The effective date for new programs subject to Statewide Academic Program review is implemented in accordance with the Statewide Academic Program Review calendar.
TO: Faculty Senate

This report is prepared and distributed for the following purposes:

1. To report new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses.
2. To notify the initiating colleges, schools, and departments of approval by the University Committee on Curriculum of their requests for new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses. Any items not approved by the Faculty Senate will be reported to the appropriate college and department or school.
3. To provide information to members of the faculty in each department about academic programs and courses in all colleges, departments, and schools of the University.

Reports of the University Committee on Curriculum to the Faculty Senate are organized as follows:

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES:
Organized by colleges in alphabetical order. For a given college, academic units are organized in alphabetical order. For a given academic unit, degrees, majors, and specializations are organized in alphabetical order.

PART II - NEW COURSES:¹
Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

PART III - COURSE CHANGES:¹
Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

Not all of the above categories, and not all of the colleges and academic units, will necessarily appear in any given Senate Report.

¹One or more of the abbreviations that follow may be included in a course entry:

P: = Prerequisite monitored in SIS
C: = Corequisite
R: = Restriction
RB: = Recommended background
SA: = Semester Alias
Establish a Minor in Creative Writing in the Department of English. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its October 6, 2016 meeting.

a. Background Information:

The Minor in Creative Writing, administered by the Department of English, will offer students broad-based exposure to concepts, history, and methods of the discipline of creative writing, without requiring the intensive upper-level studies in literature required of the English major. It is intended to offer sustained creative writing experience for a range of majors within the college and the university.

Most peer institutions offer minors in creative writing. The creation of the minor responds to the gaining popularity in creative writing courses across the university, and the desire of students who are not currently English majors to have access to creative writing courses beyond a single introductory course. Creating a minor is the natural next step for the program, which has included a Bachelor of Arts Degree in English with a concentration in creative writing since 2002.

The Minor uses existing creative writing curriculum and faculty expertise for core courses situated in the English department.

The Minor in Creative Writing educates students on forms, methods, and theories of the discipline of creative writing. Students who enroll in this minor combine practical skills in creative writing across genres, with conceptual training in literary arts as a discipline.

b. Academic Programs Catalog Text:

The Minor in Creative Writing, administered by the Department of English, offers a broad introduction to and focused experience of creative writing taking into consideration the Association of Writers and Writing Programs recommendations about an effective broad-based liberal arts curriculum, focused study of literature, and co-curricular opportunities in writing and publishing. The minor curriculum includes workshops at the introductory and advanced level in multiple genres, alongside a foundation in literary study. Required core courses are designed to provide awareness of larger conversations about creative writing as a discipline as well as promote literary citizenship through involvement in co-curricular opportunities on campus and within the local writing community. The minor will broaden the experience of creative writing education to students in related fields, including film studies, professional writing and editing, and education, as well as open up creative writing study to students across the college and university.

The minor is available as an elective to students who are enrolled in bachelor’s degree programs at Michigan State University other than the Bachelor of Arts Degree in English. With the approval of the department and college that administer the student’s degree program, the courses that are used to satisfy the minor may also be used to satisfy the requirements for the bachelor’s degree. Students who plan to complete the requirements of the minor should consult the undergraduate adviser in the Department of English to apply.
Requirements for the Minor in Creative Writing

Complete a minimum of 17 credits from the following, including 6 credits at the 300-level or above.

1. The following core courses (8 credits):
   - ENG 200 Creative Writing Community 1
   - ENG 210 Foundations of Literary Study I 3
   - ENG 320D Methodologies of Literary History: Theory and History of Creative Writing 4

2. Three courses from the following groups; a minimum of two courses from Group A and one course from Group B (9 or 10 credits):
   - **Group A: Creative Writing Workshops**
     - ENG 226 Introduction to Creative Writing 3
     - ENG 223 Introduction to Creative Non-Fiction Writing 3
     - ENG 227 Introduction to Playwriting 3
     - ENG 228 Introduction to Fiction Writing 3
     - ENG 229 Introduction to Poetry Writing 3
     - ENG 392 Special Topics in English: Creative Writing 3
     - ENG 423 Advanced Creative Nonfiction Writing 3
     - ENG 428 Advanced Fiction Writing 3
     - ENG 429 Advanced Poetry Writing 3
     - ENG 434 Advanced Screenwriting (W) 3
     - FLM 334 Introduction to Screenwriting 3
   - **Group B: Electives in Creative Writing**
     - ENG 323 Readings in Nonfiction 3
     - ENG 325 Readings in Graphic Narrative 3
     - ENG 326 Readings in Drama and Performance Studies 3
     - ENG 328 Readings in Novel and Narrative 3
     - ENG 329 Readings in Poetry and Poetics 3
     - ENG 342 Readings in Popular Literary Genres 3
     - ENG 475 History of the Book: From Manuscripts to Comics 3
     - ENG 478 Literature, Technology, and Representation 3
     - FLM 230 Introduction to Film 4
     - FLM 337 Topics in Film Form 3
     - FLM 355 Studies in Film Genres 3
     - RCAH 291 Arts Workshop 3
     - TE 458 Reading, Writing, and Teaching Poetry 3
     - WRA 320 Technical Communication (W) 3
     - WRA 341 Nature and Environmental Writing 3
     - WRA 355 Writing for Publication Workshop 3
     - WRA 370 Introduction to Grammar and Editing (W) 3
     - WRA 453 Grant and Proposal Writing 3
     - WRA 471 The Rhetoric of Grammar 3
     - WRA 480 Publication Management I 3
     - WRA 481 Publication Management II 3

Effective Fall 2017.
2. Change the requirements for the Minor in Religious Studies in the Department of Religious Studies.
   
a. Under the heading Requirements for the Minor in Religious Studies make the following changes:
   
   (1) In item 1. delete the following course:
   
   REL 185 Nonprofits and Religion     3
   
   Add the following course:
   
   REL 185 Introduction to Religion and Nonprofits     3
   
   Effective Summer 2017.

ELI BROAD COLLEGE OF BUSINESS

1. Change the requirements of the Bachelor of Arts degree in Hospitality Business in The School of Hospitality Business.
   
a. Under the heading Requirements for the Bachelor of Arts Degree Hospitality Business make the following changes:
   
   (1) Replace item 3. d. with the following:
   
   One international elective course, language or study abroad course as approved by the student's academic advisor (3 credits).
   
   (2) In item 3. e. delete the following courses:
   
   HB 370 Hospitality Business v Commerce    3
   HB 458 Advanced Hospitality Business Ownership    3
   HB 460 International Lodging Development and Management    3
   
   Effective Fall 2017.

COLLEGE OF EDUCATION

1. Change the requirements for the Master of Arts degree in Education in the College of Education. The University Committee on Graduate Studies (UCGS) approved this request at its January 9, 2017 meeting.
   
   The concentrations in the Master of Arts degree in Education will be noted on the student’s academic record when the requirements for the degree have been completed.
   
a. Under the heading Requirements for the Master of Arts Degree in Education replace the entire entry with the following:
   
   The program is available only online and only under Plan B (without thesis). The student must complete a total of 30 credits approved by the MAED academic advisor distributed as follows:
   
   1. Both of the following courses (6 credits):
      
      ED 800 Concepts of Educational Inquiry    3
      ED 870 Capstone Seminar    3
   
   2. Complete a 3-credit issues course which must be outside the student's primary concentration area and approved by the MAED academic advisor.
   
   3. Complete one concentration area as approved by the MAED advisor.
(9-21 credits). Concentrations are available in Literacy Education, P-12 School and Postsecondary Leadership, Science and Mathematics Education, Special Education, Sport Coaching and Leadership, or Technology and Learning.

4. Additional credits in courses approved by the MAED advisor to complete the 30 credit minimum. Students are able to pursue a second concentration area with a 9-credit minimum or utilize prior applicable course work at MSU or another institution, pending advisor approval.

5. Successful completion and exhibition of an online portfolio.

Effective Summer 2017.

**COLLEGE OF ENGINEERING**

1. Change the requirements for the **Minor in Energy** in the College of Engineering.

a. Under the heading **Requirements for the Minor in Energy** replace the note following item 6. with the following:

A course used to fulfill requirement 4. or 5. above may not be used to fulfill this requirement. Not all courses will be available to all majors and students must meet all course prerequisites and restrictions.

Effective Fall 2017.

**COLLEGE OF MUSIC**

1. Change the requirements for the **Bachelor of Music degree in Music Education** in the College of Music. The Teacher Education Council (TEC) approved this request at its January 9, 2017 meeting.

a. Under the heading **Requirements for the Bachelor of Music Degree in Music Education** make the following changes:

(1) In item 3. e. delete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 421</td>
<td>19th Century European American Music Literature</td>
<td>2</td>
</tr>
<tr>
<td>MUS 422</td>
<td>20th Century European American Music Literature</td>
<td>2</td>
</tr>
</tbody>
</table>

Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 421</td>
<td>Music of the 19th Century</td>
<td>2</td>
</tr>
<tr>
<td>MUS 422</td>
<td>Music of the 20th Century</td>
<td>2</td>
</tr>
</tbody>
</table>

(2) In item 3. f. delete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 177</td>
<td>Introduction to Music Education</td>
<td>2</td>
</tr>
<tr>
<td>MUS 277</td>
<td>Principles of Music Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Add the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 177</td>
<td>Principles of Music Education I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 277</td>
<td>Principles of Music Education II</td>
<td>3</td>
</tr>
</tbody>
</table>

(3) In item 3. i. delete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 241</td>
<td>Advanced Class Instruction in Piano I</td>
<td>1</td>
</tr>
<tr>
<td>MUS 242</td>
<td>Advanced Class Instruction in Piano II</td>
<td>1</td>
</tr>
</tbody>
</table>

Effective Summer 2017.
COLLEGE OF NATURAL SCIENCE

1. Change the requirements for the Bachelor of Arts degree in Mathematics, Advanced in the Department of Mathematics. The Teacher Education Council (TEC) approved this request at its January 9, 2017 meeting.

   a. Under the heading Requirements for the Bachelor of Arts Degree in Mathematics, Advanced make the following changes:

      (1) Replace item 3. a. (1) with the following:

          One course of at least 3 credits in biological science, entomology, microbiology, physiology, plant biology, or integrative biology.

      (2) In item 3. a. (3) change the credits of PHY 193H from ‘3’ to ‘4’.

      (3) Replace item 3. a. (4) with the following:

          A minimum of 2 credits in laboratory courses in biological science, chemistry, entomology, microbiology, physics, physiology, plant biology, or integrative biology.

      (4) In item 3. c. (2) change the credits of MTH 153H from ‘3’ to ‘4’.

      (5) In item 3. c. (3) change the credits of MTH 254H from ‘3’ to ‘4’.

      (6) In item 3. c. (4) delete the following course:

          MTH 291 Mathematics Snapshots

      (7) In item 3. c. (4) change the credits of MTH 317H from ‘3’ to ‘4’.

      (8) Replace item 3. d. with the following:

          A minimum of 12 credits in electives. Two courses must be selected from group (1) and two courses from group (2). If approved by the Mathematics, Advanced program, any MTH course at the 400-level or above may satisfy the requirement from group (1). Students in the teacher certification program must take MTH 432 to fulfill part of this elective requirement and may not use STT 430 towards fulfillment of this requirement.

          (1) Two of the following courses (6 credits):

              MTH 416 Introduction to Algebraic Coding 3
              MTH 417 Topics in Number Theory 3
              MTH 441 Ordinary Differential Equations II 3
              MTH 442 Partial Differential Equations 3
              MTH 451 Numerical Analysis I 3
              MTH 452 Numerical Analysis II 3
              MTH 461 Metric and Topological Spaces 3
              MTH 481 Discrete Mathematics I 3
              MTH 482 Discrete Mathematics II 3
              MTH 492H Undergraduate Thesis (W) 3

          (2) Two of the following courses (6 to 8 credits):

              CMSE 820 Mathematical Foundations of Data Science 3
              CMSE 821 Numerical Methods for Differential Equations 3
              CMSE 823 Numerical Linear Algebra 3
              CSE 425 Introduction to Computer Security 3
              CSE 450 Translation of Programming Languages 3
              CSE 460 Computability and Formal Language Theory 3
              CSE 472 Computer Graphics 3
              CSE 802 Pattern Recognition and Analysis 3
              CSE 803 Computer Vision 3
              CSE 814 Formal Methods in Software Development 3
              CSE 830 Design and Theory of Algorithms 3
              CSE 835 Algorithmic Graph Theory 3
              CSE 847 Machine Learning 3
              CSE 860 Foundations of Computing 3
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

CSE 881 Data Mining 3
EC 820A Econometrics IA 3
EC 820B Econometrics IB 3
PHL 432 Logic and its Metatheory 4
PHY 410 Thermal and Statistical Physics 3
PHY 415 Methods of Theoretical Physics 4
PHY 422 Classical Mechanics II 3
PHY 471 Quantum Physics I 3
PHY 472 Quantum Physics II 3
PHY 480 Computational Physics 3
PHY 481 Electricity and Magnetism I 3
PHY 482 Electricity and Magnetism II 3
STT 861 Theory of Probability and Statistics I 3
STT 862 Theory of Probability and Statistics II 3
STT 881 Theory of Probability I 3
STT 882 Theory of Probability II 3
STT 886 Stochastic Processes and Applications 3

Effective Fall 2017.

2. Change the requirements for the Bachelor of Science degree in Mathematics, Advanced in the Department of Mathematics. The Teacher Education Council (TEC) approved this request at its January 9, 2017 meeting.

a. Under the heading Requirements for the Bachelor of Science Degree in Mathematics, Advanced make the following changes:

(1) Replace item 3. a. (1) with the following:
One course of at least 3 credits in biological science, entomology, microbiology, physiology, plant biology, or integrative biology.

(2) In item 3. a. (3) b. change the credits of PHY 193H from ‘3’ to ‘4’.

(3) In item 3. a. (3) b. change the credits of PHY 294H from ‘3’ to ‘4’.

(4) Replace item 3. a. (3) c. with the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB 273</td>
<td>Physics I</td>
</tr>
<tr>
<td>LB 274</td>
<td>Physics II</td>
</tr>
</tbody>
</table>

(5) Add the following item 3. a. (4):
A minimum of 1 credit in a laboratory course in biological science, chemistry, entomology, microbiology, physics, physiology, plant biology, or integrative biology.

(6) In item 3. c. (2) change the credits of MTH 153H from ‘3’ to ‘4’.

(7) In item 3. c. (3) change the credits of MTH 254H from ‘3’ to ‘4’.

(8) In item 3. c. (4) delete the following course:

MTH 291 Mathematics Snapshots 1

(9) In item 3. c. (4) change the credits of MTH 317H from ‘3’ to ‘4’.

(10) Replace item 3. d. with the following:
A minimum of 12 credits in electives. Two courses must be selected from group (1) and two courses from group (2). If approved by the Mathematics, Advanced program, any MTH course at the 400-level or above may satisfy the requirement from group (1). Students in the teacher certification program must take MTH 432 to fulfill part of this elective requirement and may not use STT 430 towards fulfillment of this requirement.
(1) Two of the following courses (6 credits):

- **MTH 416** Introduction to Algebraic Coding 3
- **MTH 417** Topics in Number Theory 3
- **MTH 441** Ordinary Differential Equations II 3
- **MTH 442** Partial Differential Equations 3
- **MTH 451** Numerical Analysis I 3
- **MTH 452** Numerical Analysis II 3
- **MTH 461** Metric and Topological Spaces 3
- **MTH 481** Discrete Mathematics I 3
- **MTH 482** Discrete Mathematics II 3
- **MTH 492H** Undergraduate Thesis (W) 3

(2) Two of the following courses (6 to 8 credits):

- **CMSE 820** Mathematical Foundations of Data Science 3
- **CMSE 821** Numerical Methods for Differential Equations 3
- **CMSE 823** Numerical Linear Algebra 3
- **CSE 425** Introduction to Computer Security 3
- **CSE 450** Translation of Programming Languages 3
- **CSE 460** Computability and Formal Language Theory 3
- **CSE 472** Computer Graphics 3
- **CSE 802** Pattern Recognition and Analysis 3
- **CSE 803** Computer Vision 3
- **CSE 814** Formal Methods in Software Development 3
- **CSE 830** Design and Theory of Algorithms 3
- **CSE 835** Algorithmic Graph Theory 3
- **CSE 847** Machine Learning 3
- **CSE 860** Foundations of Computing 3
- **CSE 881** Data Mining 3
- **EC 820A** Econometrics IA 3
- **EC 820B** Econometrics IB 3
- **PHL 432** Logic and its Metatheory 4
- **PHY 410** Thermal and Statistical Physics 3
- **PHY 415** Methods of Theoretical Physics 4
- **PHY 422** Classical Mechanics II 3
- **PHY 471** Quantum Physics I 3
- **PHY 472** Quantum Physics II 3
- **PHY 480** Computational Physics 3
- **PHY 481** Electricity and Magnetism I 3
- **PHY 482** Electricity and Magnetism II 3
- **STT 861** Theory of Probability and Statistics I 3
- **STT 862** Theory of Probability and Statistics II 3
- **STT 881** Theory of Probability I 3
- **STT 882** Theory of Probability II 3
- **STT 886** Stochastic Processes and Applications 3

Effective Fall 2017.

3. Establish a **Doctor of Philosophy** degree in **Physiology-Environmental Toxicology** in the Department of Physiology as a program affiliated with the Program in Environmental and Integrative Toxicological Sciences. The University Committee on Graduate Studies (UCGS) approved this request at its October 10, 2016 meeting.

Students in this program follow currently established admission and degree requirements. Refer to the statement on **Program in Environmental and Integrative Toxicological Sciences** in **The Graduate School** section of the catalog.

Effective Summer 2017.
COLLEGE OF SOCIAL SCIENCE

1. Change the requirements for the Bachelor of Arts and Bachelor of Science degree in Interdisciplinary Studies in Social Science in the College of Social Science.

   a. Under the heading Requirements for the Bachelor of Arts or Bachelor of Science Degree in Interdisciplinary Studies in Social Science make the following changes:

   (1) In item 6., under the Community Governance and Advocacy concentration make the following changes:

   (a) Under Criminal Justice add the following course:

       CJ 355 Juvenile Justice 3

   (b) Under Human Development and Family Studies delete the following course:

       HDFS 405 Work and Family 3

   (2) In item 6., delete the Human Capital and Society concentration.

       NOTE: No new students are to be admitted to the Human Capital and Society concentration effective Fall 2017. No students are to be readmitted to the concentration effective Fall 2017. Effective Fall 2019, coding for the Human Capital and Society concentration will be discontinued and the concentration will no longer be available. Students who have not met the requirements for the concentration prior to Fall 2019 will have to change their concentration.

   (3) In item 7., under the Anthropology Cognate make the following changes:

   (a) In item d. delete the following courses:

       ANP 416 Anthropology of Southern Africa 3
       ANP 453 Mesoamerican Archaeology 3

   (4) In item 7., under the Business Emphasis delete the following course:

       ACC 202 Principles of Management Accounting 3

Effective Fall 2017.
PART II - NEW COURSES

DEPARTMENT OF ACCOUNTING AND INFORMATION SYSTEMS

ACC 827  Accounting Analytics
Fall of every year. Spring of every year. 3(3-0) P: ACC 321 or ACC 821 R: Open to master's students in the Accounting Major.
Develop an accounting analytics mindset. Determine and apply appropriate data analytic techniques based upon the accounting environment and situation. Use data visualization, predictive analytics and other analytics software as appropriate.
Effective Fall 2017

DEPARTMENT OF ANIMAL SCIENCE

ANS 885  Animal Science Seminar
Spring of every year. 1(1-0) A student may earn a maximum of 2 credits in all enrollments for this course. RB: At least one year of graduate coursework and research experience. R: Open to graduate students in the Department of Animal Science.
Critical review of relevant literature and organization of communication of scientific data in animal science.
Effective Spring 2017

COLLEGE OF ENGINEERING

EGR 440  Engineering Entrepreneurship
Fall of every year. 3(3-0) R: Open to juniors or seniors in the College of Engineering.
Technical skills to enable and engage in engineering related entrepreneurship at all levels. Discovery, evaluation, and engagement of entrepreneurial opportunities starting with technology development to solve a problem, bring about desired change that is scalable, and the application of engineering principles in business related endeavors.
Effective Fall 2017

EGR 840  Engineering Entrepreneurship
Fall of every year. 3(3-0) R: Open to graduate students in the College of Engineering.
Technical skills to enable and engage in engineering related entrepreneurship at all levels. Discovery, evaluation, and engagement of entrepreneurial opportunities starting with technology development to solve a problem, bring about desired change that is scalable, and the application of engineering principles in business related endeavors.
Effective Fall 2017

DEPARTMENT OF GEOGRAPHY, ENVIRONMENT, AND SPATIAL SCIENCES

GEO 302  Climates of the World
Fall of odd years. 3(3-0) RB: GEO 206 or GEO 203 R: Not open to freshmen.
Regional climates and underlying atmospheric circulation patterns. Climate classification, physical climatic processes, spatial and temporal aspects of climate, climate changes. Sources and use of climate data.
Effective Fall 2017

GEO 303  Severe and Hazardous Weather
Spring of even years. 3(3-0) P: GEO 203 or approval of department
Extratropical cyclones, freezing precipitation and ice storms, lake effect snowstorms, cold waves, blizzards, thunderstorms, tornadoes, downbursts, tropical cyclones, floods, drought, and heat waves.
Effective Spring 2018
SCHOOL OF MUSIC

MUS 147  Class Instruction in Elementary Piano I
Fall of every year. Spring of every year. 2(2-1) R: Not open to students in the College of Music.
REINSTATEMENT  Basic notation, performance, improvisation, and transposition. Repertoire includes folksongs, simple classics, and blues.
Effective Spring 2017

MUS 850C  Harp
Fall of every year. Spring of every year. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course.
REINSTATEMENT  Private instruction in harp.
Effective Spring 2017

DEPARTMENT OF PHYSIOLOGY

PSL 331  Concepts and Critical Thinking in Physiology
Fall of every year. Spring of every year. 3(3-0) P: BS 161 or BS 181H or LB 145 RB: (PSL 101) and (BS 162 or BS 182H or LB 144) R: Open to sophomores or juniors in the Physiology Major or in the Lyman Briggs Physiology Coordinate Major. Approval of department.
Knowledge, skills, and approaches necessary to create deep understanding of biological concepts for success in advanced physiology courses
Effective Fall 2017

PSL 460  Topics in Physiology (W)
Fall of every year. Spring of every year. Summer of every year. 2(2-0) A student may earn a maximum of 4 credits in all enrollments for this course. P: (PSL 431 and (PSL 432 or concurrently)) and completion of Tier I writing requirement R: Open to seniors or juniors in the Physiology Major or in the Lyman Briggs Physiology Coordinate Major.
In-depth exploration of contemporary areas of physiology and human disease, emphasizing scientific literacy and effective written and oral communication.
SA: PSL 421, PSL 438, PSL 439, PSL 440, PSL 441, PSL 442, PSL 443, PSL 444, PSL 445, PSL 446, PSL 447, PSL 448, PSL 449
Effective Fall 2017

DEPARTMENT OF RELIGIOUS STUDIES

REL 425  Apocalypse Then and Now (W)
Spring of odd years. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen and not open to sophomores.
Apocalyptic thought and writings in ancient Christianity and the persistence of apocalyptic ideas in modern fiction and film.
Effective Fall 2016

DEPARTMENT OF SOCIOLOGY

SOC 252  Introduction to Environmental Sociology
Fall of every year. Spring of every year. 3(3-0) Key concepts, theories, methods, and findings in environmental sociology.
Effective Fall 2016

SOC 478  Climate Change and Society
Fall of every year. Spring of every year. 3(3-0) P: Completion of Tier I Writing Requirement Climate change as a societal challenge. The nature of climate change, its role in human history, and vulnerabilities of coupled human and natural systems to climate change.
Effective Fall 2017
SOC 480  Advanced Research Methods in Sociology  
Spring of every year. 3(3-0) P: SOC 281 or approval of department RB: SOC 282 or concurrently  
R: Open to sophomores or juniors or seniors.  
Advanced training in methodologies commonly used in specific sub-fields of sociology.  
Effective Fall 2017

DEPARTMENT OF SUPPLY CHAIN MANAGEMENT

SCM 460  Procurement Contracting  
On Demand. 1(1-0) P: SCM 371 or concurrently R: Open to juniors or seniors in the Department of  
Supply Chain Management or approval of department.  
Workshop in procurement contracting including terms and conditions, legal terms and  
conditions, and contracting negotiation  
Effective Fall 2017

SCM 461  Customs, Compliance and Security  
On Demand. 1(1-0) R: Open to juniors or seniors in the Department of Supply Chain Management  
or approval of department.  
Workshop in customs including the role of customs and border protection, supply security  
programs, export programs and tariffs, brokers, and trusted traders.  
Effective Fall 2017

SCM 462  End-to-End Supply Chain Management Simulation  
Fall of every year. 1(1-0) R: Open to seniors in the Department of Supply Chain Management or  
approval of department.  
Simulation exercise and competition in the design and operation of global supply chains  
Effective Fall 2017

SCM 463  Supply Chain Enterprise Resource Planning Applications  
Fall of every year. 1(1-0) R: Open to seniors in the Department of Supply Chain Management or  
approval of department.  
Workshop with hands-on experience in enterprise resource planning applications.  
Effective Fall 2017

SCM 472  Supply Chain Industry Applications  
Spring of every year. 3(3-0) P: (SCM 371 and SCM 372 and SCM 373) and completion of Tier I  
writing requirement R: Open to seniors in the Department of Supply Chain Management. Not open  
to students with credit in SCM 470.  
Integrated analysis and problem solving of supply chain management applications in  
collaboration with Engineering. Purchasing, manufacturing, logistics, and transportation  
as an integrated supply chain.  
Effective Fall 2017
PART III – COURSE CHANGES

DEPARTMENT OF ANIMAL SCIENCE

ANS 407  Food and Animal Toxicology
Fall of every year. Spring of every year. 3(3-0) P: BS 161 or LB 145 or BS 181H R: Open to juniors or seniors. 
Effective Spring 2014 Effective Spring 2018

DEPARTMENT OF ENGLISH

ENG 493  English Internship
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: Completion of Tier I writing requirement. R: Open to juniors or seniors in the Department of English or in the English Major. 
Supervised pre-professional field experience in English. 
Request the use of the Pass-No Grade (P-N) system. 
Effective Spring 2015 Effective Spring 2017

ENG 499  Senior Thesis Research (W)
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P: Completion of Tier I Writing Requirement R: Open to juniors or seniors in the English Major. Approval of department. 
Faculty-supervised research project that demonstrates ability to do independent research and submit or present a major paper. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. 
Effective Spring 2015 Effective Spring 2017

DEPARTMENT OF FINANCE

GBL 295  Business Law, Public Policy and Ethics
GBL 385  Business Law and Ethical Leadership
Fall of every year. Spring of every year. Summer of every year. 3(3-0) R: Open to sophomores in the Eli Broad College of Business and The Eli Broad Graduate School of Management and not open to students in the School of Hospitality Business and open to students in the Applied Engineering Sciences Major. R: Open to juniors or seniors in the Eli Broad College of Business and The Eli Broad Graduate School of Management and not open to students in the School of Hospitality Business and open to students in the Applied Engineering Sciences Major. 
Court systems and jurisdictions, constitutional law and product liability, Administrative law and government regulation of business. Ethics and corporate social responsibility, Court systems, jurisdiction, constitutional law, and product liability. Administrative law and government regulation, Ethical leadership, corporate social responsibility, and sustainability 
SA: GBL 395 SA: GBL 295, GBL 395 
Effective Fall 2014 Effective Fall 2018
DEPARTMENT OF FISHERIES AND WILDLIFE

FW 813  Democracy and Environment
Natural Resources and Environmental Governance
Fall of odd years. 3(3-0) RB: Exposure to social science or legal approaches to the environment. Relationship between democracy and environmental protection and management. Effects of democratic institutions on natural resource management. Relationship between governance frameworks and environmental protection and management. Assessment of political actors’ impacts on natural resource management.
Effective Fall 2009  Effective Fall 2017

FW 854  Adaptive Management of Natural Resource Systems
Uncertainty in Natural Resource Management
Fall of odd years. Spring of odd years. 3(2-2) RB: ZOL 355 RB: IBIO 355
Principles and practices of adaptive environmental assessment and management. Applications to ecosystem and natural resource management. Methods and challenges associated with accounting for uncertainty in natural resource decision making. Decision analysis, structured decision making, and adaptive management.
Effective Spring 2015  Effective Fall 2016

DEPARTMENT OF FORESTRY

FOR 412  Wildland Fire
Spring of every year. 2(2-0) P: (FOR 404 or concurrently) or (ZOL 355 or concurrently) P: (FOR 404 or concurrently) or (IBIO 355 or concurrently) R: Not open to freshmen or sophomores.
Fire in wildland forest and grassland communities as a physical and ecological process. Fire history, culture, and management. Global perspectives, strategies for prevention and suppression of wildfires. Techniques for using prescribed fire. Field trips required.
Effective Fall 2013  Effective Spring 2017

DEPARTMENT OF GEOGRAPHY, ENVIRONMENT, AND SPATIAL SCIENCES

GEO 403  Dynamic Meteorology (W)
Spring of every year. Spring of odd years. 3(3-0) P: (MTH 234 and GEO 203) and completion of Tier I writing requirement RB: GEO 405 R: Open to juniors or seniors or master’s students or doctoral students.
Principles of fluid dynamics and their application to the atmosphere.
Effective Fall 2017  Effective Spring 2019

GEO 405  Weather Analysis and Forecasting
Spring of every year. Spring of even years. 4(3-2) P: GEO 203 and (MTH 110 or MTH 116)
Dynamic and thermodynamic principles of atmospheric science applied to the development and evolution of extratropical cyclones. Laboratory sessions include analysis of current observations and satellite imagery.
Effective Fall 2017  Effective Spring 2018

GEO 432  Environmental Ethics (W)
Fall of every year. Fall of even years. 3(3-0) P: Completion of Tier I writing requirement. R: Not open to freshmen or sophomores.
Ethical dimensions of environmental and spatial issues and associated public policies
Effective Fall 2017

GEO 820  GIS and Management
Fall of odd years. 3(3-0) P: GEO 425 or approval of department RB: Students should be familiar with GIS Technology
Exploration of the professional field of geographic information science (GIS) career management opportunities, organizational structures, and applications within the public, commercial and academic sectors.
DELETE COURSE
Effective Spring 2017
GEO 821  GIS Practicum  
Spring of even years. 3(3-0) P: (GEO 425 or approval of department) and (GEO 820 or approval of department)  
RB: Students should be knowledgeable in the application of GIS technology  
Instructor-guided geographic information science (GIS) practicum connecting University faculty and students with local communities. Students are assigned a community GIS project and work collaboratively to develop a proposal, manage the project, and present the output.  
DELETE COURSE  
Effective Spring 2017

GEO 868  Spatial Regression and Modeling  
Fall of every year. 3(3-0) P: GEO 865 or approval of department  
RB: Linear regression and data analysis at graduate level  
Using spatial regression to address geographic problems. Modeling spatial processes with continuous and discrete dependent variables. Maximum likelihood estimation.  
Bayesian approaches.  
SA: GEO 867  
DELETE COURSE  
Effective Spring 2017

DEPARTMENT OF HORTICULTURE

HRT 332  Tree Fruit Production and Management  
Fall of every year. 2(2-0) 3(2-2) P: HRT 203 or HRT 251  
Commercial apple, cherry, peach, and pear production. Cultural practices to manipulate growth and development and optimize fruit yields and quality. Field trips required.  
Effective Fall 2014 Effective Fall 2017

SCHOOL OF HOSPITALITY BUSINESS

HB 105  Service Management Principles  
Fall of every year. Spring of every year. 2(2-0) RB: HB 100  
R: Open to freshmen or sophomores and open to juniors or seniors in the School of Hospitality Business.  
R: Not open to seniors.  
Effective Spring 2013 Effective Fall 2017

HB 380  Meeting and Event Planning and Management  
Fall of every year. Spring of every year. 3(3-0) P: (HB 375 or concurrently) or (MKT 300 or concurrently) or (MKT 327 or concurrently)  
R: Open to juniors or seniors in the School of Hospitality Business.  
Planning, developing, budgeting, promoting, delivering, and evaluating meetings or special events in the hospitality industry.  
Effective Summer 2014 Effective Fall 2017

HB 437  Hospitality Revenue Management  
Spring of every year. 3(3-0) P: HB 375  
R: Open to juniors or seniors in the School of Hospitality Business.  
Exposure to key management and marketing issues relating to the effective implementation of revenue management. The relationships between the revenue management function and other functions or departments in the hospitality organization. The role and job responsibilities of a revenue manager. The identification of distribution channels that hospitality organizations may use to distribute their inventory.  
Effective Fall 2016 Effective Fall 2017
PART III – COURSE CHANGES

HB 489  Hospitality Business Strategy (W)
Fall of every year. Spring of every year. 3(3-0) P: Completion of Tier I Writing Requirement RB: Completion of Level I and Level II internship. R: Open to seniors in the School of Hospitality Business.
Management problems and issues in the hospitality industry. Focus on decision-making models. Case study analysis, discussion and report writing.
Effective Spring 2013 Effective Fall 2017

HB 490  Independent Study
Fall of every year. Spring of every year. Summer of every year. On Demand. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to juniors or seniors in the School of Hospitality Business. Approval of school.
Supervised research in hospitality management and operations.
Effective Spring 2013 Effective Fall 2017

HB 492  Hospitality Business Real Estate Professional Skills Workshop
Fall of every year. Spring of every year. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to students in the Hospitality Business Real Estate Investment Management Minor. R: Open to students in the Hospitality Business Real Estate Investment Management Minor or approval of school.
Specific knowledge and analytical skills necessary to be successful in an analyst role with a consulting, real estate development, or investment advisory organization. Workshop topics include but are not limited to hospitality real estate investment, market valuation, Excel modeling, business writing, financing hospitality enterprises, asset management, and hotel industry data analytics.
Effective Fall 2016 Effective Fall 2017

DEPARTMENT OF INTEGRATIVE BIOLOGY

IBIO 328  Comparative Anatomy and Biology of Vertebrates (W)
Comparative Anatomy and Biology of Vertebrates
Spring of every year. 4(3-3) P: (BS 162 or LB 144 or BS 182H) and completion of Tier I writing requirement P: BS 162 or LB 144 or BS 182H
Comparative morphology and natural history of vertebrates. Dissection of representatives of most vertebrate classes. Comparative morphology, evolution and biodiversity of vertebrates. Dissection of representatives of most vertebrate classes.
SA: ZOL 228, ZOL 328
Effective Fall 2016 Effective Summer 2017

IBIO 341  Fundamental Genetics
Fall of every year. Spring of every year. Summer of every year. 4(4-0) Interdepartmental with Plant Biology. P: BS 161 or LB 145 or BS 181H P: (BS 161 or LB 145 or BS 181H) and (BS 162 or LB 144 or BS 182H)
Principles of heredity in animals, plants and microorganisms. Classical and molecular methods in the study of gene structure, transmission, expression and evolution.
SA: ZOL 341
Effective Fall 2016 Effective Spring 2017

DEPARTMENT OF MANAGEMENT

MGT 872  Strategy Process
Developing Competitive Strategy
Fall of every year. 1 to 3 credits. P: MBA 850 or MGT 850 R: Open to MBA students.
Strategy development and execution as a process. Identification of issues that both impede and improve the likelihood of successful strategies.
Effective Fall 2013 Effective Fall 2016
DEPARTMENT OF MARKETING

MKT 829  Marketing Technology and Analytics
Summer of every year. 2(3-0) 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. P: MBA 820 or MKT 805 R: Open to graduate students in the Eli Broad College of Business and The Eli Broad Graduate School of Management. Not open to students with credit in MKT 412.
The collection and analysis of information from the web using contemporary web-based research techniques.
Effective Summer 2012  Effective Fall 2017

SCHOOL OF MUSIC

MUS 141  Class Instruction in Piano I
Fall of every year. 1(4-0) 1(1-0) R: Open to students in the College of Music.
Use of the piano as a teaching tool.
Effective Fall 2015  Effective Summer 2017

MUS 177  Introduction to Music Education
Principles of Music Education I
Fall of every year. Spring of every year. 2(2-1)
Historical foundations, current trends, and teaching responsibilities in music education at all curricular levels.
SA: MUS 260
Effective Fall 2015  Effective Summer 2017

MUS 277  Principles of Music Education
Principles of Music Education II
Fall of every year. Spring of every year. 3(2-2) P: MUS 177
Techniques for developing instructional and management skills for teaching music. On- and off-campus clinical experiences required.
SA: MUS 339
Effective Fall 2015  Effective Summer 2017

COLLEGE OF NATURAL SCIENCE

BS 191H  Honors Cell and Molecular Biology Laboratory
Spring of every year. 2(1-3) Interdepartmental with Biochemistry and Molecular Biology and Lyman Briggs and Microbiology and Molecular Genetics. P: BS 181H or concurrently Not open to students with credit in BS 171 or LB 145. Not open to students with credit in LB 145.
Basic techniques of cellular and molecular biology including experimental design and hypothesis formulation; biochemistry, molecular biology and genetics.
SA: BS 159H, BS 111L SA: BS 159H
Effective Fall 2013  Effective Summer 2017

DEPARTMENT OF PHYSIOLOGY

PSL 421  Adult and Embryonic Stem Cells (W)
Spring of every year. 2(2-0) P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.
Topics in the physiology, cell biology, genetics, and developmental potential of adult and embryonic stems cells.
DELETE COURSE
Effective Summer 2017
PSL 438  Topics in the Biology and Cellular Physiology of Cancer (W)  
Fall of every year. Spring of every year. 2(2-0) P: (BS 161 or BS 181H or LB 145) and (PSL 431 and completion of Tier I writing requirement) RB: BMB 461 and BMB 462 R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Topics in the biology and physiology of cancer, selected from areas such as regulation of the cell cycle, oncogenes and tumor suppressors, cancer cell signal transduction, tumor progression and metastasis, and cancer genetics and genomics.  
DELETE COURSE  
Effective Summer 2017

PSL 439  Special Topics in Physiology (W)  
Spring of every year. 2(2-0) P: Completion of Tier I Writing Requirement RB: PSL 431 and PSL 432 R: Open to seniors in the Lyman Briggs Physiology Coordinate Major or in the Physiology major.  
Special topics in physiology, focusing on the process of biomedical discovery, alternative medicine, autoimmunity, or other selected topics of interest related to careers in health care or biomedical research.  
DELETE COURSE  
Effective Summer 2017

PSL 440  Topics in Cell Physiology (W)  
Spring of every year. 2(2-0) A student may earn a maximum of 4 credits in all enrollments for this course. P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Selected topics in mammalian cell physiology related to cell energetics and metabolism, molecular and cellular biology, cell growth and differentiation, or molecular physiology and functional genomics.  
DELETE COURSE  
Effective Summer 2017

PSL 441  Topics in Endocrinology (W)  
Fall of every year. 2(2-0) P: (PSL 431 and PSL 432) and completion of Tier I writing requirement R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Selected topics on the role of hormones in the regulation of growth, metabolism, differentiation, and physiological homeostasis.  
DELETE COURSE  
Effective Summer 2017

PSL 443  Topics in Respiratory Physiology (W)  
Spring of odd years. 2(2-0) P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Contemporary topics in lung airway, alveolar, and general respiratory physiology.  
DELETE COURSE  
Effective Summer 2017

PSL 444  Topics in Reproductive Physiology (W)  
Spring of every year. 2(2-0) P: (PSL 431 and PSL 432) and completion of Tier I writing requirement R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Selected topics in the physiology and development of the reproductive system.  
DELETE COURSE  
Effective Summer 2017

PSL 445  Topics in Environmental Physiology (W)  
On Demand. 2(2-0) P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R: Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.  
Selected topic in environmental physiology with an emphasis on thermoregulation.  
DELETE COURSE  
Effective Summer 2017
PART III – COURSE CHANGES

PSL 446  Topics in Sensory Physiology (W)
On Demand. 2(2-0) P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R:
Open to seniors in the Physiology Major or in the Lyman Briggs Physiology Coordinate Major.
Selected topic in the functioning of the visual system, auditory system, or other sensory systems in health and disease.
DELETE COURSE
Effective Summer 2017

PSL 447  Topics in Brain Function (W)
Summer of every year. 2(2-0) P: (PSL 431) and completion of Tier I writing requirement RB: PSL 432 R:
Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.
Selected topics on structure and function of the mammalian brain.
DELETE COURSE
Effective Summer 2017

PSL 448  Topics in Gastrointestinal Physiology (W)
Spring of odd years. 2(2-0) P: (PSL 431 and PSL 432) and completion of Tier I writing requirement R:
Open to seniors in the Physiology major or in the Lyman Briggs Physiology Coordinate Major.
Selected topics in the physiology of the digestive system.
DELETE COURSE
Effective Summer 2017

DEPARTMENT OF PLANT BIOLOGY

PLB 416L  Plant Physiology Laboratory
Spring of every year. 2(1-3) P: (CEM 143 or CEM 351 or CEM 251) and (BS 161 or LB 145 or BS 181H) and (PLB 415 or concurrently) P: (CEM 143 or CEM 351 or CEM 251) and (BS 161 or LB 145 or BS 181H) and (PLB 415 or concurrently) and (BS 171 or BS 191H or approval of department)
Experimental methods and experiment design in plant physiology and molecular biology, with emphasis in photosynthesis, water relations, plant growth, plant development, genetics and gene regulation. Communication of scientific information in written and graphical format.
Effective Fall 2015 Effective Fall 2017

DEPARTMENT OF RELIGIOUS STUDIES

REL 185  Nonprofits and Religion
Introduction to Religion and Nonprofits
Fall of every year. 3(3-0) R: Not open to seniors.
History, themes and issues in the intersection of religion, philanthropy, and nonprofit organizations in U.S. and global contexts.
Effective Fall 2015 Effective Summer 2017

REL 275  Magic and Mysticism: Western Esoteric Traditions and Practices
Magic and Mysticism: An Introduction to Esoteric Religion
Fall of every year. 3(3-0)
Surveys the history of Western esoteric traditions in Europe, England and North America including alchemy, magic, Jewish and Christian mysticisms, and secret or semisecret groups like Freemasonry. Transdisciplinary investigation of religion, science, literature, art and history. Surveys esoteric traditions in Europe, England and North America including alchemy, magic, Jewish and Christian mysticisms, and secret or semisecret groups like Freemasonry. Transdisciplinary investigation of religion, science, literature, art and history.
Effective Spring 2015 Effective Summer 2017
REL 441  Bhakti Hinduism  (WA) Devotional Hinduism  (W)
Fall of odd years. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen.
Historical, philosophical, and doctrinal development of Bhakti Hinduism (devotional Hinduism) of North India from the 12th to the 18th century.
Effective Fall 2009 Effective Summer 2017

COLLEGE OF SOCIAL SCIENCE

SSC 299  Integration of Social Science Perspectives
Fall of every year. Spring of every year. Summer of every year. 1(1-0) P: (ANP 201 or EC 201 or GEO 204 or HST 110 or PLS 200 or PSY 101 or SOC 100) and (ANP 201 or EC 201 or GEO 204 or HST 110 or PLS 200 or PSY 101 or SOC 100) P: (ANP 201 or EC 201 or EC 202 or GEO 151 or GEO 204 or HST 110 or HST 140 or HST 150 or PLS 140 or PLS 160) and (PLS 200 or PSY 101 or SOC 100 or SOC 161 or UP 100 or ANP 203 or ANP 206) R: Recommended background: two or more prerequisite courses in different disciplines. R: Open to undergraduate students in the Interdisciplinary Studies in Social Science major. R: Open to undergraduate students in the Global and International Studies in Social Science Major or in the Interdisciplinary Studies in Social Science Major or in the Interdisciplinary Studies in Social Science Major.
Multidisciplinary study. Integration of social science perspectives and policy issues.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2014 Effective Summer 2017

SOC 499  Capstone in Interdisciplinary Studies in Social Science (W)
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (SSC 299) and completion of Tier I writing requirement R: Open to seniors in the Interdisciplinary Studies in Social Science Major or approval of college. R: Open to seniors in the Interdisciplinary Studies in Social Science Major or in the Interdisciplinary Studies in Social Science Major or in the Global and International Studies in Social Science Major or approval of college.
Integration and application of interdisciplinary methods, models and theories in social science.
Effective Fall 2014 Effective Summer 2017

DEPARTMENT OF SOCIOLOGY

SOC 330  Social Stratification Social Inequality
Spring of every year. 3(3-0)
SA: SOC 330
Effective Spring 2014 Effective Fall 2017

SOC 281  Methods of Social Research I Social Research Methods
Fall of every year. 4(3-2)
Effective Spring 2014 Effective Summer 2017

SOC 282  Methods of Social Research II
Quantitative Analysis for Social Research
Spring of every year. 4(3-2) P: SOC 281
Experiments. Selected quantitative techniques of data analysis. Experiments. Selected quantitative techniques of data analysis including regression and analysis of variance.
Effective Spring 2014 Effective Summer 2017
SOC 368  Science, Technology and Society  
Fall of every year. 3(3-0) 4(4-0) Interdepartmental with Lyman Briggs. RB: (LB 133) or some familiarity with basic concepts and methods in sociology. R: Not open to freshmen or sophomores. Role of science and technology in social change. Values and ethics in contemporary perspectives, controversies, and cases. Science and technology as forms of knowledge. 
Effective Spring 2014 Effective Summer 2017

SOC 452  Environment and Society  
Advanced Seminar in Environmental Sociology  
Fall of every year. Spring of every year. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: SOC 252 or approval of department R: Not open to freshmen. 
Environmental conditions and social organization. Relation to resources, pollution, energy, and risks. Growth and limits to growth. Environmental attitudes, actions, movements, and regulation. Environmental conditions and social organization. Social relations and connection to resource use, pollution, energy, and risks. Growth and limits to growth. Environmental attitudes, actions, movements, and regulation. 
Effective Spring 2014 Effective Summer 2017

DEPARTMENT OF WRITING, RHETORIC AND AMERICAN CULTURES

WRA 101  Writing as Inquiry  
Fall of every year. Spring of every year. Summer of every year. 4(4-0) P: (WRA 1004) or designated score on English Placement test Not open to students with credit in LB 133 or MC 111 or MC 112 or RCAH 111 or WRA 195H. Not open to students with credit in LB 133 or MC 111 or MC 112 or RCAH 111 or WRA 101. Not open to students with credit in AL 110. 
The study and practice of invention, arrangement, revision, style, and delivery to help students make successful transitions to writing, reading, and researching in higher education. 
Effective Fall 2016 Effective Fall 2016

WRA 195H  Writing as Inquiry Honors  
Fall of every year. Spring of every year. 4(4-0) P: Designated score on English Placement test Not open to students with credit in LB 133 or MC 111 or MC 112 or RCAH 111 or WRA 101. Not open to students with credit in AL 110 or LB 133 or MC 111 or MC 112 or RCAH 111 or WRA 101. 
The study and practice of varieties of invention, arrangement, revision, style and delivery to help students make successful transitions to writing, reading, and researching in higher education. 
SA: ATL 195H 
Effective Summer 2016 Effective Fall 2016