

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
Meeting #12 - February 13, 2019
Approved Minutes

Present: Amanda Durik (PSYC), Steve Estes (Ex-Officio), Trude Jacobsen (HIST/SEAS), Deepak Naidu (MATH), Carol Thompson (PHYS)

Suzanne Hogan (CLAS)

Absent: Dave Ballantine (Chair/CLAS), Kristen Myers (WGST), Alicia Schatteman (PSPA)

Meeting called to order at 1:35 PM

A. Action on Minutes

Minutes from the #11 meeting on November 14, 2018, have been approved electronically and forwarded to the catalog editor.

B. Miscellaneous

Steve Estes acted as Committee Chair in the absence of Dave Ballantine.

A consent agenda was assembled for the following items: revisions to BIOS 359 (change to BIOS 459), BIOS 402X, BIOS 461, BIOS 463, BIOS 490 and footnote, BIOS 561, honors program, and major requirements; deletion of CHEM 230 and CHEM 231, revisions to CHEM 370, CHEM 493X, and new courses CHEM 310 and CHEM 311; revisions to ENV5 483X and the minor; new course GEOG 382, revisions to GEOL 483; revisions to PHYS 493X. **Motion of approval** moved by Carol Thompson, seconded by Amanda Durik, and approved by all members.

C. Curriculum - Old Business

None

D. Curriculum - New Business

Department of Biological Sciences

New course, BIOS 559, was approved. Revisions to the following courses were approved: BIOS 359 (change to BIOS 459), BIOS 370, BIOS 402X, BIOS 433, BIOS 454, BIOS 461, BIOS 463, BIOS 490 and footnote, BIOS 533, BIOS 554, and BIOS 561. Revisions to the honors program and major requirements were also approved. New courses, BIOS 478 and BIOS 578, were TABLED until assessment details are provided by the department.

Department of Chemistry and Biochemistry

The following course deletions were approved: CHEM 230 and CHEM 231. Revisions to CHEM 370 and CHEM 493X were approved. New courses CHEM 310 and CHEM 311 were also approved. The writing-infused application for CHEM 471 was TABLED until a syllabus is provided by the department.

Department of Computer Science

Revisions to CSCI 390 and CSCI 690 were TABLED until clarification regarding descriptions and credit hours are provided by the department.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
Meeting #12 - February 13, 2019
Approved Minutes

Environmental Studies

Revisions to ENVS 483X and the minor were approved.

Department of Geographic and Atmospheric Sciences

New course GEOG 382 was approved.

Department of Geology and Environmental Geosciences

Revisions to GEOL 483 were approved. The writing-infused application for GEOL 483 (*crosslisted as BIOS 402X, CHEM 493X, ENVS 483X, PHYS 493X*) was also approved.

Department of Physics

Revisions to PHYS 493X were approved.

Meeting adjourned at 2:20 PM

TABLED:

BIOS New Course Proposal: BIOS 478
New Course Proposal: BIOS 578

CSCI Course Revision: CSCI 390
Course Revision: CSCI 690

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

All University Section

Other Catalog Change

Page 26, 2018-19 Undergraduate Catalog

Limited Admissions and Limited Retention Requirements

**Medical Laboratory Sciences Major
(School of Health Sciences)**

↓

BIOS 208, Fundamentals of Biology I (3),
AND BIOS 210, Fundamentals of Biology I Laboratory (1)

↓

*CHEM 211, General Chemistry II (3),
AND *CHEM 213, General Chemistry Laboratory II (1)

~~CHEM 230, Introductory Organic Chemistry (3)~~

~~CHEM 231, Introductory Organic Chemistry Laboratory (1)~~

CHEM 310, Introductory Organic and Biological Chemistry (3)

CHEM 311, Introductory Organic and Biological Chemistry (1)

*STAT 208, Basic Statistics (3)

Rationale: CHEM 230 and CHEM 231 are being deleted and replaced by new courses, CHEM 310 and CHEM 311.

Notification: The School of Health Sciences was notified of these changes via email on March 11, 2019.

Other Catalog Change

Page 31-42, 2018-19 Undergraduate Catalog

University Graduate Requirements

↓

Writing-Infused Course List

ACCY 375. ACCOUNTANCY WRITING LAB (1). Development of

↓

ARTH 494. ART HISTORY UNDERGRADUATE SEMINAR (3). Special problems

BIOS 402X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as CHEM 493X, ENVS 483X, GEOL 483, and PHYS 493X.* Methods and theory for the teaching of interdisciplinary science in grades 6-12. Exploration of the nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges through research, discussion, and reflection. Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio. PRQ: Consent of department.

CHEM 442. PHYSICAL CHEMISTRY LABORATORY I (1). Modern experimental

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

CHEM 443. PHYSICAL CHEMISTRY LABORATORY II (1). Modern experimental

CHEM 493X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, ENVS 483X, GEOL 483, and PHYS 493X.* Methods and theory for the teaching of interdisciplinary science in grades 6-12. Exploration of the nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges through research, discussion, and reflection. Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio. PRQ: Consent of department.

COMD 429. ASSESSMENT PROCEDURES IN COMMUNICATIVE DISORDERS (3).
Fundamental concepts

↓

ENVS 444X. PRIMATE ECOLOGY AND CONSERVATION (3). *Crosslisted as ANTH 444.*
Study of living nonhuman

ENVS 483X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, GEOL 483, and PHYS 493X.* Methods and theory for the teaching of interdisciplinary science in grades 6-12. Exploration of the nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges through research, discussion, and reflection. Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, microteaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

#*EPFE 321. HISTORY OF AMERICAN EDUCATION (3). Survey of

↓

GEOL 477. FIELD METHODS IN ENVIRONMENTAL GEOSCIENCES (4). Field camp

GEOL 483. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, ENVS 483X, and PHYS 493X.* Methods and theory for the teaching of interdisciplinary science in grades 6-12. Exploration of the nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges through research, discussion, and reflection. Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

HDFS 432. THEORIES OF CHILD DEVELOPMENT (3). Analysis of the

↓

PHYS 374. INTRODUCTION TO EXPERIMENTAL PHYSICS (3). Selected

PHYS 493X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, ENVS 483X, and*

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

GEOL 483. Methods and theory for the teaching of interdisciplinary science in grades 6-12. Exploration of the nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges through research, discussion, and reflection. Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

POLS 307. THE U.S. CONGRESS (3). Principles, organization,

↓

THEA 482. PLAYWRITING STUDIO (3). Advanced work on new

Rationale: GEOL 483 and its crosslistings were approved as writing-infused upper-division courses. This will add them to the catalog of available WI courses.

College of Liberal Arts and Sciences

Other Catalog Change

Page 222, 2018-19 Undergraduate Catalog

College of Liberal Arts and Sciences

↓

Interdisciplinary Minors

↓

Minor in Cognitive Studies

Requirements (18-19)

*ILAS 261 - Language, Mind, and Thought (3)

At least five of the following, from at least three departments (15-16)

*ANTH 230 - Introduction to Linguistic Anthropology (3)

↓

ANTH 4983 - Independent Study in Anthropology(1-6)

BIOS ~~359~~ 459 - Human Neurobiology (4)

COMD 305 - Language Development (3)

↓

PSYC 498³ - Honors Independent Study (1-3)

Six or more semester hours in the minor must be taken at NIU.

Notification: The Coordinator for the Minor in Cognitive Studies was notified of this change via email on March 11, 2019.

Department of Biological Sciences

New Course

Page 212, 2018-19 Graduate Catalog

CIP: 26.1504

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

559. HUMAN NEUROBIOLOGY (4). Covers the basic organization of the central nervous system with an emphasis on the neural systems in the brain and spinal cord that mediate sensation, motivate bodily action, and integrate sensorimotor signals with memory as well as pathways and diseases affecting the CNS. In the laboratory, students will have the opportunity to dissect a human brain.

Rationale: This course is currently offered as a 700 Special Topics course, and was previously offered as an undergrad class (BIOS 359). We are proposing it to be a grad level equivalent to 359 which we are proposing be changed to 459 so that it can be linked.

Course Revision Page 246, 2018-19 Undergraduate Catalog

359 459. HUMAN NEUROBIOLOGY (4). ~~Biology of~~ Basic organization of the human central nervous system, with emphasis on the ~~anatomy and physiology of~~ neural systems in the brain and spinal cord that mediate sensation, motivate bodily action, and integrate sensorimotor signals with memory as well as pathways and diseases affecting the central nervous system. ~~In the laboratory,~~ students will have the opportunity to dissect a human brain. PRQ: BIOS 355 or BIOS 357.

Rationale: The undergraduate course must be 400-level to be linked to the new graduate equivalent (559), so we are proposing the change to BIOS 459 which is currently not used in our department.

Course Revision Page 246, 2018-19 Undergraduate Catalog

370. DIRECTED RESEARCH IN BIOLOGY (1-3). Experimental laboratory ... member. May be repeated to a maximum of 6 9 semester hours. PRQ: At least a B average ... department. Collectively, a maximum of 6 9 semester hours of credit (~~9 in the case of students admitted to the department honors program~~) in BIOS 370, BIOS 490, BIOS 495H and BIOS 499H, including no more than 3 hours from BIOS 490, may be applied to the major.

Rationale: 1) Remove the "H" from BIOS 495 and BIOS 499 since it is no longer used to designate honors classes. 2) Change maximum credit hours from 6 to 9, which is in line with BIOS 495 and BIOS 499 and other CLAS department directed research credits allowed; 3) The additional language at the end clarifies that students may not apply 9 hours of BIOS 490 (internship) under the "collectively" designation. Without the qualifier, students may interpret that they can do 9 hours of internship and apply it to their degree. BIOS 370, 495 and 499 are all research credits, so they do qualify for the 9-hour cap.

Course Revision Page 246, 2018-19 Undergraduate Catalog

402X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as CHEM 493X, ENVS 483X, GEOL 483, and PHYS 493X.* Methods and theory ... PRQ: Consent of department.

Rationale: Change in title for the parent course, GEOL 483.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Notification: The Department of Biological Sciences was notified of this change via email on March 11, 2019.

Course Revision Page 246, 2018-19 Undergraduate Catalog

433. BEHAVIORAL ECOLOGY (3). Examples and theories of how behaviors influences survival and reproduction in different environments evolve. Practice in critical analysis, decision-making, and reasoning skills, such as weighing costs, benefits, and tradeoffs. Many key ideas apply not only to biology, but also to anthropology, economics, and psychology. PRQ: ~~BIOS 208, BIOS 210, BIOS 209, and BIOS 211~~ or consent of department.

Rationale: 1) This is an organismal course that does not require background in cell and molecular other than what is covered in BIOS 209. In addition, BIOS 209 already has a PRQ of BIOS 208 and BIOS 210, or BIOS 103 and BIOS 105, with a CRQ of BIOS 211; and whether a student has taken 208 or 103 does not matter, as long as they have taken BIOS 209: Fundamentals of Organismal Biology. I have had anthropology and psychology students take the course and do very well. 2) Expanding the description to clarify the most important aspects of the course.

Course Revision Page 247, 2018-19 Undergraduate Catalog

454. DEVELOPMENTAL BIOLOGY (4). Have you ever wondered how an embryo develops from a simple fertilized egg to a complex multicellular organism? Explore this question by examining the basic patterns Mechanisms of eukaryotic embryonic development and studying the mechanisms that control these processes at the cellular and molecular levels. Emphasis on model animal systems. Two hours of lecture and four hours of laboratory per week. Due to advances in imaging and gene editing techniques, developmental biology is one of the most exciting and rapidly expanding areas in biology today. This has important and broader impact on other areas of biology, from medicine, molecular and cellular biology to evolutionary biology and paleontology. An understanding of the basis of developmental biology is also critical to forming enlightened opinions regarding growing ethical issues in your society such as stem cell research and genetic engineering. PRQ: BIOS 302 and BIOS 303, ~~and CHEM 330 or CHEM 336.~~

Rationale: 1) The former description is from a former instructor and it is very generic. I would like to provide students with a more appealing and informative description of the course. 2) We are removing the PRQs of CHEM 330 and CHEM 336 since this course does not require background in Organic Chemistry.

Course Revision Page 247, 2018-19 Undergraduate Catalog

461. ENDOCRINOLOGY (3). ~~Classic mammalian~~ Investigation of endocrine systems examined with emphasis on cellular and molecular mechanisms of action through a comparative systems approach. Topics Concepts include endocrine cell signaling coordination of physiological processes, cellular and molecular mechanisms of hormonal action, and some discussion of endocrine pathology evolution of hormonal regulation. ~~Lecture material and readings from the current professional literature.~~ Competencies include creative problem solving, modeling and

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

simulating systems, interdisciplinary communication, experimental design and critique, and teamwork. PRQ: BIOS 355; or BIOS 302 and BIOS 303.

Rationale: 1) While an understanding of physiology can be helpful, it is not essential for students to be successful in Endocrinology. The general trend (due to a series of prerequisites) is for students to wait until they are seniors to take Physiology, thus greatly limiting the enrollment availability for upper-division courses that require Physiology as a prerequisite, such as Endocrinology. Previous coursework in molecular and cellular biology will provide students sufficient background to adequately support their learning of endocrinology. 2) The former description is from a previous instructor. Now, the course examines endocrinology in a variety of vertebrate models systems (i.e., a comparative approach). The rephrasing emphasizes students' active role in the course and focuses on the core concepts and competencies that are recommended by national standards for undergraduate students.

Course Revision Page 247, 2018-19 Undergraduate Catalog

463. PHARMACOLOGY AND TOXICOLOGY (3). Topics include PRQ: BIOS 303 and BIOS 355.

Rationale: While an understanding of physiology can definitely be helpful, it is not essential for students to be successful in BIOS 463 - Pharmacology and Toxicology. The general trend (due to a series of prerequisites and scheduling) is for students to wait until their senior year to take BIOS 355 (Physiology); thus, courses with a BIOS 355 prerequisite experience low enrollments due to the barrier. Previous coursework in cellular biology will provide students sufficient background to adequately support their learning of pharmacology. Any physiological topics necessary for understanding of pharmacology or toxicology material will be covered in the course.

Course Revision Page 247, 2018-19 Undergraduate Catalog

490. COOPERATIVE EDUCATION/INTERNSHIP (3). Biological Collectively, a maximum of 6 semester hours of credit (9 in the case of students admitted to the department honors program) in BIOS 370, BIOS 490, BIOS 495~~H~~, and BIOS 499~~H~~ may be applied to the major.

Rationale: Remove the "H" from BIOS 495 and BIOS 499 since it is no longer used to designate honors classes.

Course Revision Page 211, 2018-19 Graduate Catalog

533. BEHAVIORAL ECOLOGY (3). Examples and theories of how behaviors influences survival and reproduction in different environments evolve. Practice in critical analysis, decision-making, and reasoning skills, such as weighing costs, benefits, and tradeoffs. Many key ideas apply not only to biology, but also to anthropology, economics, and psychology.

Rationale: Expanding the description to clarify the most important aspects of the course, and to coordinate with the revisions to BIOS 433.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Course Revision

Page 211, 2018-19 Graduate Catalog

554. DEVELOPMENTAL BIOLOGY (4). ~~Have you ever wondered how an embryo develops from a simple fertilized egg to a complex multicellular organism? Explore this question by examining the basic patterns~~ ~~Mechanisms of eukaryotic embryonic development and studying the mechanisms that control these processes at the cellular and molecular levels.~~ ~~Emphasis on model animal systems. Two hours of lecture and four hours of laboratory per week.~~ ~~Due to advances in imaging and gene editing techniques, developmental biology is one of the most exciting and rapidly expanding areas in biology today. This has important and broader impact on other areas of biology, from medicine, molecular and cellular biology to evolutionary biology and paleontology. An understanding of the basis of developmental biology is also critical to forming enlightened opinions regarding growing ethical issues in your society such as stem cell research and genetic engineering.~~

Rationale: The former description is from a former instructor and it is very generic. I would like to provide students with a more appealing and informative description of the course, and to coordinate with the revisions to BIOS 433.

Course Revision

Page 211, 2018-19 Graduate Catalog

561. ENDOCRINOLOGY (3). ~~Classic mammalian~~ ~~Investigation of~~ endocrine systems ~~examined with emphasis on cellular and molecular mechanisms of action~~ ~~through a comparative systems approach.~~ ~~Topics~~ ~~Concepts~~ include ~~endocrine cell signaling~~ ~~coordination of physiological processes,~~ ~~cellular and~~ molecular mechanisms of hormonal ~~e~~ action, and ~~some discussion of~~ endocrine pathology ~~evolution of hormonal regulation.~~ ~~Lecture material and readings from the current professional literature.~~ ~~Competencies include creative problem solving, modeling and simulating systems, interdisciplinary communication, experimental design and critique, and teamwork.~~

Rationale: The former description is from a previous instructor. Now, the course examines endocrinology in a variety of vertebrate models systems (i.e., a comparative approach). The rephrasing emphasizes students' active role in the course and focuses on the core concepts and competencies that are recommended by national standards for undergraduate students.

Other Catalog Change

Page 243, 2018-19 Undergraduate Catalog

Major in Biological Sciences (B.S.)

↓

Requirements outside Department (33)

*CHEM 210 - General Chemistry I (3), ~~and~~

~~AND~~ *CHEM 212 - General Chemistry Laboratories I (1)

*CHEM 211 - General Chemistry II (3), ~~and~~

~~AND~~ *CHEM 213 - General Chemistry Laboratory II (1)

CHEM 330 - General Organic Chemistry I (3),

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

OR CHEM 336 - Organic Chemistry I (3)

↓

*MATH 229 - Calculus I (4),

AND MATH 230 - Calculus II (4),

OR *MATH 211 - Calculus for Business and Social Science (4),

AND STAT ~~301~~ 200 - Elementary Statistics (4)

OR *MATH 229 - Calculus I (4)

AND STAT 200 - Elementary Statistics (4)

*PHYS 210 and *PHYS 211 - General Physics I and II (8),

OR *PHYS 253 - Fundamentals of Physics I: Mechanics (4) and

AND *PHYS 273 - Fundamentals of Physics II: Electromagnetism (4)

Total Hours for a Major in Biological Sciences: 79

Rationale: MATH 229/STAT 200 has been approved as a viable substitution for > 10 yrs within the major but has never been codified. Additionally, professional schools and graduate programs are increasingly requiring non-business calculus and well as upper-level (300+) statistics for admission.

Other Catalog Change

Page 244, 2018-19 Undergraduate Catalog

Department of Biological Sciences (BIOS)

↓

Admission and Retention Requirements in the Discipline

↓

Professional Development Phase and Student Teaching

↓

ILAS 201 - Introductory Clinical Experience (1)

↓

Students must satisfactorily complete a series of discipline-based pedagogy course work.

▲BIOS 402X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)

BIOS 403 - Methods in Teaching Biology (3)

↓

ETT 402 - Teaching and Learning with Technology (3)

Rationale: Change in course title for parent course, GEOL 483.

Notification: The Department of Biological Sciences was notified of this change via email on March 11, 2019.

Other Catalog Change

Page 244, 2018-19 Undergraduate Catalog

Degree with Biology Honors

The degree Bachelor of Science with Honors in Biological Sciences will be awarded to students satisfying the following requirements.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

↓
3) Complete BIOS 370, Directed Research in Biology and 6 semester hours of BIOS 495, Directed Research Biology Honors, or BIOS 499, Directed Research University Honors under a faculty member's supervision²;

↓
Note: Collectively, a maximum of 6 semester hours of credit (9 in the case of students admitted to the department honors program) in BIOS 370, BIOS 399~~H~~, BIOS 490, BIOS 495~~H~~, and BIOS 499~~H~~ may be applied to the major.

Rationale: ***PDF is correct. The online version needs to be fixed.** The “2” at the end of point #3 needs to be removed; it's copied over from the PDF which has a superscript. The “H” needs to be removed from BIOS 399, 495, and 499 since it's no longer being used to designate honors classes.

Other Catalog Change Page 248-249, 2018-19 Undergraduate Catalog

Footnote

¹ Collectively, a maximum of 6 semester hours of credit (9 in the case of students admitted to the department honors program) in BIOS 370, BIOS 399~~H~~, BIOS 490, BIOS 495~~H~~, and BIOS 499~~H~~ may be applied to the major.

Rationale: ***PDF Catalog*** Remove the “H” from BIOS 495 and BIOS 499 since it is no longer used to designate honors classes.

Department of Chemistry and Biochemistry

Course Deletions Page 252-253, 2018-19 Undergraduate Catalog

230. INTRODUCTORY ORGANIC CHEMISTRY (3).

231. INTRODUCTORY ORGANIC CHEMISTRY LABORATORY (1).

Rationale: CHEM 230 and the corresponding laboratory class CHEM 231 will be replaced by CHEM 310 and CHEM 311, which will have more biochemical content. Students who wish to have more chemistry coursework than the revised two-semester sequence will be able to take classes from the majors sequence if desired. For the immediate future, CHEM 370 will be taught as before to serve students who took CHEM 230, as well as other students who took organic chemistry classes such as CHEM 330/331/332/333.

Notifications: These service courses are part of the curriculum for four majors in the College of Health and Human Sciences and one in the College of Engineering and Engineering Technology. Representatives of the affected colleges have been contributing to the revisions proposed here.

New Course Page 253, 2018-19 Undergraduate Catalog

CIP: 40.0599

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

310. INTRODUCTORY ORGANIC AND BIOLOGICAL CHEMISTRY (3). Beginning organic and biological chemistry for non-chemistry majors designed to follow CHEM 110 to provide a one-year sequence in general, organic, and biological chemistry. PRQ: CHEM 110 or CHEM 210.

Rationale: NIU currently teaches “General-Organic-Biochemistry” (GOB) for non-chemistry majors as a three-semester sequence: CHEM 110 (Chemistry), CHEM 230 (Introductory Organic Chemistry), and CHEM 370 (Introductory Biochemistry). The proposed class will be the second half of a two-semester GOB sequence. Currently only Biomedical Engineering Track 1 students, and Nutrition, Dietetics, and Wellness students who intend to complete the Didactic Program in Dietetics are required to take CHEM 370. Combining the material in CHEM 230 (Introductory Organic Chemistry) and CHEM 370 (Introductory Biochemistry) into one class will reduce the required class load for these majors. The syllabus for the combined class is designed to meet the requirements for the Didactic Program in Dietetics. Most students for whom CHEM 230 is required do not continue to the course in biochemistry. Replacing this class with a class that includes biochemistry as well as organic chemistry will improve the preparation of these students in the area most directly relevant to their intended careers.

Non-Duplication: None, although this class was developed in coordination with other departments that use this as a service course.

New Course Page 253, 2018-19 Undergraduate Catalog

CIP: 40.0599

311. INTRODUCTORY ORGANIC AND BIOLOGICAL CHEMISTRY LABORATORY (1). Designed to accompany CHEM 310. One 3-hour period a week. PRQ: CHEM 110 and CHEM 111, or CHEM 210 and CHEM 212. CRQ: CHEM 310.

Rationale: This laboratory class is intended to accompany the new CHEM 310 lecture class. It will be partially based on material from the current CHEM 231 laboratory, which it will replace. CHEM 230 already contains some biochemistry material, and more will be added to the new class.

Non-Duplication: None, although this class was developed in coordination with other departments that use this as a service course.

Course Revision Page 253, 2018-19 Undergraduate Catalog

370. INTRODUCTORY BIOCHEMISTRY (3). Terminal course PRQ: CHEM 230 or CHEM 330.

Rationale: Students who take CHEM 370 often take CHEM 330 instead of CHEM 230 before this class. With the deletion of CHEM 230, CHEM 330 should be formally listed as an appropriate prerequisite.

Course Revision Page 254, 2018-19 Undergraduate Catalog

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

^493X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, ENVS 483X, GEOL 483, and PHYS 493X.* Methods and theory... PRQ: Consent of department.

Rationale: Change in title for the parent course, GEOL 483.

Notification: The Department of Chemistry and Biochemistry was notified of this change via email on March 11, 2019.

Other Catalog Change Page 251, 2018-19 Undergraduate Catalog

Department of Chemistry and Biochemistry (CHEM)

↓

Emphasis 3. Secondary Teaching

↓

Requirements in Department (52-58)

*CHEM 210 - General Chemistry I (3),
AND *CHEM 212 - General Chemistry Laboratory I (1)

↓

CHEM 490X - Science Across Time and Culture (2)

^CHEM 493X - Interdisciplinary Teaching of Science in Secondary and Middle School Education (3)

CHEM 495X (PHYS 495) - Teaching of Physical Sciences (3)

↓

Electives chosen from 400-level classes (4-9)

Rationale: Change in title for the parent course, GEOL 483.

Notification: The Department of Chemistry and Biochemistry was notified of this change via email on March 11, 2019.

Environmental Studies

Course Revision Page 253, 2018-19 Undergraduate Catalog

^483X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, GEOL 483, and PHYS 493X.* Methods and theory Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

Rationale: Change in title for the parent course, GEOL 483.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Notification: Environmental Studies was notified of this change via email on March 11, 2019.

Other Catalog Change Page 286, 2018-19 Undergraduate Catalog

Environmental Studies (ENVS)

↓

Emphasis 6. Educator Licensure - Environmental Science (96)

↓

Environmental Science Educator Licensure

↓

Professional education courses, including (37):

^BIOS 402X/CHEM 493X/ENVS 483X/GEOL 483/PHYS 493X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)

BIOS 484X/CHEM 490X/ENVS 475X/GEOL 475/PHYS 490X - Science Across Time and Culture (2)

↓

SESE 457 - Methods for Including Middle and Secondary Students with Exceptionalities in the General Education Classroom (3)

Rationale: Change in title for GEOL 483/BIOS 402X/CHEM 493X/ENVS 483X/PHYS 493X.

Notification: Environmental Studies was notified of this change via email on March 11, 2019.

Other Catalog Change Page 286, 2018-19 Undergraduate Catalog

Minor in Environmental Studies (21-22)

The environmental studies minor is an interdisciplinary and multidisciplinary program that allows undergraduates in any degree program to study environmental concepts, issues, and problems from the viewpoints and with the approaches of the natural and social sciences. Credit hours applied to a major may not be applied to this minor.

***The above needs to be added to the PDF catalog.**

Requirements (21-22)

Students must select at least seven (7) of the following courses. At least three (3) courses must be selected from the environmental studies courses, and at least one (1) course must be selected in each of the following: natural sciences, engineering, and technology courses and humanities and social sciences courses. The remaining two (2) courses must be selected from the courses listed below, if not previously used to fulfill the requirements for those categories.

Select three of the following environmental studies courses (9)

ENVS 301 - Environmental Science I: Physical Systems (3)

↓

TECH 305 - Green Technologies (3)

OR ENVS 305X - Green Technologies (3)

Select from one of the following natural science, engineering, and technology courses (3-4)

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

BIOS 406 - Conservation Biology (4)
~~CHEM 427 - Environmental Chemistry (3)~~
~~ENVS 315 - Geography of Energy (3)~~
~~OR GEOG 315X - Geography of Energy (3)~~
ENVS 301 - Environmental Science I: Physical Systems (3)
ENVS 302 - Environmental Science II: Biological Systems (3)
GEOG 303 - Water Resources and the Environment (3)
↓
TECH 245 - Pollution Prevention and Sustainable Production (3)
TECH 305 - Green Technologies (3)
OR ENVS 305X - Green Technologies (3)

Select one of the following humanities and social sciences courses (3)
^ANTH 425 - Environment and Anthropology (3)
OR ^ENVS 425X - Environment and Anthropology (3)
ECON 386 - Environmental Economics (3)
ENVS 210 - Introduction to Sustainable Food Systems (3)
ENVS 303 - Environment in the Social Sciences and Humanities (3)
ENVS 304 - Environmental Law, Policy, and Economics (3)
#HIST 377 - American Environmental History (3)
PHIL 335 - Environmental Ethics (3)
PHIL 338 - Philosophy of Food (3)
POLS 220 - Introduction to Public Policy (3)
OR PSPA 220X - Introduction to Public Policy (3)
^POLS 324 - Politics or Environmental Health and Safety Regulation (3)
~~SOCL 364 - Environmental Sociology (3)~~

Rationale: The updates make this minor more accessible to students seeking a B.A., students in different colleges, and students transferring from community colleges.

Impact Statement: All the departments have been consulted regarding the addition of their courses to the list of requirements. None of the departments identified any negative impact on course availability or enrollment with these changes.

Department of Geographic and Atmospheric Sciences

New Course

Page 293, 2018-19 Undergraduate Catalog

CIP: 40.0401

GEOG 382. GEOGRAPHY OF DISEASE AND HEALTH (3). Geographic dimensions of health in local and regional populations across the globe with a regional foci on Southeast Asia, Africa, and the Americas. Topics include disease ecology, infectious and chronic diseases, geographic mobility, biometeorology, nutrition, development and health, geographic disparities in health,

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

healthcare resources and access, medical systems and ethnomedicine, concepts of health and place, and therapeutic spaces.

Rationale: This new course results from splitting the GEOG 432/532 The Geography of Health course that has been offered since 2010. The present GEOG 432/532 has a substantial focus on GIS that includes a lab. GEOG 432/532 is presently being revised as solely a GIS course in public and environmental health. The proposed course, GEOG 382, will focus on the topics indicated in the course description above. The premise for this offering is to make the subject matter more attractive to a wide range of undergraduate majors not desiring a lab. The proposed course also contains a regional component that focuses, in order, Southeast Asia, Africa, and the Americas. It is also intended to appeal to SEAS students being potentially cross-listed with SEAS. With regional foci, there may be an appeal to Study Abroad students as well. What is more, most universities that have courses in health/medical geography have a separate course in GIS for health/medical geography, public health, and environmental health. This proposed split will bring NIU into alignment with practice at other universities.

Non-Duplication: The Department of Public Health and Center for Southeast Asian Studies were notified with regard to this course and have indicated there is no significant duplication with any of their current course offerings.

Department of Geology and Environmental Geosciences

Course Revision

Page 301, 2018-19 Undergraduate Catalog

483. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, ENVS 483X, and PHYS 493X.* Methods and theory Use of state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

Rationale: The Illinois Board of Education (ISBE) has mandated that all middle grades licensure students take a course specifically in “middle level” methods. Our current course description already specifies grades 6-12, which is considered both middle and secondary methods. However, the ISBE requires it specifically in the course name. We are proposing no changes in how the course is taught; it is a name change only. The crosslisted courses also need to have their titles changed to comply with state requirements, and to match the parent class.

Notifications: The Coordinator of Teacher Licensure for these departments is requesting this change, and the Chairs have been informed of these changes. The changes do not affect other departments.

Department of Physics

Course Revision

Page 330, 2018-19 Undergraduate Catalog

493X. INTERDISCIPLINARY TEACHING OF SCIENCE IN SECONDARY AND MIDDLE LEVEL EDUCATION (3). *Crosslisted as BIOS 402X, CHEM 493X, ENVS 483X, and GEOL*

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

483. Methods and theory for the teaching of interdisciplinary science in grades 6-12. **Exploration of** The nature and purpose of science and its underlying assumptions, the social and cultural challenges in science teaching, and the potential solutions to these challenges ~~are explored~~ through research, discussion, and reflection. ~~Requirements include using~~ **Use of** state and national science standards to develop student learning objectives and to design inquiry-based lesson plans, micro-teaching, construction and use of assessment rubrics, and ongoing development of a professional portfolio.

Rationale: Change in title for the parent course, GEOL 483. Revise description to match parent course; changes were omitted previously.

Notification: The Department of Physics was notified of these changes via email on March 11, 2019.

Other Catalog Change Page 327, 2018-19 Undergraduate Catalog

Department of Physics (PHYS)

↓

Emphasis 2. Secondary School Teaching

↓

Requirements in Department (37)

*PHYS 253 - Fundamentals of Physics I: Mechanics (4)

↓

PHYS 383 - Intermediate Quantum Physics (3)

PHYS 493X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)

PHYS 495 - Teaching of Physical Sciences (3)

PHYS 498 - Senior Seminar (1);

Rationale: Change in title for the parent course, GEOL 483. Remove the misplaced “,” at the end of PHYS 498.

Notification: The Department of Physics was notified of these changes via email on March 11, 2019.

Other Catalog Change Page 328, 2018-19 Undergraduate Catalog

Department of Physics (PHYS)

↓

Educator Licensure Program

↓

Requirements

↓

EPS 406 - Issues in Human Development and Learning in the Middle School and High School Years (3)

↓

PHYS 490X - Science across Time and Culture (2)

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

^PHYS 493X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)
PHYS 495 - Teaching of Physical Sciences (3)
(must be taken concurrently with PHYS 401)
↓
SESE 457 - Methods for Including Middle and Secondary Students with Exceptionalities in the General Education Classroom (3)

Rationale: Change in title for the parent course, GEOL 483.

Notification: The Department of Physics was notified of these changes via email on March 11, 2019.

Other Colleges

College of Education

Other Catalog Change

Page 124-125, 2018-19 Undergraduate Catalog

Department of Curriculum and Instruction (LTIC, LTLA, LTRE, TLCI, TLEE)

↓

Major in Middle Level Teaching and Learning (B.S.Ed.)

↓

Professional Education Requirements (49)

^ENGL 404 - Theory and Research in Written Composition for English Language Arts (3)

↓

TLCI 422 - Middle School Organization and Instruction (3)

One of the following in the major content area (3)

^GEOL 483/BIOS 402X/CHEM 493X/ENVS 483X/PHYS 493X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)

LTLA 350 - Language Arts in the Middle School (3)

↓

MLTL 432 - Methods and Materials of Instruction for Middle School Social Science (3)

↓

Minor Content Area Option: Science (24)

BIOS 208 - Fundamentals of Cellular Biology (3)

AND BIOS 210 - Fundamentals of Cellular Biology Laboratory (1)

↓

^BIOS 402X/CHEM 493X/ENVS 483X/GEOL 483/PHYS 493X - Interdisciplinary Teaching of Science in Secondary and Middle Level Education (3)

BIOS 484X/CHEM 490X/ENVS 475X/GEOL 475/PHYS 490X - Science across Time and Culture (2)

↓

*PHYS 150 - Physics (3),

OR *PHYS 210 - General Physics I (3)

Rationale: Change in title for GEOL 483/BIOS 402X/CHEM 493X/ENVS 483X/PHYS 493X.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Notification: The Department of Curriculum and Instruction was notified of these changes via email on March 11, 2019.

College of Engineering and Engineering Technology

Other Catalog Change Page 157, 2018-19 Undergraduate Catalog

Department of Electrical Engineering (ELE)

↓

Emphasis 2. Biomedical Engineering

↓

Track 1

Requirements outside Department (63-65)

BIOS 208 - Fundamentals of Biology I (3)

↓

*CHEM 212 - General Chemistry Laboratory I (1)

~~CHEM 230 - Introductory Organic Chemistry (3)~~

~~CHEM 231 - Introductory Organic Chemistry Laboratory (1)~~

CHEM 310 - Introductory Organic and Biological Chemistry (3)

CHEM 311 - Introductory Organic and Biological Chemistry Laboratory (1)

CHEM 370 - Introductory Biochemistry (3)

↓

Electives (6-8)

Choose 6-8 credit hours from the following:

BIOS 213 - Introductory Bacteriology (3)

BIOS ~~359~~ **459** - Human Neurobiology (4)

ELE 421 - Biomedical Sensor Engineering (3)

↓

PHYS 434 - Nuclear and Particle Physics (3)

Track 2

Rationale: CHEM 230 and CHEM 231 are being deleted and replaced by new courses, CHEM 310 and CHEM 311. Change in course number from BIOS 359 to BIOS 459.

Notification: The Department of Electrical Engineering was notified of these changes via email on March 11, 2019.

College of Health and Human Sciences

Course Revision Page 204, 2018-19 Undergraduate Catalog

Nutrition (NUTR)

309. SCIENCE OF NUTRITION (3). Study of various PRQ: BIOS 103 and BIOS 105, CHEM ~~230~~ **310** or CHEM 330. CRQ: BIOS 357.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Rationale: CHEM 230 is being deleted and replaced by CHEM 310.

Notification: The School of Health Sciences was notified of this change via email on March 11, 2019.

Other Catalog Change

Page 199-201, 2018-19 Undergraduate Catalog

School of Health Studies (AHLS, HLTH, NUTR, PHHE)

↓

Major in Medical Laboratory Sciences (B.S.)

↓

Requirements outside School (37-38)

BIOS 208 - Fundamentals of Biology I (3),

AND BIOS 210 - Fundamentals of Biology I Laboratory (1)

↓

*CHEM 211 - General Chemistry II (3),

AND *CHEM 213 - General Chemistry Laboratory II (1)

~~CHEM 230 - Introductory Organic Chemistry (3)~~

~~CHEM 231 - Introductory Organic Chemistry Laboratory (1)~~

CHEM 310 - Introductory Organic and Biological Chemistry (3)

CHEM 311 - Introductory Organic and Biological Chemistry Laboratory (1)

HSCI 318 - Medical Terminology (3)

^HSCI 460 - Research in Health and Human Sciences (3)

*STAT 208 - Basic Statistics (3)

Total Hours for a Major in Medical Laboratory Sciences: 84-97

↓

Major in Nutrition, Dietetics, and Wellness (B.S.)

↓

Requirements outside School (47-49)

*BIOS 103 - General Biology (3)

↓

*CHEM 111 - Chemistry Laboratory (1),

OR *CHEM 212 - General Chemistry Laboratory I (1)

~~CHEM 230 - Introductory Organic Chemistry (3),~~

CHEM 310 - Introductory Organic and Biological Chemistry (3),

OR CHEM 330 - General Organic Chemistry I (3)

*ECON 260 - Principles of Microeconomics (3)

↓

*STAT 100 - Basic Statistics (3),

OR STAT 200 - Elementary Statistics (4)

Total Hours for a Major in Nutrition, Dietetics and Wellness: 76-81

Major in Public Health (B.S.)

↓

Emphasis 3. Environment and Health

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

↓
Requirements outside School (28-31)
~~CHEM 230 – Introductory Organic Chemistry (3)~~
~~AND CHEM 231 – Introductory Organic Chemistry Laboratory (1)~~
CHEM 310 - Introductory Organic and Biological Chemistry (3)
AND CHEM 311 - Introductory Organic and Biological Chemistry Laboratory (1)
GEOG 253 - Environment and Society (3)
↓
*TECH 245 - Pollution Prevention and Sustainable Production (3)
↓
One course in science approved by the public health adviser (3-4)

Total Hours for Emphasis 3, Environment and Health: 82-92

Rationale: Rationale: CHEM 230 and CHEM 231 are being deleted and replaced by new courses, CHEM 310 and CHEM 311.

Notification: The School of Health Sciences was notified of these changes via email on March 11, 2019.

Other Catalog Change Page 208, 2018-19 Undergraduate Catalog

School of Interdisciplinary Health Professionals (HSCI, REHB)
↓
Major in Health Sciences (B.S.)
↓
Emphasis 2: General (31-41)
↓
Requirements outside School (29-41)
*BIOS 103 - General Biology (3)³
↓
Select five of the following (13-16):
AHLS 211 - Introduction to the Medical Laboratory Sciences (3)²
~~CHEM 230 – Introductory Organic Chemistry (3)²~~
~~AND CHEM 231 – Introductory Chemistry Laboratory (1)²~~
CHEM 310² - Introductory Organic and Biological Chemistry (3)
AND CHEM 311² - Introductory Organic and Biological Chemistry Laboratory (1)
*COMD 220 - Introduction to Communicative Disorders (3)
↓
REHB 497B - Internship in Health Sciences (3)
OR other course(s) as approved by adviser

Total Hours for Emphasis 2. General: 71-84

Rationale: Rationale: CHEM 230 and CHEM 231 are being deleted and replaced by new courses, CHEM 310 and CHEM 311.

NORTHERN ILLINOIS UNIVERSITY
COLLEGE OF LIBERAL ARTS AND SCIENCES
CURRICULUM COMMITTEE
#12 Meeting – February 13, 2019
Approved Attachments

Notification: The School of Interdisciplinary Health Professionals was notified of these changes via email on March 11, 2019.