisburg must fulfill the admission requirements as set forth by the Graduate School of the Graduate School Council, and have a bachelor of science degree in electrical engineering or its equivalent from an institution that is accredited by the Accreditation Board of Engineering and Technology (ABET). An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale is required for admission. Exceptions to this will be based on professional experience and other factors such as GRE scores. In addition, a student who does not meet the overall 3.0 grade-point average may be considered for admission if the student has a 3.0 junior/senior grade-point average. Up to 15 credits earned in three semesters or fewer, as a special nondegree student, may be applied toward the master's degree. Those applying for admission as a master of engineering candidate without an electrical engineering degree may be admitted with the stipulation that deficiencies in background, if any, will be remedied early in the program and that these courses will be in addition to the required number of credits for the degree.

Applicants should submit the following:
• a graduate online application with the application fee;
• official copies of undergraduate transcripts;
• test scores from the Graduate Record Examinations (GRE) (preferable, but not required);
• three (3) letters of reference, especially those from faculty who can evaluate academic potential;
• a personal statement of technical interest, goals, and experience.

Test scores from the Graduate Record Examination (GRE) are required ONLY for those applicants indicating interest in an assistantship.

Degree Requirements

A total of 33 credits is required for a Master of Engineering degree, of which at least 24 must be taken through Penn State Harrisburg engineering graduate programs. Up to 9 credits of graduate work may be transferred from other institutions provided (a) credits are suitable for the particular engineering discipline, and (b) students have earned a grade of B or better. At least 18 credits must be at the 500 level, which includes 3 credits of ENGR 594.

Generally, students enrolled in the program for the Master of Engineering degree in Electrical Engineering must earn 12 credits in the required core courses (i.e., courses with the E E prefix).

Master of Engineering Paper: A candidate for the master of engineering degree in Electrical Engineering must write a scholarly report or engineering paper and defend it before three faculty members. The paper is intended to be a relatively short document compared with a thesis. A published paper may be used to meet this requirement. The paper should be written according to the standards set for an IEEE publication.

The engineering paper may be initiated by taking the 1-credit ENGR 594 course. This should be done approximately halfway through the program. Once the proposal is approved and the work well under way, the student should register for ENGR 594 with his/her paper adviser. Work will proceed as planned under the direction of the paper adviser, though changes may be made with the consent of the master's paper committee.

Up to 9 credits of graduate work may be transferred from other institutions provided (a) credits are suitable for the particular engineering discipline, and (b) students have earned a grade of B or better.

Students must have a 3.00 grade-point average in both prescribed and supporting courses approved by the program to graduate. Students pursue the program on a part-time basis. A student can complete the program within two years, based on completion of two courses a semester.
Admission Requirements

Admission into the Master of Science (M.S.) Electrical Engineering program will be granted only to candidates who demonstrate high potential for success in graduate studies.

Applicants should have undergraduate degrees in engineering or technology-related fields from an accredited university and must meet the admission requirements as set by Penn State's Graduate Council. An applicant must hold either (1) a baccalaureate degree from a regionally accredited U.S. institution or (2) a tertiary (postsecondary) degree that is deemed comparable to a four-year bachelor's degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates 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.

An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale and scores from the GRE are required for admission.

Applicants must submit the following:

- a completed Graduate School online application with the application fee;
- official copies of undergraduate transcripts;
- three (3) letters of professional recommendation from individuals who can evaluate the applicant’s potential;
- a personal statement of technical interest, goals, and experience;
- test scores from the Graduate Record Examination (GRE); and
- statement of interest in graduate assistantship, if desired.

English Proficiency—The language of instruction at Penn State is English. International applicants must take and submit scores for the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System), with the exceptions noted below. The minimum acceptable score for the TOEFL is 550 for the paper-based test, 213 for the computer-based test, or a total score of 80 with a 19 on the speaking section for the internet-based test. Applicants with IBT speaking scores between 15 and 18 may be considered for provisional admission, which requires an institutional test of English proficiency upon first enrollment and, if necessary, remedial course work. The minimum composite score for the IELTS is 6.5.
International applicants are exempt from the TOEFL/IELTS requirement if they have received a baccalaureate or a master's degree from a college/university/institution in any of the following countries: Australia, Belize, British Caribbean and British West Indies, Canada (except Quebec), England, Guyana, Republic of Ireland, Liberia, New Zealand, Northern Ireland, Scotland, the United States, and Wales.

Degree Requirements

All graduate students in Electrical Engineering are required to adhere to the requirements of the Graduate CouncilSchool, as found in the Graduate Degree Programs Bulletin. The requirements of the Graduate CouncilSchool, however, are minimum requirements and the policies, procedures, and regulations listed below are additional and more specific for graduate students pursuing the MS in Electrical Engineering degree at Penn State Harrisburg. Advisers will call pertinent regulations to the attention of their advisees, but it should be understood that it is the student’s personal responsibility to see that all requirements are satisfied.

The MS E ENG program at Penn State Harrisburg is structured into two areas of concentration to fully take advantage of the specialty areas represented in the E E graduate faculty. The areas are Electronics-Electromagnetics-Optics (EEO) and Systems. The program requires 31 credits, including 24 course credits with at least 15 credits at the 500 level, one colloquium credit, and 6 thesis credits (600-level). All students are required to take a 500-level analysis course (EMCH 524A) in addition to prescribed courses in one of the two concentration areas. The prescribed courses are intended to establish the fundamentals of the technical areas. To incorporate some breadth into the program, students are required to take at least one course in the second concentration area. A maximum of three 400-level courses (9 credits) may be taken for the MS E ENG degree.

Original research, usually requiring at least two semesters of work (nominal 6 credits), is expected for a thesis. Students must write and submit a thesis. The thesis work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. The thesis committee consists of three graduate faculty members, including the thesis adviser. For thesis guidelines and timelines, students are referred to the Penn State Graduate School website (http://www.gradschool.psu.edu/).

The E E program has established a six-year time limit for completion of the M.S. degree. Any extension beyond six years requires the approval of the E E program’s Graduate Faculty.

Students must maintain a minimum grade point average (GPA) of 3.00 or better on a 4.00 scale in 500- and 400-level courses listed on their Plan of Study.

Penn State Harrisburg’s MS E ENG program is distinct and independent of the MSEE program offered at the University Park campus.
**English Proficiency**—The language of instruction at Penn State is English. International applicants must take and submit scores for the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System), with the exceptions noted below. The minimum acceptable score for the TOEFL is 550 for the paper-based test, 213 for the computer-based test, or a total score of 80 with a 19 on the speaking section for the internet-based test. Applicants with IBT speaking scores between 15 and 18 may be considered for provisional admission, which requires an institutional test of English proficiency upon first enrollment and, if necessary, remedial course work. The minimum composite score for the IELTS is 6.5. Specific graduate programs may have more stringent requirements.

International applicants are exempt from the TOEFL/IELTS requirement if they have received a baccalaureate or a master's degree from a college/university/institution in any of the following countries: Australia, Belize, British Caribbean and British West Indies, Canada (except Quebec), England, Guyana, Republic of Ireland, Liberia, New Zealand, Northern Ireland, Scotland, the United States, and Wales.

Completed International Application material must be submitted by the following deadlines: May 31 for the fall semester; September 30 for the spring semester; February 28 for the summer session. Applications received after these deadlines will be processed for the following semester.

**PLEASE NOTE:** Each graduate program reserves the right to set earlier deadlines than those noted above.

**Integrated B.S./M.S. in Electrical Engineering**

The Electrical Engineering program offers a limited number of academically superior Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science and the Master of Science in Electrical Engineering. The ability to coordinate as well as concurrently pursue the two degree programs enables students to earn the two degrees in five years.

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. However, the total course load is reduced due to the maximum of 12 credits that can count towards both degrees. A minimum of 7 credits proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program due to the courses that count toward the Master of Science Degree requirements. Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student’s academic performance will be conducted at the end of the first semester of the senior year for a typical student in the program. Students who have not maintained a 3.4 GPA in their Math and Electrical Engineering courses will be put on probationary status with respect to the IUG program. Their ability to continue in the IUG program will be based on academic performance in the last semester of their senior year. As part of the review in the senior year, students will be advised about the thesis requirement in the graduate program.
Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years. If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree assuming all the undergraduate degree requirements have been satisfactorily completed. If 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.

**Admission Requirements**

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Electrical Engineering Application Form*, an official transcript, three letters of professional recommendation from individuals who can evaluate the applicant’s potential, and a personal statement of technical interest and goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 81 credits; therefore a typical student would apply after completing the fifth semester and before the end of the sixth semester. Students will be admitted 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. For consideration for acceptance into the program, students must have cumulative grade point average (GPA) of 3.4 or better and collective GPA of 3.4 or better in the following courses: CMPEN 271, CMPEN 275, E E 315 (or equivalent), E E 341, CMPEH 472 and all the designated MATH, PHYS, and CMPSC courses. Applications will be evaluated based on students’ overall academic performance, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee of the Electrical Engineering program.

**Degree Requirements**

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. The minimum of 67 credits double-counted must be at the 500 level. Thesis credits may not be double counted.

**M.S. Degree Portion:**

TOTAL M.S. REQUIREMENTS: 31 credits
All graduate students in Electrical Engineering are required to adhere to the requirements of the Graduate Council, as found in the Graduate Degree Programs Bulletin. The requirements of Graduate Council, however, are minimum requirements and the policies, procedures, and regulations listed below are additional and more specific for graduate students pursuing the MS in Electrical Engineering degree at Penn State Harrisburg. Advisers will call pertinent regulations to the attention of their advisees, but it should be understood that it is the student’s personal responsibility to see that all requirements are satisfied.

The MS E ENG program at Penn State Harrisburg is structured into two areas of concentration to fully take advantage of the specialty areas represented in the E E graduate faculty. The areas are Electronics-Electromagnetics-Optics (EEO) and Systems. The program requires 31 credits, including 24 course credits with at least 15 credits at the 500 level, one colloquium credit, and 6 thesis credits (600-level). All students are required to take a 500-level analysis course (EMCH 524A) in addition to prescribed courses in one of the two concentration areas. The prescribed courses are intended to establish the fundamentals of the technical areas. To incorporate some breadth into the program, students are required to take at least one course in the second concentration area. A maximum of three 400-level courses (9 credits) may be taken for the MS E ENG degree.

Original research, usually requiring at least two semesters of work (nominal 6 credits), is expected for a thesis. Students must write and submit a thesis. The thesis work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. The thesis work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. The thesis committee consists of three graduate faculty members, including the thesis adviser. For thesis guidelines and timelines, students are referred to the Penn State Graduate School website (http://www.gradschool.psu.edu/)

The E E program has established a six-year time limit for completion of the M.S. degree. Any extension beyond six years requires the approval of the E E program’s Graduate Faculty.

Students must maintain a minimum grade point average (GPA) of 3.00 or better on a 4.00 scale in 500- and 400-level courses listed on their Plan of Study.

Courses

Graduate courses carry numbers from 500 to 6599 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.
For course information specific to the Electrical Engineering M.S. program at Penn State Harrisburg, refer to the program home page located at:
http://harrisburg.psu.edu/programs/master-electrical-engineering-msee

ELECTRICAL ENGINEERING course list
X. B.S. AND M.S. IN ELECTRICAL ENGINEERING INTEGRATED UNDERGRADUATE-GRADUATE (IUG) HANDBOOK

Electrical Engineering Program
School of Science, Engineering, and Technology
Penn State Harrisburg

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U. Ed. ARC 06–18
B.S. and M.S. in Electrical Engineering
Integrated Undergraduate-Graduate (IUG) Degree Program
Electrical Engineering Program
School of Science, Engineering, and Technology
Penn State Harrisburg

I. INTRODUCTION

The Electrical Engineering program offers to academically-talented Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science and the Master of Science in Electrical Engineering. The ability to coordinate as well as concurrently pursue the two degree programs will permit the student to earn the two degrees in five years, with 12 credits counting towards both degrees.

II. APPLICATION PROCESS

To initiate the application process, students must submit an Integrated Undergraduate-Graduate (IUG) Degree in Electrical Engineering Application Form, a transcript, three letters of professional recommendation from individuals who can evaluate the applicant’s potential, and a personal statement of technical interest and goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 81 credits; therefore a typical student would apply after completing the fifth semester and before the end of the sixth semester. Students will be admitted 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. For consideration for acceptance into the program, students must have cumulative grade point average (GPA) of 3.4 or better and collective GPA of 3.4 or better in the following courses:

- CMPEN 271 Introduction to Digital Systems
- CMPEN 275 Digital Design Laboratory
- E E 315 Electrical Signals and Circuits with Lab (Or equivalent courses)
- E E 341 Semiconductor Device Principles
- CMPEH 472 Microprocessors
• All the designated MATH, PHYS, and CMPSC courses

In order to apply, students must submit a completed graduate school application. The student should mention in the notes section that the application is for the IUG program in Electrical Engineering.

Student applications will be evaluated based on overall academic performance, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Electrical Engineering.

**Reduced Course Load**

As many as 12 of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50 percent of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted. As shown in Table 1 below, the Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn these degrees from 165 to 153.

**Table 1: Credit Requirements for Bachelor of Science and Master of Science Degrees when Pursued Separately and when Pursued in the Integrated Program**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Total Credits Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Science in Electrical Engineering</td>
<td>134</td>
</tr>
<tr>
<td>Master of Science in Electrical Engineering</td>
<td>31</td>
</tr>
<tr>
<td>Separate Bachelor of Science and Master of Science in Electrical Engineering</td>
<td>165</td>
</tr>
<tr>
<td>Integrated Bachelor of Science and Master of Science in Electrical Engineering</td>
<td>153</td>
</tr>
</tbody>
</table>

**Eligibility for a Graduate Assistantship**

Students in the IUG program will be eligible for consideration for a graduate assistantship to be awarded beginning the fifth year. To be eligible for a graduate assistantship, students must have completed the requirements for their B.S. degree. The GRE exam is not required for admission into the IUG program; however, if a student is interested in being considered for a graduate assistantship, GRE scores must be submitted before the beginning of the 8th semester.
III. IUG DEGREE REQUIREMENTS

Students in the IUG program must satisfy the requirements for both the Bachelor of Science and Master of Science degrees, as listed in Appendix A and Appendix C. As outlined in the Reduced Course Load section above, the total course load is reduced due to courses that can count towards both degrees. The first three years of the IUG program are identical to the first three years of the Bachelor of Science program, which is listed in Appendix B. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program due to a change in the order in which courses are normally taken.

The M.S. in Electrical Engineering at Penn State Harrisburg has two areas of emphasis: Electronics-Electromagnetics-Optics (EEO) and Systems. Therefore, in this proposal the course schedule is designed so that students fulfill the course requirements for the two concentrations, as shown on page 27. The core courses for both areas of the graduate program are offered in such a way that an IUG student will be able to finish the degree requirements on time. The core and elective courses are shown in the schedule described in Appendix C. In the schedule, courses shown in bold satisfy requirements for both the undergraduate and graduate programs. As described in Table 2 (page 27), in order to satisfy the Master of Science degree requirements, students must write a thesis.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be conducted at the end of the first semester of the senior year for a typical student in the program. Students who have not maintained a 3.3 GPA in their Math and Electrical Engineering courses will be put on probationary status with respect to the IUG program. Their ability to continue in the IUG program will be based on their academic performance in the last semester of the senior year. As a part of the review in the senior year, students will be counseled about thesis development.

A minimum grade point average of 3.4 must be earned in all Math and Electrical Engineering course work that is applied toward the graduate degree. This includes any courses that count toward both the undergraduate and graduate degrees, as well as all courses taken during the fifth year.

Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees.

If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree if all the undergraduate degree requirements have been satisfactorily completed. Students
who successfully complete courses listed in the recommended schedule will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

IV. JUSTIFICATION

By implementing the IUG program, Penn State Harrisburg would give students an opportunity to complete B.S. and M.S. degrees in five years instead of six. We predict that this program will also increase the attractiveness of master’s study prior to beginning a professional career. We anticipate approximately two to three students per semester to initially enroll for the IUG, with enrollment increasing as the number of students in the undergraduate Electrical Engineering program increases. The B.S./M.S. Electrical Engineering IUG Program should not affect the frequency of current course offerings or faculty load, with the exception of additional advising which can be easily accommodated.

V. ACCREDITATION

There are currently no accreditation bodies that issue credentials to electrical engineering integrated/undergraduate graduate programs. The undergraduate Electrical Engineering program has been ABET accredited since 2000.
<table>
<thead>
<tr>
<th>Typical BS E ENG</th>
<th>IUG Electrons - Electromagnetics – Optics concentration</th>
<th>IUG Systems concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr Semester VII (Fall)</td>
<td>Cr Semester VII</td>
<td>Cr Semester VII</td>
</tr>
<tr>
<td>3 E E 311</td>
<td>3 E E 311</td>
<td>3 E E 311</td>
</tr>
<tr>
<td>3 E E 461</td>
<td>3 E E 461</td>
<td>3 E E 461</td>
</tr>
<tr>
<td>4 E E 481</td>
<td>4 E E 481</td>
<td>4 E E 481</td>
</tr>
<tr>
<td>1 E E 405</td>
<td>1 E E 405</td>
<td>1 E E 405</td>
</tr>
<tr>
<td>3 Technical Elective</td>
<td>3 EEO 400 level Elective</td>
<td>3 Systems 400 level Elective</td>
</tr>
<tr>
<td>3 GA/GH/GS V</td>
<td>3 EMCH 524A (3)</td>
<td>3 EMCH 524A (3)</td>
</tr>
<tr>
<td>Cr Semester VIII (Spring)</td>
<td>Semester VIII</td>
<td>Semester VIII</td>
</tr>
<tr>
<td>3 E E 406W</td>
<td>3 E E 406W</td>
<td>3 E E 406W</td>
</tr>
<tr>
<td>3 GA/GH/GS VI</td>
<td>3 GA/GH/GS VI</td>
<td>3 GA/GH/GS VI</td>
</tr>
<tr>
<td>3 Technical –Elective</td>
<td>3 EEO 400 level Elective</td>
<td>3 Systems 400 level Elective</td>
</tr>
<tr>
<td>6 2-Techical - Electives</td>
<td>3 EEO 500 level Core</td>
<td>3 Systems 500 Core</td>
</tr>
<tr>
<td></td>
<td>1 E E 500</td>
<td>1 E E 500</td>
</tr>
<tr>
<td>Semester IX</td>
<td>Semester IX</td>
<td></td>
</tr>
<tr>
<td>3 One from Systems</td>
<td>3 One from EEO</td>
<td></td>
</tr>
<tr>
<td>3 One from EEO Course Group</td>
<td>3 One from Systems Course Group</td>
<td></td>
</tr>
<tr>
<td>3 E E 600</td>
<td>3 E E 600</td>
<td></td>
</tr>
<tr>
<td>Semester X</td>
<td>Semester X</td>
<td></td>
</tr>
<tr>
<td>3 EEO 500 level Core</td>
<td>3 Systems 500 level Core</td>
<td></td>
</tr>
<tr>
<td>3 One from EEO Course Group</td>
<td>3 One from Systems Course Group</td>
<td></td>
</tr>
<tr>
<td>3 E E 600</td>
<td>3 E E 600</td>
<td></td>
</tr>
</tbody>
</table>

B.S. E ENG can be conferred at the end of the 8th semester and 12 of 31 credits towards M.S. E ENG have been completed leaving 18 credits to complete. Course titles are in Appendix C, Table 3. B.S. E ENG technical electives should satisfy the EEO or Systems courses in the integrated program. Bolded courses will double count towards B.S. and M.S. ENG degrees. No more than three 400-level courses can be taken to satisfy the 31 credits MS requirement.
APPENDIX A: BACHELOR OF SCIENCE DEGREE REQUIREMENTS

Note: All courses are 3 credits unless otherwise noted. As indicated previously, twelve credits in the IUG program can apply to both the Bachelor of Science degree and the Master of Science degree. Refer to the Reduced Course Load portion of Section II for more details.

General Education & Entrance to Major Requirements (45 credits)

- **English** (9 credits)
  
  ENGL 015 [GWS] Rhetoric and Composition (3 credits) or ENGL 030 [GWS]
  ENGL 202C [GWS] Effective Writing: Technical Writing (3 credits)
  CAS 100 [GWS] Effective Speech (3 credits)

- **Mathematics** (8 Credits)
  
  MATH 140 [GQ] Calculus With Analytic Geometry I (4 credits)
  MATH 141 [GQ] Calculus with Analytic Geometry II (4 credits)

- **Natural Sciences** (14 Credits)
  
  PHYS 211 [GN] General Physics: Mechanics (4 credits)
  PHYS 212 [GN] General Physics: Electricity and Magnetism (4 credits)
  PHYS 213 [GN] General Physics: Fluids and Thermal Physics (2 credits)
  CHEM 110 [GN] Chemical Principles I (3 credits)
  CHEM 111 [GN] Experimental Chemistry I (1 credit)

- **Arts†**
  
  6 credits of any courses with a GA suffix

- **Humanities†**
  
  6 credits of any courses with a GH suffix

- **Social & Behavioral Sciences†**
  
  6 credits of any courses with a GS suffix

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

† Students may apply 9-6-3 rule.
• **General Electives**
  1 credit of any non-remedial courses

• **SSET 295 (1 credit)**
  This is required for any student who enrolls as a freshman at Penn State Harrisburg.

**Major Requirements (87 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220 [GQ]</td>
<td>Matrices</td>
<td>2-3</td>
</tr>
<tr>
<td>MATH 230</td>
<td>Calculus and Vector Analysis</td>
<td>4</td>
</tr>
<tr>
<td>MATH 250</td>
<td>Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>STAT 200</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>EDSGN 100</td>
<td>Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>E MCH 211</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 214 [GN]</td>
<td>General Physics: Fluids and Thermal Physics</td>
<td>2</td>
</tr>
<tr>
<td>CMPSC 121 [GQ]</td>
<td>Introduction to Programming Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CMPEN 271</td>
<td>Introduction to Digital Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMPEN 275</td>
<td>Digital Design Laboratory (1 credit)</td>
<td>1</td>
</tr>
<tr>
<td>E E 315 or [if E E 210 then E E 314]</td>
<td>Electrical Signals and Circuits with Lab</td>
<td>5</td>
</tr>
<tr>
<td>E E 310</td>
<td>Electronic Circuit Design I</td>
<td>4</td>
</tr>
<tr>
<td>CMPEH 472</td>
<td>Microprocessors</td>
<td>4</td>
</tr>
<tr>
<td>E E 341</td>
<td>Semiconductor Device Principles</td>
<td>3</td>
</tr>
<tr>
<td>E E 330</td>
<td>Engineering Electromagnetics</td>
<td>4</td>
</tr>
<tr>
<td>E E 352</td>
<td>Signals and Systems: Continuous and Discrete-Time</td>
<td>4</td>
</tr>
<tr>
<td>E E 485</td>
<td>Energy Systems and Conversion</td>
<td>3</td>
</tr>
<tr>
<td>E E 311</td>
<td>Electronic Circuit Design II</td>
<td>3</td>
</tr>
<tr>
<td>E E 405</td>
<td>Capstone Proposal Preparation</td>
<td>1</td>
</tr>
<tr>
<td>E E 461</td>
<td>Electronic Communications I</td>
<td>3</td>
</tr>
<tr>
<td>E E 481</td>
<td>Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 436</td>
<td>Communications and Networking</td>
<td>3</td>
</tr>
<tr>
<td>E E 406W</td>
<td>Electrical Engineering Capstone Design</td>
<td>3</td>
</tr>
</tbody>
</table>

• **Technical Electives** (9 credits)

Three courses at 400 level (9 credits) in consultation with an academic adviser and in support of the student's interests. These courses are typically taken in semesters 7 and/or 8.
**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 can be satisfied simultaneously with any of the above requirements or any course in the degree requirements.
- Writing Across the Curriculum requirement is satisfied by E E 406W, a required course in the Electrical Engineering degree program.
APPENDIX B: BACHELOR OF SCIENCE TYPICAL SCHEDULE

The following table shows a typical class schedule for each semester in a 4-year curriculum.  
*Note: Bold-typed courses require a grade of C or better.*

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Semester II</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>CHEM 110 Chemical Principles GN</em></td>
<td>CAS 100 — Effective Speech GWS</td>
</tr>
<tr>
<td><em>CHEM 111 Experimental Chemistry GN</em></td>
<td>EDSGN 100 Introduction to Engineering Design</td>
</tr>
<tr>
<td>ENGL 015 Rhetoric and Composition or 030 Honors Freshman Composition GWS</td>
<td>*MATH 141 Calculus with Analytic Geometry II GQ</td>
</tr>
<tr>
<td><em>MATH 140 Calculus With Analytic Geometry I GQ</em></td>
<td><em>PHYS 211 General Physics: Mechanics GN</em></td>
</tr>
<tr>
<td>Humanities GH</td>
<td>Arts GA</td>
</tr>
<tr>
<td>Health and Physical Activity GHA</td>
<td>Semester II Total</td>
</tr>
<tr>
<td>First-Year Seminar</td>
<td>17</td>
</tr>
<tr>
<td>Semester I Total</td>
<td>16.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Semester IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPEN 271 Introduction to Digital Systems</td>
<td>CMPSC 121 Introduction to Programming Techniques (recommended) GQ or CMPSC 201 Computer Programming for Engineers Using C GQ or CMPSC 202 Programming for Engineers with FORTRAN GQ</td>
</tr>
<tr>
<td>CMPEN 275 Digital Design Laboratory</td>
<td>ECON 102 Introductory Microeconomic Analysis and Policy or ECON 104 Introductory Macroeconomic Analysis and Policy GS-III or 014 Principles of Economics GS</td>
</tr>
<tr>
<td>E MCH 211 Statics</td>
<td>ENGL 202C — Technical Writing GWS</td>
</tr>
<tr>
<td>MATH 220 Matrices</td>
<td>MATH 250 Ordinary Differential Equations</td>
</tr>
<tr>
<td>MATH 230 Calculus and Vector Analysis</td>
<td>PHYS 213 General Physics: Fluids and Thermal Physics GN</td>
</tr>
<tr>
<td>PHYS 212 General Physics: Electricity and Magnetism GN</td>
<td>PHYS 214 General Physics: Wave Motion and Quantum Physics GN</td>
</tr>
<tr>
<td></td>
<td>SSET 295 Internship</td>
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<tr>
<td></td>
<td>Semester IV Total</td>
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<table>
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<th>Semester III Total</th>
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<tbody>
<tr>
<td>17</td>
<td>17</td>
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<table>
<thead>
<tr>
<th>Semester V</th>
<th>Semester VI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E E 315 Electrical Signals and Circuits with Lab</strong></td>
<td><strong>E E 310 Electronic Circuit Design I</strong></td>
</tr>
<tr>
<td>Or (if <strong>E E 210 Circuits and Devices</strong> or equivalent was taken) then</td>
<td><strong>E E 330 Engineering Electromagnetics</strong></td>
</tr>
<tr>
<td><strong>E E 314 Signals and Circuits II</strong> (9 weeks)</td>
<td><strong>E E 352 Signals and Systems:</strong> Continuous and Discrete-Time</td>
</tr>
<tr>
<td><strong>E E 341 Semiconductor Device Principles</strong></td>
<td><strong>E E 485 Energy Systems and Conversion</strong></td>
</tr>
<tr>
<td>CMPEH 472 Microprocessors</td>
<td>Social and Behavioral Science GS</td>
</tr>
<tr>
<td><strong>MATH 444 Mathematical Statistics and Applications I</strong> or <strong>MATH 446 Introduction Statistics I</strong> or <strong>STAT 200 Elementary Statistics GQ</strong></td>
<td><strong>Semester VI Total</strong></td>
</tr>
<tr>
<td>SSET 295 Internship (if not previously done)</td>
<td>18</td>
</tr>
<tr>
<td><strong>Semester V Total</strong> (1)</td>
<td><strong>Semester VI Total</strong></td>
</tr>
<tr>
<td>13-16</td>
<td>18</td>
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<table>
<thead>
<tr>
<th>Semester VII</th>
<th>Semester VIII</th>
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</thead>
<tbody>
<tr>
<td><strong>E E 311 Electronic Circuit Design II</strong></td>
<td><strong>CMPSC 436 Communications and Networking</strong></td>
</tr>
<tr>
<td><strong>E E 405 Capstone Proposal Preparation</strong></td>
<td><strong>E E 406W Electrical Engineering</strong></td>
</tr>
<tr>
<td><strong>E E 461 Electronic Communications I</strong></td>
<td><strong>Capstone Design</strong></td>
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<td><strong>E E 481 Control Systems</strong></td>
<td>Technical Elective-II</td>
</tr>
<tr>
<td>Technical Elective-I</td>
<td>Technical Elective-III</td>
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<td>Humanities GH</td>
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<td>Health and Physical Activity GHA</td>
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<td><strong>Semester VIII Total</strong></td>
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<td>16.5</td>
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*Advising Notes: Bold type requires a grade of C or better.*

* Italics indicate courses that satisfy both major and General Education requirements.*
APPENDIX C: MASTER OF SCIENCE DEGREE REQUIREMENTS

The MS E ENG program at Penn State Harrisburg is structured into two areas of concentration to fully take advantage of the specialty areas represented by the EE graduate faculty. The areas are Electronics-Electromagnetics-Optics (EEO) and Systems. The program requires 31 credits, including 24 course credits with at least 15 credits at the 500 level, 1 colloquium credit (E E 500), and 6 thesis credits (E E 600). All students are required to take a 500-level analysis course (EMCH 524A) in addition to prescribed courses in one of the two concentration areas. The prescribed courses are intended to establish the fundamentals of the technical areas. To incorporate some breadth into the program, students are required to take at least one course in the second concentration area.

Original research, usually requiring at least two semesters of work (nominally 6 credits), is expected for a thesis. The work should be an in-depth investigation intended to extend the state of knowledge in some specialty area. The EE program has established a six-year time limit for completion of the M.S. degree. Any extension beyond six years requires the approval of the EE program Graduate Faculty.

Students must maintain a minimum grade point average (GPA) of 3.00 or better on a 4.00 scale in 500- and 400-level courses listed on their Plan of Study.

Penn State Harrisburg’s MS E ENG program is distinct and independent of the MSEE program offered at the University Park campus.

As part of the degree requirements, students must complete the Scholarship and Research Integrity (SARI) requirement as described below.

Scholarship and Research Integrity (SARI) Requirement

The SARI program at Penn State is designed to offer graduate students comprehensive, multilevel training in the responsible conduct of research, in a way that is tailored to address the issues faced by individual disciplines. The program is implemented by PSU colleges and graduate programs in a way that meets the particular needs of students in each unit. In general, SARI programs have two parts: an online program to be completed in the first year of graduate study; to be followed by five hours of discussion-based Responsible Conduct of Research (RCR) education prior to degree completion. The SARI Resource Portal provides information, teaching tools, and links to other resources to support SARI program activities, as well as access to an online training program provided by the Collaborative Institutional Training Initiative (CITI), which most programs will use for first-year training.
<table>
<thead>
<tr>
<th>Program Requirements</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis</td>
<td></td>
</tr>
<tr>
<td>EMCH 524A</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Concentration Areas</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Electronics, Electromagnetics and Optics (EEO)</strong></td>
<td></td>
</tr>
<tr>
<td>Two from the following: E E 521, E E 531, E E 541</td>
<td></td>
</tr>
<tr>
<td>Two from the following: E E 560, E E 580, E E 588</td>
<td>6.0</td>
</tr>
<tr>
<td>E E 510</td>
<td></td>
</tr>
<tr>
<td>E E 520</td>
<td></td>
</tr>
<tr>
<td>E E 521</td>
<td></td>
</tr>
<tr>
<td>E E 522</td>
<td></td>
</tr>
<tr>
<td>E E 531</td>
<td></td>
</tr>
<tr>
<td>E E 534</td>
<td></td>
</tr>
<tr>
<td>E E 537</td>
<td></td>
</tr>
<tr>
<td>E E 538</td>
<td></td>
</tr>
<tr>
<td>E E 541</td>
<td></td>
</tr>
<tr>
<td>E E 542</td>
<td></td>
</tr>
<tr>
<td>Maximum of 6 Credits from:</td>
<td>12.0</td>
</tr>
<tr>
<td>E E 420</td>
<td></td>
</tr>
<tr>
<td>E E 421</td>
<td></td>
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<td>E E 430</td>
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<tr>
<td>E E 432</td>
<td></td>
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<tr>
<td>E E 438</td>
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<td>E E 441</td>
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<td>E E 442</td>
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<tr>
<td>Maximum of 6 Credits from:</td>
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<tr>
<td>E E 453</td>
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<td>E E 456</td>
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<td>E E 458</td>
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<tr>
<td>E E 460</td>
<td></td>
</tr>
<tr>
<td>E E 480</td>
<td></td>
</tr>
<tr>
<td>E E 481</td>
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</tr>
<tr>
<td>E E 488</td>
<td></td>
</tr>
<tr>
<td>Math 430</td>
<td></td>
</tr>
<tr>
<td>Math 444</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td>E E 500/-E E 400-level courses from list on Table 3</td>
<td>3.0</td>
</tr>
<tr>
<td>Colloquium</td>
<td></td>
</tr>
<tr>
<td>E E 500</td>
<td>1.0</td>
</tr>
<tr>
<td>Thesis Research</td>
<td></td>
</tr>
<tr>
<td>E E 600</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total credits</strong>:</td>
<td>31.0</td>
</tr>
</tbody>
</table>

Note: No more than three 400-level courses (9 credits) may be taken to satisfy the MS E ENG degree requirements.
At least one course must be taken in a different concentration area.

**Table 3. Complete List of Courses, including electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>E E 410</td>
<td>Linear Electronic Design</td>
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<tr>
<td>E E 413</td>
<td>Power Electronics</td>
<td>3</td>
</tr>
<tr>
<td>E E 420</td>
<td>Electro-optics: Principles and Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 421</td>
<td>Optical Fiber Communications</td>
<td>3</td>
</tr>
<tr>
<td>E E 430</td>
<td>Principles of Electromagnetic Fields</td>
<td>3</td>
</tr>
<tr>
<td>E E 432</td>
<td>UHF and Microwave Engineering</td>
<td>3</td>
</tr>
<tr>
<td>E E 438</td>
<td>Antenna Engineering</td>
<td>3</td>
</tr>
<tr>
<td>E E 441</td>
<td>Semiconductor Integrated Circuit Technology</td>
<td>3</td>
</tr>
<tr>
<td>E E 442</td>
<td>Solid State Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 453</td>
<td>Fundamentals of Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>E E 456</td>
<td>Introduction to Neural Networks</td>
<td>3</td>
</tr>
<tr>
<td>E E 458</td>
<td>Digital Image Processing and Computer Vision</td>
<td>3</td>
</tr>
<tr>
<td>E E 460</td>
<td>Communication Systems II</td>
<td>3</td>
</tr>
<tr>
<td>E E 480</td>
<td>Linear Systems: Time Domain and Transform Analysis</td>
<td>3</td>
</tr>
<tr>
<td>E E 481</td>
<td>Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>E E 483</td>
<td>Introduction to Automation and Robotics Systems</td>
<td>3</td>
</tr>
<tr>
<td>E E 484</td>
<td>Control System Design</td>
<td>3</td>
</tr>
<tr>
<td>E E 488</td>
<td>Power Systems Analysis I</td>
<td>3</td>
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<tr>
<td>E E 489</td>
<td>Power Systems Analysis II</td>
<td>3</td>
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<tr>
<td>E E 496</td>
<td>Independent Studies</td>
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<tr>
<td>MATH 414</td>
<td>Introduction to Probability Theory</td>
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<tr>
<td>E E 500</td>
<td>Colloquium</td>
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<tr>
<td>E E 510</td>
<td>Linear Integrated Circuits</td>
<td>3</td>
</tr>
<tr>
<td>E E 520</td>
<td>Electro Optics--Systems and Computing</td>
<td>3</td>
</tr>
<tr>
<td>E E 521</td>
<td>Fiber Optics and Integrated Optics</td>
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</tr>
<tr>
<td>E E 531</td>
<td>Engineering Electromagnetics</td>
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<td>E E 534</td>
<td>Conformal Antennas</td>
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<tr>
<td>E E 537</td>
<td>Numerical and Asymptotic Methods of Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>E E 538</td>
<td>Antenna Engineering</td>
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</tr>
<tr>
<td>E E 541</td>
<td>Manufacturing Methods in Microelectronics</td>
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</tr>
<tr>
<td>E E 542</td>
<td>Semiconductor Devices</td>
<td>3</td>
</tr>
<tr>
<td>E E 551</td>
<td>Wavelets, Filter Banks and Multi-Resolution Analysis</td>
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<tr>
<td>E E 553</td>
<td>Topics in Digital Signal Processing</td>
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</tr>
<tr>
<td></td>
<td>Prerequisite: E E 453</td>
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</tr>
<tr>
<td>E E 556</td>
<td>Graphs, Algorithms and Neural Networks</td>
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</tr>
<tr>
<td></td>
<td>Prerequisite: none</td>
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</tr>
<tr>
<td>E E 560</td>
<td>Probability, Random Variables and Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>E E 561</td>
<td>Information Theory</td>
<td>3</td>
</tr>
<tr>
<td>E E 562</td>
<td>Detection and Estimation Theory</td>
<td>3</td>
</tr>
<tr>
<td>E E 568</td>
<td>Digital Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>E E 580</td>
<td>Linear Control Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>E E 581</td>
<td>Optimal Control</td>
<td>(3)</td>
</tr>
<tr>
<td>E E 587</td>
<td>Nonlinear Control And Stability</td>
<td>(3)</td>
</tr>
<tr>
<td>E E 588</td>
<td>Power Systems Control and Operation</td>
<td>(3)</td>
</tr>
<tr>
<td>E E 594</td>
<td>Research Projects</td>
<td>(1-3)</td>
</tr>
<tr>
<td>E E 596</td>
<td>Individual Studies</td>
<td>(1-9)</td>
</tr>
<tr>
<td>E E 597</td>
<td>Special Topics (course names &amp; numbers vary from semester)</td>
<td></td>
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<tr>
<td>E E 600</td>
<td>Thesis Research</td>
<td>(1-15)</td>
</tr>
<tr>
<td>E MCH 524A</td>
<td>Mathematical Methods in Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>E E 500</td>
<td>Colloquium</td>
<td>(1)</td>
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<tr>
<td>x x 5xx</td>
<td>500-level courses in ENGINEERING, COMPUTER SCIENCE, and MATHEMATICS (must be preapproved)</td>
<td></td>
</tr>
</tbody>
</table>
Graduate Council
Program, Option, or Minor Proposal Form

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

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

College/School: College of the Liberal Arts
Department or Instructional Area: English

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: ____________________
Adoption of the dual-title graduate degree program in African American and Diaspora Studies (AF AM) for the Ph.D.
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
Garrett Sullivan
Printed name
Signature
Date: 3/20/14

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Jennifer Wagner-Lawlor
Printed name
Signature
Date: 3/20/2014

Approved by College/School Dean/Chancellor (or Designee):
Christopher Long
Printed name
Signature
Date: 3/21/14
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

C. Andrew Cole  
Printed name  
Signature  
Date: 11/20/2014

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

Joan M. Redwing  
Printed name  
Signature  
Date: 11/26/2014

Noted by Dean of the Graduate School:

Regina Vasilatos-Younken  
Printed name  
Signature  
Date: 12/1/2014
A proposal to the Graduate Council by the Graduate Program in English to Adopt the Dual-Title Graduate Degree Program in African American and Diaspora Studies

Submitted by the Department of English
Mark Morrisson, Head, mxm61@psu.edu
A proposal to the Graduate Council by the Graduate Program in English to Adopt the Dual-Title Graduate Degree Program in African American and Diaspora Studies

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I. Program Justification and Objectives

A. The departmental and interdepartmental context

The Pennsylvania State University doctoral (Ph.D.) program in English aims (a) to provide students with the conceptual and methodological tools they will need to produce scholarly work in the often overlapping domains of English and American literature and culture; literary theory and cultural studies; and rhetoric and composition; (b) to help them develop a comprehensive understanding of their field(s) of inquiry; and (c) to guide them in using their specialized research skills to produce dissertations of the highest quality. The program’s primary objective is to prepare graduates for academic positions at colleges and universities.

The proposed dual-title Ph.D. program in English and African American and Diaspora Studies builds on existing strengths in the Department of English, and on existing links between English and African American and Diaspora Studies, to create a new pathway for students to develop professional and scholarly expertise in the study of African American life. In concert with the Africana Research Center, faculty in English are actively involved in a variety of scholarly initiatives, including the biennial Celebrating African American Literature (CAAL) conference, the most recent iteration of which focused on “African American and Afro-Caribbean Poetry” (October, 2013); and the African American Tradition Series summer conferences, inaugurated in 1994. Moreover, the English department is a sponsor of the African American Literature and Culture Society and has had faculty involved in its leadership. Productive synergies between the English and African American and Diaspora Studies departments have led to an increasing number of faculty sharing lines between the departments. The proposed dual-title Ph.D.
program will offer our doctoral students a clear and rigorous path to a broader and truly multidisciplinary perspective on their doctoral studies.

B. Program justification

1. The College context

The 2008-13 strategic plan for Penn State’s College of the Liberal Arts announces the aspiration of moving from national prominence to national leadership. It announces further that two key steps to achieving this goal are achieving national leadership in graduate education and recruiting and retaining top faculty, and that multi-disciplinarity is a key value organizing the pursuit of this goal. The proposed dual-title Ph.D. program in English and African American and Diaspora Studies will be a valuable resource in the pursuit of national leadership.

The proposed dual-title Ph.D. program will raise the profile and improve the quality of graduate education in the College of the Liberal Arts in straightforward ways. It will improve the quality of graduate education by enhancing or supplementing the various approaches to the graduate-level study of African American culture that have emerged at Penn State over the last several years. The university offers a great many resources for this sort of work, but they currently exist in a loose array spread across otherwise unrelated fields of study. The proposed collaboration will systematize these resources in the college, and organize them into a coherent field of study in which students can receive training and credentialing.
The proposed dual-title Ph.D. program in English and African American and Diaspora Studies will help recruit and retain top faculty in similarly straightforward ways. Top scholars relish the opportunity to work with graduate students. And they prize the opportunities for dynamic intellectual exchange and exploration that most readily emerge and flourish on campuses with thriving graduate programs. Formalizing these opportunities in areas related to African American Studies will help the college attract scholars in three related, overlapping, but non-identical populations: scholars with interests in African American studies, broadly construed; scholars who value being a part of a diverse, vital, and vibrant campus community; and scholars from under-represented populations.

The proposed dual-title Ph.D. in English and African American and Diaspora Studies will not just reflect the commitment to multi-disciplinarity that organizes the pursuit of national leadership. It will also build the commitment into the structure of the program. As a partnership between otherwise independent areas of study, the proposed program will institutionalize a form of multi-disciplinarity that promotes interdisciplinary and trans-disciplinary cross-fertilization as well as resource sharing, and that is growing in popularity in the African American Studies community. The doctoral program in African American Studies at Yale has a similar structure, and has produced a number of remarkable and promising scholars in recent years while promoting intellectual exchanges across traditional disciplinary boundaries.

2. Justification for the degree title

The primary advantages of dual-title degrees include the intellectual and academic advantages of interdisciplinarity, strengthening the reputation of individual programs/departments through
innovative degree programs, increased recruitment of quality graduate students, and improved placement of doctoral graduates. The dual-title Ph.D. in English and African American and Diaspora Studies will address the literatures and cultures of black America. The new waves of transnational migrations of black people from Latin America, the Caribbean, and Africa to the United States, Europe, and elsewhere have increasingly influenced the interdependent contemporary world and its diverse patterns and politics of representation. These new population movements have compelled scholars to rethink conventional debates about freedom, citizenship, experience, and knowledge.

The dual-title Ph.D. aims to produce Penn State doctoral graduates with a competitive advantage for English and African American Studies-related employment in academia and elsewhere. The program uses the research projects and institutional networks of English and African American and Diaspora Studies graduate faculty to provide research opportunities for Penn State doctoral students.

C. Program objectives

The principal aim of the proposed dual-title Ph.D. in English and African American and Diaspora Studies is to provide graduate students in English with the opportunity to formalize interdisciplinary components to their graduate training that will enhance their scholarly work and increase their competitiveness on the job market. It will do this by combining the resources of English and African American and Diaspora Studies into a formal structure for training graduate students to describe, analyze, and evaluate the practices, phenomena, and policies that both issue from and structure the cultural practices of African-descended peoples in the
Americas. This training will cultivate breadth by pushing students to think across disciplines, domains of practice, and historical eras. But it will balance this breadth with rigor: it will combine systematic training in the best research methods with a thorough grounding in the techniques and intellectual resources of state-of-the-art scholarship.

The proposed dual-title Ph.D. in English and African American and Diaspora Studies has two broad learning objectives at its core (in addition to the objectives that animate the regular doctoral program in English). First, students will leave the program with an expert understanding of (a) the literature and culture of African-descended populations in the United States and the wider Americas as well as of transnational cultural formations like the Black Atlantic world; and (b) the history, content, conceptual options, and ethical stakes of the theoretical debates about the best ways to study the cultural productions of African American culture. Second, graduating students will have acquired the skills and content mastery necessary to produce new knowledge within the intersecting domains of African American Studies and English. Thus, this dual-title Ph.D. does not duplicate any other program of graduate study at this institution.

With these learning objectives at its core, the dual-title Ph.D. in English and African American and Diaspora Studies will also satisfy several broader aims. As a program committed to integrating knowledge produced across disciplines, it will reinforce and deepen the expertise that students acquire and that scholars typically cultivate in the traditional disciplines. It will provide an intellectual and physical location where inherently interdisciplinary scholarship can
assist in broadening graduates’ academic credentials. The dual-title degree grounded both in
English and in African American and Diaspora Studies will acknowledge and foster scholarly
work across disciplines and build on existing strengths in the partnering departments. Graduate
students in English will gain valuable experience in applying interdisciplinary theories and
research methods, and the dual-title degree will provide students with an opportunity to work
within a pedagogical framework that also encourages an interdisciplinary approach to teaching.

D. Size of program and impact on course offerings and faculty load

The proposed dual-title Ph.D. in English and African American and Diaspora Studies expects to
enroll up to three students each year, drawn either from the ranks of existing graduate
students in English who have not yet passed their candidacy exams or from newly admitted
students. The three required graduate courses for the dual-title program will be taught by
graduate faculty in African American and Diaspora Studies, and so will make no additional
demands on teaching resources in English; additionally, four of the electives for the dual-title
Ph.D. are offered by the English program. Moreover, faculty advising responsibilities should
not substantially increase, insofar as they will distributed across the English and African
American and Diaspora Studies programs.

E. Student recruitment and employment prospects

Students will enter the proposed program either from the ranks of existing graduate students in
English who have not yet passed their candidacy exams or from students newly admitted to the
department. Students of either type will have to declare their intention and secure permission
to complete the dual-title program in accordance with the requirements detailed below. The
program will be advertised on the web pages of the departments of English and African American Studies, as well as on the web pages of other units and in the Graduate Degree Programs Bulletin. Professional meetings, conferences, and undergraduate programs in English and in African American Studies will also be mined for recruitment opportunities.

The Department of English is already cooperating with the Department of African American and Diaspora Studies to enrich the experiences of its graduate students. In a joint venture that also includes the Africana Research Center, the Richards Civil War Era Center, and the departments of History and Philosophy, English and African American and Diaspora Studies will support students interested in African American Studies through sponsorship of workshops and programming that will lead to a recurring national (and international) conference for networking and showcasing cutting-edge scholarship. The recurring conference and the dialogue across disciplines will ultimately serve to establish a network for the dual-title Ph.D., both in terms of new student recruitment and graduate student placement. It will therefore enhance the potential for Penn State graduate students to establish productive professional relationships that lead to better placement opportunities.

The broad training that this program promises will naturally enhance the job market experience: graduates will qualify for a wider selection of jobs across academic disciplinary and interdisciplinary units and in the larger employment marketplace. Successful graduate placement will make the program more attractive in terms of recruiting the brightest students and scholars to the program, and this in turn will raise the prestige of the program and render it
more likely to attract a more diverse array of quality students. The pending retirement of the first generation of African American and Africana Studies faculty across the United States would place our dual-title graduate program in a strategic position to contribute to the development and production of the next generation of scholars for these academic units.

F. Costs and funding

While the dual-title program might require some students to take additional time to complete their degrees, they will not incur additional costs by participating in the program. The Department of English will distribute its funding awards in accordance with its standing practices for duly admitted graduate students, and the Department of African American and Diaspora Studies will supplement this funding from its own awards to support students during any additional time to completion. Accordingly, graduate funding for students in the dual-title degree program will be provided by both the English Department and the African American and Diaspora Studies Department. The departments will work closely together to ensure that student support packages are comprehensive and properly coordinated across units. Advisers will help students select their courses in order to ensure that all degree requirements are satisfied in a timely manner.

Students supported by funds from the English program will perform teaching and other academic duties determined by the English Department graduate officer. Students supported by funds from the Department of African American and Diaspora Studies will perform teaching and other academic duties determined by the head of African American and Diaspora Studies. African American and Diaspora Studies currently has two assistantships and hopes to receive at
least one more after launching the dual-title program. Dual-title Ph.D. candidates will be eligible
for these assistantships. African American and Diaspora Studies will also use workload
resources to support students to teach its introductory undergraduate courses. 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 will receive every available support from the graduate faculty in English and in African
American and Diaspora Studies to write grants to support their field research and other
academic endeavors. Students will also be given every opportunity to participate in faculty
efforts to secure extramural funding. External funding secured by English and African American
and Diaspora Studies graduate faculty also may provide additional graduate funding.

II. List of New Courses
There is no need for new course proposals. The necessary seminars exist in the English graduate
curriculum or through the Department of African American Studies.

III. Proposed Graduate Bulletin Copy

English (ENGL)

GARRETT SULLIVAN, Director of Graduate Studies
136 Burrowes Building
814-863-3069; Fax: 814-863-7285

Degrees Conferred
Ph.D., M.A., M.F.A.
Integrated B. A./ M. A. in English

**Dual-Title Ph.D. (English and African American and Diaspora Studies)**

**The Graduate Faculty**

Candidates for the M.A., M.F.A., and Ph.D. in English may choose from a variety of courses in English literature and language, rhetoric and composition, and theory/cultural studies. The M.F.A. in English helps prepare candidates for professional careers as writers of fiction, poetry, or nonfiction, or for careers in academia.

The department offers a strong college-level teacher-training program, and most graduate students in English have the opportunity to serve as teaching assistants. Students usually begin by teaching basic composition courses, but there are opportunities for advanced students to teach courses in business writing, technical writing, fiction writing, poetry writing, literature, and humanities, and to serve as tutors in the Writing Center.

**Admission Requirements**

Requirements listed in this section are in addition to general Graduate Council requirements stated in the **GENERAL INFORMATION** section of the **Graduate Bulletin**.

For admission to the Graduate School, an applicant must hold either (1) a baccalaureate degree from a regionally accredited U.S. institution or (2) a tertiary (postsecondary) degree that is deemed comparable to a four-year bachelor's degree from a regionally accredited U.S. institution. This degree must be from an officially recognized degree-granting institution in the country in which it operates.

The language of instruction at Penn State is English. International applicants must take and submit scores for the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System), with the exceptions noted below. The minimum acceptable score for the TOEFL is 550 for the paper-based test, 213 for the computer-based test, or a total score of 80 with a 19 on the speaking section for the internet-based test; or a minimum composite score of 6.5 on the IELTS.

International applicants are exempt from the TOEFL/IELTS requirement who have received a baccalaureate or a graduate degree from a college/university/institution in any of the following: Australia, Belize, British Caribbean and British West Indies, Canada (except Quebec), England, Guyana, Republic of Ireland, Liberia, New Zealand, Northern Ireland, Scotland, the United States, and Wales.

Applicants should have a junior/senior grade-point average of 3.50 (on a 4.00 scale), although exceptions may be made for students with special backgrounds, abilities, and interests. Scores from the Graduate Record Examinations (GRE) Aptitude Tests (verbal and quantitative) are
required for admission. Applicants must also submit three letters of recommendation, a writing sample indicating their ability to do analytical or original work, and a statement of their professional goals.

For admission, M.A. students should have strong backgrounds in English courses: 18 credits beyond freshman composition are a minimum, but the department prefers at least 24 credits.

For admission into the M.F.A. program, students must have a baccalaureate degree (with substantial work in English), a portfolio of publishable student writing, and the intention to pursue a career as a professional writer.

To be considered for the doctoral program, students must have completed an M.A. in English, M.F.A. or its equivalent. The records of potential students should indicate promise of superior work in doctoral study.

**Master's Degree Requirements**

Candidates for the M.A. take at least 30 credits of course work. M.A. candidates must fulfill the language requirement in one foreign language. All master's candidates are required to take ENGL 501, one course in literary or rhetorical theory, two courses in periods prior to 1800, and two courses in periods after 1800. Students are also required to complete a Master's paper that will demonstrate mastery of the field.

For admission into the M.F.A. program, students must have a baccalaureate degree (with substantial work in English), a portfolio of publishable student writing, and the intention to pursue a career as a professional writer.

M.F.A. candidates are required to take 42 credits, distributed as follows:

- 3 credits ENGL 501
- 12 credits in ENGL 512, ENGL 513, or ENGL 515, at least 9 of which must be in the student's area of specialization (ENGL 512, 513, and 515 can be repeated for credit)
- 12 credits in ENGL 596 for the final project, or at least 6 credits of ENGL 596 and 6 credits of English Department graduate seminars
- 3 credits in electives (400 or 500-level courses)
- 12 credits in literature at the 500 level
- Candidates will complete a book-length manuscript of publishable quality in their area of specialization.

**Doctoral Degree Requirements**
The Ph.D. degree does not require a specific number of credits although all candidates are required to have completed English 501 (or the equivalent), one course in rhetoric or theory, two courses in periods before 1800, and two in periods after 1800. With the help of departmental graduate advisers, students select a program of seminars or reading courses. To complete their programs, students must show reading proficiency in one foreign language; pass Ph.D. candidacy and written comprehensive examinations; and write and defend a doctoral dissertation.

Integrated Undergraduate-Graduate (B.A. /M.A.) Program

The English B.A./M.A. Integrated Undergraduate Degree Program (ENGL IUG) is a five-year program designed for highly qualified and motivated students seeking to improve their writing skills significantly. The integrated B.A./M.A. degree offers talented undergraduates a chance to acquire both a B.A. in English and an M.A. in English in five years of study. The first two years of undergraduate coursework include the University General Education and Liberal Arts requirements in addition to introductory coursework in the English major. Students typically will apply to the B.A./M.A. during their 5th or 6th semester and begin graduate studies in their fourth year. In the third year students are expected to take upper-level course work in English in literature, rhetoric, or creative writing. In the fourth year, students will complete the capstone course for the English major, English 487W, and enroll exclusively in 400-level and graduate level courses in creative writing. The fifth and final year of the integrated program consists entirely of graduate level seminars. The program culminates with the submission of a Master’s paper that consists of the best creative work that each student has produced in his or her primary creative genre—either poetry or prose. In the Master’s paper, students receiving an M.A. in English with a creative writing concentration will append their creative theses with a bibliographic essay referencing primary and/or secondary sources generated by their research for the thesis. The essay can discuss the range of research modalities, including contextual background in the work itself as well as contemporary and historic literature that has influenced the style and form of the creative thesis. Sources consulted for contextual background can include library and database materials, historical research, oral history, interviews, and other bibliographic tools.

Integrated Undergraduate-Graduate (IUG) Degree Requirements

The BA in English requires a minimum of 123 credits, with 36 of those credits required for the English major—3 credits of English 200, 3 credits of English 201, 3 credits of English 221, 18 credits of English 300 level or above, 3 credits of pre-1800 300 level or above, 3 credits of post-1800 race, ethnic, or minority literatures 300 level or above, 3 credits of English 487W, senior seminar.

The B.A./M.A. consists of these 36 English credits of the B.A., plus an additional 24 English credits of M.A. work distributed as follows: 12 credits of English 512, 513, or 515. English 512, 513, and 515 can be repeated for credit. In addition, students will take 6 credits of a graduate-level literature and 6 credits of M.A. Master's paper, 596, to support work on a major project.
that will be the centerpiece of each student's culminating Master's paper. In the Master's paper, students receiving an M.A. in English with a creative writing concentration will append their Master's paper with a bibliographic essay referencing primary and/or secondary sources generated by their research for the paper. The essay can discuss the range of research modalities, including contextual background in the work itself as well as contemporary and historic literature that has influenced the style and form of the Master's paper. Sources consulted for contextual background can include library and database materials, historical research, oral history, interviews, and other bibliographic tools. 12 credits, 6 at the 400 level (412/413/415) and 6 at the 500 level (512/513/515), will be double counted between the B.A. and the M.A. The IUG B.A./M.A. consists of a total of 60 English credits.

A minimum of 141 credits are required to complete the IUG B.A/M.A. in English.

**Time of Admission to the Program**

Students shall be admitted to the English IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study.

Application to the English IUG would typically occur in the junior year after a student has completed 60 credits, enrolled in the English major, and completed two English courses in creative writing.

**Admission Requirements**

Admission to the integrated B.A./M.A. program will be based on the submission of a portfolio of creative work and a plan of study to the department's Director of Graduate Studies and the Director of the B.A./M.A. program. Applications typically will be filed during the 5th or 6th semesters of study, and applicants must have achieved a minimum of 60 credits and a 3.3 overall GPA and 3.6 GPA in English to begin the program. The English DGS will ensure that the applicant meets the minimum credit and GPA requirements for the program. The Director of the B.A./M.A. program will evaluate the quality of the student's creative work and the applicant's plan for fulfilling the requirements of the M.A. in English. The Director of the B.A./M.A. program, in consultation with the Creative Writing faculty, will have final approval for what constitutes an acceptable level of creative work and an acceptable plan for the completion of the M.A.

The application procedure requires submission of the following:

A. Support Letters from Faculty and Administrators (addressed to the department's Director of Graduate Studies and the Director of the B.A./M.A. program)

B. A Personal Statement
C. Portfolio of Creative Work  
D. A Plan of Study  
E. A transcript and degree audit printed from E-lion  
F. A current resume or curriculum vita  
G. A copy of the completed on-line Graduate School Application (GRE scores are not required).

Plan of Study and Advising

Prior to the application process, students should communicate their intent to enroll in the IUG to the English B.A. adviser and the Director of the B.A./M.A. program. The Director of the B.A./M.A. will help each student identify an appropriate series of English courses to properly prepare each student for the 500-level M.A. workshops and 500-level literature courses.

Students will be expected to maintain a minimum overall GPA of 3.3 for all undergraduate coursework and a GPA of 3.6 in English (ENGL) courses throughout the IUG program of study. Failure to do so will result in the student being advised that he/she must regain a GPA of 3.3 within one semester. If the GPA is not 3.3 or higher in general undergraduate coursework and 3.6 or higher in English coursework after that term, the student will be dropped from the IUG.

Each student enrolled in the B.A./M.A. will meet at the beginning of each term with the Director of the B.A./M.A. to discuss his or her progress through the M.A. degree and to make sure that he or she is following the plan established upon his or her admission to the B.A./M.A. program.

If the student decides not to continue on in the IUG, the student may, contingent on fulfilling all other requirements for the BA in English, graduate with a B.A. in English.

Sequence of Courses

The IUG B.A./M.A. consists of a total of 60 English credits. A minimum of 141 credits are required to complete the IUG B.A/M.A. in English.

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<th>1&lt;sup&gt;ST&lt;/sup&gt; SEMESTER</th>
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<tr>
<td>English 015, English 030, or English 137H/138H (GWS)</td>
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<th>2&lt;sup&gt;ND&lt;/sup&gt; SEMESTER</th>
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<td>English literature, writing, or rhetoric (English any level)</td>
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<th>3&lt;sup&gt;RD&lt;/sup&gt; SEMESTER</th>
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<tr>
<td>English 200, Introduction to Critical Reading</td>
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<tr>
<td>English 221, British Literature to 1798 (offered only during fall semesters)</td>
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| 4<sup>th</sup> | 6 | English 201, What is Literature?  
English 212, Introduction to Fiction Writing, or English 213, Introduction to Poetry Writing, or English 215, Introduction to Article Writing (English literature, writing, or rhetoric, any level) |
| 5<sup>th</sup> | 6 | English 3XX or 4XX, English literature, pre-1800  
English 412, Advanced Fiction Writing, English 413, Advanced Poetry Writing, or English 415, Advanced Non-fiction Writing (300-400 level English) |
| 6<sup>th</sup> | 6 | English 412, Advanced Fiction Writing, or English 413, Advanced Poetry Writing, or English 415, Advanced Non-fiction Writing (300-400 level English)  
English 3XX or 4XX, English literature (post-1800 race, gender, ethnic minority, postcolonial literatures, or rhetoric) |
| 7<sup>th</sup> | 6 | English 3XX or 4XX, English literature, writing, creative writing, or rhetoric (substitute for Traditions B: English 222, 231, 232, 235)  
English 5XX, MA writing workshop |
| 8<sup>th</sup> | 6 | English 310 H or 487W, Senior Seminar  
English 5XX, MA writing workshop |
| 9<sup>th</sup> | 9 | English 5XX, MA writing workshop  
English graduate-level literature course  
English 5XX, MA Thesis |
| 10<sup>th</sup> | 9 | English 5XX, MA writing workshop  
English graduate-level literature course  
English 5XX, MA Paper |

**Reduced Course Load**

6 credits of 400-level English courses and 6 credits of 500-level English courses will be double counted in the IUG.

**Tuition Charges**
Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student receives a graduate assistantship that would require payment of assistantship-rate graduate tuition.

**Dual-Title Graduate Degree in English and African American and Diaspora Studies**

**Admission Requirements**

In addition to the admission requirements set forth by the Graduate Council and the Department of English, students will be admitted to the dual-title degree program in African American and Diaspora Studies by an admissions committee of African American and Diaspora Studies faculty. Students can apply to the dual-title program in one of two ways. First, they can apply to the dual-title program when they apply to Penn State's English Department, following that department's admission requirements and writing a statement of purpose that addresses how the student's research and professional goals intersect with the objectives of the dual-title graduate degree program in English and African American and Diaspora Studies. Second, students who are already enrolled in the English Department can apply directly for admission to the dual-title degree before their admission to candidacy.

GPA and GRE Requirements

Applicants entering with only an undergraduate degree should have a junior/senior cumulative average of at least 3.00 (on a 4.00 scale), and, where applicable, a minimum GPA of 3.50 for all graduate work previously undertaken. Exceptions to the minimum GPA requirement may be made for students with special backgrounds, abilities, and interests. Each applicant must submit the scores of the Graduate Record Examination (GRE) taken within five years previous to the date of application.

Ph.D. Degree In addition to the English Department requirements listed above, the minimum course requirements for this dual-title Ph.D. degree are as follows: 15 credits of coursework related to African American and Diaspora Studies, all at the 500 level or above. Of these 15 credits, 9 must come from the required core course sequence in African American Studies, which comprises the following courses:

**AFRICAN AMERICAN AND DIASPORA STUDIES (AF AM)**

501. Seminar in African American and Diaspora Studies (3)

502. Blacks in the African Diaspora (3)

503. Sexual and Gender Politics (3)

Students must also take 6 elective credits, all of which must come either from the list below or otherwise have the prior approval of African American Studies supervising faculty. Over time,
additional courses may be added to the list of acceptable electives. The director of graduate studies in the Department of African American Studies will maintain a comprehensive list of approved courses. A maximum of ten (10) credits of high-quality graduate work done at a regionally accredited U.S. institution or an officially recognized degree-granting international institution may be applied toward the requirements for a master's or doctoral degree. However, credits earned to complete a previous master's degree, whether at Penn State or elsewhere, may not be applied to a second master's or doctoral degree at Penn State.

AFR 501. Key Issues in African Studies (3)

ENGL 565. Period Studies in African-American Literature (3)

ENGL 566. Genre Studies in African-American Literature (3)

ENGL 567. Thematic Studies in African-American Literature (3)

ENGL 568. Gender Issues in African-American Literature (3)

HIST 547. Slavery in the Americas (3)

HIST 549. Topics in African-American History (3)

HIST 551. The African American Freedom Struggle in the Twentieth Century (3)

HIST 572. Race and Empire in the Americas, Caribbean & Pacific (3)

PHIL 539. Critical Philosophy of Race (3)

**Foreign Language Requirements**

As required by the Department of English, students must demonstrate reading proficiency in at least one foreign language no later than the third semester of residency (not including summer semester).

**Candidacy**

The dual-title field must be fully integrated into the candidacy exam for the doctoral program. In addition, candidates for the dual-title Ph.D. in African American Studies will be required to present to their committee a portfolio of work in African American and Diaspora Studies which includes a statement of the student’s interdisciplinary research interests, a program plan, and samples of writing that indicate the student’s interest in questions taken up by scholars of African American Studies.

**Doctoral Committee Composition**

For the dual-title Ph.D. degree, at least one member of the committee must be a member of the African American and Diaspora Studies graduate faculty. The doctoral committee for a dual-title doctoral degree student must include a minimum of four faculty members, i.e., a chair and at least three additional members, all of whom must be members of the Graduate Faculty, and one of which must be on the Graduate Faculty in the Department of African American and
Diaspora Studies. If the chair is not faculty in African American and Diaspora Studies, then the committee member representing African American and Diaspora Studies must be appointed as co-chair. At least one regular member of the doctoral committee must represent a field outside the candidate’s major field of study in order to provide a broader range of disciplinary perspectives and expertise. This committee member is referred to as the “Outside Field Member.” In cases where the candidate is also pursuing a dual-title field of study, the dual-title representative to the committee may serve as the Outside Field Member. Additionally, in order to avoid potential conflicts of interest, the primary appointment of at least one regular member of the doctoral committee must be in an administrative unit that is outside the unit in which the dissertation adviser’s primary appointment is held (i.e., the adviser’s administrative home; in the case of tenure-line faculty, this is the individual's tenure home). This committee member is referred to as the “Outside Unit Member.” In the case of co-advisers, the Outside Unit Member must be from outside the administrative home(s) of both co-advisers. In some cases, an individual may have a primary appointment outside the administrative home of the student’s dissertation adviser and also represent a field outside the student’s major field of study; in such cases, the same individual may serve as both the Outside Field Member and the Outside Unit Member.

Comprehensive Exams
The African American and Diaspora Studies graduate faculty member on the student's committee is responsible for developing and administering the African American and Diaspora Studies portion of the student's comprehensive exams. The exam must incorporate written and oral components in African American and Diaspora Studies based on the student’s thematic or regional area of interest and specialization in African American and Diaspora Studies. The African American and Diaspora Studies portion of the exam will include the following components: broad history of the field, contemporary theory and debates, and either sexual and gender politics or a topic related to the student’s specific area of interest.

Dissertation
The candidate must complete a dissertation and pass a final oral defense of that dissertation on a topic that reflects their original research and education in both the English and African American and Diaspora Studies in order to earn the dual-title Ph.D. degree.

Student Aid for English Graduate Students
In addition to the fellowships, traineeships, graduate assistantships, and other forms of financial aid described in the STUDENT AID section of the Graduate Bulletin, the following awards typically have been available to graduate students in English graduate programs:

EDWIN ERLE SPARKS FELLOWSHIPS IN THE HUMANITIES (8)
Available to beginning and continuing graduate students in one of the following graduate programs: Comparative Literature, English, French, German, History, Linguistics, Philosophy,
Spanish, and Speech Communication; stipend $12,560 plus waiver of tuition. Apply to
department before February 1.

KATEY LEHMAN FELLOWSHIP

Provides approximately $13,000 plus tuition for a year's study in poetry or fiction writing
leading toward the B.A./M.A. in English or the M.F.A. in English. The Lehman Fellow will teach
one course during the fellowship year. Fellowship holders are eligible for graduate
assistantships with a similar stipend and tuition grant during the second year of study.

WILMA EBBITT AWARD

Funding to support research in rhetoric. Number and amount of awards to be determined.

BEN EUWEMA MEMORIAL SCHOLARSHIP

Travel funding for graduate degree candidates; consideration will be given to all currently
enrolled graduate students in English. Preference will be given to students at the Ph.D. thesis
stage, particularly those who need to travel to complete their research; number of awards and
amount of each will be determined each year.

FOLGER INSTITUTE FELLOWSHIPS

Penn State is a member of the Folger Institute of Renaissance and Eighteenth-Century Studies.
Graduate students in English are eligible for Folger Institute Fellowship to study in seminars and
workshops at the Folger Library, Washington, D.C.

PHILIP YOUNG MEMORIAL AWARD

Funding to support research in American Literature. Number and amount of awards will be
determined.

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.
IV. Affected Departments and Programs

The graduate program in English has contacted the following departments and programs regarding this proposal and, over a three-week consultation period, no concerns or issues were expressed regarding this dual-title degree program.

- Philosophy
- Communication Arts and Sciences
- Art Education
- African Studies
- Women’s Studies
- Comparative Literature