



Academic Notes

July 6, 2009

AN 2008-2009

ARTICULATION AGREEMENTS

Program articulation agreements between Indiana State University and our two-year partner institutions allow students to complete a specific associate degree program at another institution and receive credit toward a specific bachelor's degree program at Indiana State University.

Each agreement details the transfer courses accepted for credit at ISU, the courses needed to complete the bachelor's degree, and any other requirements or guidelines that apply. The following agreements have recently been approved and are available on the Transfer Central web site <http://www1.indstate.edu/transfer/articulations.htm> :

Danville Area Community College
ASA with Business Emphasis to BS in Accounting
5/16/2009

ASA with Business Emphasis to BS in Business Education
5/16/2009

ASA with Business Emphasis to BS in Finance
5/16/2009

ASA with Business Emphasis to BS in Financial Services
5/16/2009

ASA with Business Emphasis to BS in Information Design End-User Computing
5/16/2009

ASA with Business Emphasis to BS in Insurance and Risk Management
5/16/2009

ASA with Business Emphasis to BS in Marketing
5/16/2009

ASA with Business Emphasis to BS in Management
5/16/2009

ASA with Business Emphasis to BS in Management Information Systems
5/16/2009

ACADEMIC NOTES PUBLICATION SCHEDULE FOR SUMMER 2009

Below is the circulation schedule for the electronic copy of *Academic Notes* through August 17, 2009. All submissions for inclusion in Academic Notes are due in the Office of Academic Affairs no later than 10:00 a.m. on the Wednesday prior to the distribution of Academic Notes on the following Monday. Submissions must be in hard copy along with an e-mail, disk, or CD with the same information. The electronic version must be formatted either in Word with pages with signatures scanned and inserted as a picture OR PDF saved as text and image. (Do NOT send PDF just saved as an image.) Information submitted to Academic Notes that is not accompanied by an electronic version or that is incomplete or unusable will be returned to the appropriate office.

Academic Notes is available using Acrobat Reader at
http://www.indstate.edu/academicaffairs/academic_notes.htm

ACADEMIC NOTES PUBLICATION SCHEDULE FOR SUMMER 2009

<u>Deadline for Items</u>	<u>Issue Date</u>
July 15	July 20
July 29	August 3
August 12	August 17

ACALOG NOTE

The format for curriculum proposals has changed to correspond with the structure of Acalog, the new version of the electronic catalogs. Some proposals will be published under the old structure and some under the new structure during this transition period.

Improved Electronic Catalog

The new electronic version of the undergraduate catalog is posted at
<http://www.indstate.edu/academics/catalogs.htm> Some advantages of the new format are:

- It is easily searchable and searchable from the internet
- It is easier for students and advisors to find and choose the courses students need
- Students create a personal portfolio of courses in which they are interested
- Links to information such as department web sites, advising information, and video clips can easily be added
- Every page can easily be printed, decreasing the number of printed catalogs

If you have questions, please contact Academic Affairs, extension 3662.

DEPARTMENT NAME CHANGE

PROPOSAL TO MERGE THE ANTHROPOLOGY, GEOGRAPHY, AND GEOLOGY CURRICULUM AND ESTABLISH A DEPARTMENT OF EARTH AND ENVIRONMENTAL SYSTEMS

RATIONALE

The global concern for the quality of our environment has resulted in a critical need for environmental programs nation-wide to train students and conduct research centered on complex human/environmental systems. The study of earth and environmental systems requires an integrated and interdisciplinary approach that includes an examination of the interaction of human societies with the environment. A comprehensive environmental program is lacking at ISU. We propose to create an environmentally focused unit by merging the curriculum of the Anthropology, Geography, and Geology programs and establishing a Department of Earth and Environmental Systems. This reconfigured department will form the basis for a core environmental curriculum at ISU.

There have been a number of environmental program initiatives over the past 10 years, none of which have come to fruition. This situation may be at least partially due to the proposed structures, where departments were to share a program but were unwilling to make funding or faculty FTE commitments because of scarce departmental resources, and the belief that students would be siphoned from their programs. Given this history we believe that this current proposal for a department-level environmental unit with a committed core faculty, which welcomes Affiliated Faculty in other disciplines, has the structure that is most likely to succeed and prosper.

As indicated previously, an environmental program requires an interdisciplinary approach. The Anthropology, Geography, and Geology faculty have a broad range of interdisciplinary teaching and research interests that can be used to build this program including an existing curriculum that spans earth, environmental, and human systems. Faculty in the three programs have expertise in biogeography, paleoecology, synoptic meteorology and climatology, paleoenvironments, paleontology, marine biology, geochemistry, biogeochemistry, earth sciences, hydrology, evolutionary biology, behavioral ecology, geoarchaeology, geomorphology, environmental archaeology, bioarchaeology, environmental geology, landuse/cover change, urban environmental systems, remote sensing, geographic information systems, and global studies. This broad array of teaching and research interests in the physical, geochemical, atmospheric, hydrologic, and behavioral/social sciences will form the basis for an environmental program in which complex environmental issues are addressed. The new focus on the environment will enhance faculty grantsmanship, provide more funding for graduate assistants, and lead to new research synergies.

We understand that in order for the program to be successful and fully comprehensive it must also draw on faculty and curriculum from other departments. We will encourage faculty in other departments with environmental teaching and research interests to become Affiliated Faculty members in the Department of Earth & Environmental Systems. We also expect that other departments will continue to offer and propose environmental courses.

CURRICULUM

Undergraduate Program: The proposed undergraduate degrees represent an integrative approach to the education of students interested in pursuing a career related to the environment. We propose two revised degrees with a common core: (1) Earth & Environmental Sciences and (2) Human and

Environmental Systems. The Earth & Environmental Sciences degree will have concentrations in Geosciences and Atmosphere and Surface Processes. Similar cognate courses will be required for each concentration. Human and Environmental Systems will have concentrations in Anthropology, Geography, and Geographic Information Science. These concentrations will have a common statistics requirement. Students in both degrees will complete a common core of courses that emphasizes an understanding of environment and how it relates to the emergence of humans and their interaction with the environment. The common core consists of 14 credit hours in earth sciences, conservation and sustainability of natural resources, human adaptation and sustainability, with an introductory environmental science course. These courses were selected because they are the common foundation in most environmental programs. The modifications represent revisions of the geology and geography bachelor degrees and address issues raised in the recent program prioritization process.

Students in the reconfigured department will thus receive an educational experience that is quite unlike that offered by any other program at the University, including the current degrees in Geology, Geography, and Anthropology. The proposed degree modifications and concentrations reflect faculty expertise, and are also designed to meet the needs of students wishing to pursue further study or employment in traditional fields of study as well as environmental disciplines and professions. The majors will emphasize experiential learning and community engagement as has been the case in the current geology, geography, and anthropology degree programs. No licensures or program accreditations are affected by the creation of the new programs.

Graduate Program: The existing Masters (MS) Degree in Geology is currently undergoing modification with a degree title change to Earth and Quaternary Science and a broadening of the program by restructuring the degree requirements. As a result of this modification additional department faculty will be able to participate in the revised graduate program. It will also attract a more diverse array and number of students with interests in environmental sciences, earth sciences, paleoenvironments, biogeography, geoarchaeology, among other topics that are encompassed by Quaternary Science (study of the last 1.8 million years of earth history) and Earth Sciences. Both thesis and non-thesis MS degree options will be continued.

The Geography MA and the Geography PhD degrees will remain unchanged under the present proposal.

Proposed Course Prefix: The proposed prefix for all undergraduate and 500 level graduate courses listed by the University will be **ENVI**. This prefix is currently not in use at ISU. Graduate courses at the 600 level will retain their existing prefixes for clarification for potential employers and Ph.D. granting institutions.

OPERATIONS

Department bylaws, promotion and tenure requirements, and other operating documents will be reviewed, revised, or created as necessary in spring 2009 and submitted for approval by the faculty once the reconfigured unit begins to operate in fall 2009.

The department's three programs currently have separate budgets; these will be maintained during the transition period and administered by the Department Chairperson as previously. The base budgets will likely be combined after the transition period. No new funding is required due to the reconfiguration.

Preferred effective term: Fall 2009

CURRICULUM

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UNDERGRADUATE PROPOSALS

NEW COURSES

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ENVI 276L Dinosaurs, Quakes, and Volcanoes Laboratory

1 credit

Laboratory exercises and activities include practical, hands-on demonstrations of scientific principles of dinosaurs, earthquakes, and volcanoes.

Co-requisite: ENVI 276.

A-F Grading

Preferred effective term: Fall 2009

ENVI 436 - Environmental Archaeology

3 credits

An interdisciplinary course where the analytical approaches of the geological and biological sciences are used to solve archaeological problems centered on the adaptation of prehistoric societies. Case studies are used to illustrate this approach.

A-F Grading

Preferred effective term: Fall 2009

ENVI 456 - Lakes and Wetlands

3 credits

Using the principles of biology, chemistry, and geology, freshwater water resources will be studied. The effects of human perturbation on aquatic systems and potential consequences of climate change will be highlighted.

A-F Grading

Preferred effective term: Fall 2009

ENVI 458 - Medical Geology

3 credits

This course introduces students to the basic concepts of medical geology, which is the study of the interaction between earth materials and human and environmental health. Topics include exposure pathways, water and air quality, and environmental contaminants.

A-F Grading

Preferred effective term: Fall 2009

ENVI 479 - Global Biogeochemical Cycles

3 credits

Biogeochemistry is the study of how living systems influence, and are controlled by, the geology and chemistry of the earth. We will explore major chemical, biological, and geological processes that occur within and between terrestrial and aquatic ecosystems on geologic and human time scales.

Prerequisites: CHEM 106

A-F Grading

Preferred effective term: Fall 2009

COURSE REVISIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Change prefixes of the following courses from ANTH, GEOG, and GEOL to ENVI:

ANTH 202	Multiple Lifeways
ANTH 202I	Multiple Lifeways
ANTH 205	Intro to Biol. Anthropology
ANTH 260	Archaeology Lab Practicum
ANTH 303	Aspects of Culture
GEOG 112	Cartography
GEOG 115	Earth from Space
GEOG 210	Intro to Cultural Geography
GEOG 211	Physical Geography
GEOG 213	Intro to Economic Geography
GEOG 240	Intro Quantitative Geography
GEOG 242	Intro Geographic Info. Sys.
GEOG 313	Advanced Economic Geography
GEOG 356	Water & Environ. Health
GEOG 405	Fund. Remote Sensing
GEOG 406	Remote Sensing: Image Devel.
GEOG 407	Remote Sensing: Digital Anal.
GEOG 408	Remote Sensing: Digital Analysis
GEOG 412	Advanced Cartography
GEOG 417	Industrial Geography
GEOG 423	Geog. Middle East
GEOG 424	Geog. Former Soviet Union
GEOG 452	Quaternary Environments
GEOL 110	Intro to Environmental Sciences
GEOL 110L	Intro to Environmental Sciences Lab
GEOL 160	Intro to Earth and Sky Sciences
GEOL 160L	Intro to Earth and Sky Sciences Lab
GEOL 170	Earth Science
GEOL 170L	Earth Science Lab
GEOL 270	Earth History
GEOL 350	Geomorphic Processes
GEOL 351	Regional Geomorphology
GEOL 360	Astronomy
GEOL 361	Oceanography
GEOL 380	Mineralogy
GEOL 382	Petrology
GEOL 385	Structural Geology
GEOL 389	Intro Field Geology
GEOL 454	Intro Hydrology
GEOL 455	Groundwater Hydrology
GEOL 457	Environ. Geology

GEOL 465	Fund. Tree-Ring Research
GEOL 470	Paleontology and Geobiology
GEOL 471	Quaternary Paleoecology
GEOL 475	Strat. And Sedimentation
GEOL 481	Geochemistry
GEOL 482	Volc. Process. & Hazards
GEOL 483	Mineral Resources
GEOL 484	Energy Resources
GEOL 486	Geophysics
GEOL 488	Geoscience Research Methods
GEOL 489	Field Geology

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

GEOG 110 - Introduction to Human Geography

3 credits

The purpose of this course is to provide an overview of human spatial behavior as a means to foster an understanding of basic geographical concepts and to provide an introduction to human geography as an important part of the discipline of geography.

Change prefix and number to:

ENVI 105 - Introduction to Human Geography

3 credits

The purpose of this course is to provide an overview of human spatial behavior as a means to foster an understanding of basic geographical concepts and to provide an introduction to human geography as an important part of the discipline of geography.

A-F Grading

Preferred effective term: Fall 2009

GEOG 130 - World Geography

3 credits

An interpretation of human activities in selected world regions.

General Education Credit: [GE2000: Multicultural Studies-International Cultures]

Change prefix, title and description to:

ENVI 130 – World Cultures and Environments

3 credits

A study of cultural variability and human interaction with the environment in selected regions of the world.

General Education Credit: [GE2000: Multicultural Studies-International Cultures]

A-F Grading

Preferred effective term: Fall 2009

GEOG 312 - Intermediate Cartography

3 credits

Intermediate principles of map design, map interpretation and analysis, map construction, and map reproduction.

Prerequisites: GEOG 112 or consent of instructor.

Change prefix, number, description, and remove prerequisites to:

ENVI 212 - Introduction to GIScience

3 credits

This course examines the fundamentals of geographic information science (GIScience) including spatial data collection, descriptive data analysis, and cartographic representation. The course will also introduce students to geographic information systems, remote sensing, and global positioning systems technologies.

A-F Grading

Preferred effective term: Fall 2009

GEOG 411 - Conservation of Natural Resources

3 credits

Utilization of our natural resources and the improvement in the quality of the environment, including the role of government agencies in resource management.

General Education Credit: [GE2000: Social and Behavioral Studies-Elective]

Change prefix, number and title to:

ENVI 460 - Conservation and Sustainability of Natural Resources

3 credits

Utilization of our natural resources and the improvement in the quality of the environment, including the role of government agencies in resource management.

General Education Credits: [GE2000: Social and Behavioral Studies-Elective]

A-F Grading

Preferred effective term: Fall 2009

GEOG 416 - Climatology

3 credits

Elements of physical, synoptic, and applied climatology viewed in the context of world regional climates.

Prerequisite: consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 453 - Climatology

3 credits

Elements of physical, synoptic, and applied climatology viewed in the context of world regional climates.

Prerequisite: consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 420 - Geography of Anglo America

3 credits

Regional analysis of Canada and the United States in terms of population, culture, and economy.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 425 - Geography of Anglo America

3 credits

Regional analysis of Canada and the United States in terms of population, culture, and economy.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 430 - Global Geography

3 credits

Designed primarily for those students who desire a general overview of world relationships from the geographic approach.

Change prefix and number to:

ENVI 419 - Global Geography

3 credits

Designed primarily for those students who desire a general overview of world relationships from the geographic approach.

A-F Grading

Preferred effective term: Fall 2009

GEOG 431 - Urban Geography

3 credits

Approach to the city as a geographical phenomenon created through human effort. Historic development, classification, ecology, and city planning are emphasized.

Cross-listed: (Also listed as African and African American Studies 423G.)

Capstone Course: General Education Credits [GE2000: Social and Behavioral Studies-Elective]

Change prefix and number to:

ENVI 420 - Urban Geography

3 credits

Approach to the city as a geographical phenomenon created through human effort. Historic development, classification, ecology, and city planning are emphasized.

Cross-listed: (Also listed as African and African American Studies 423G.)

Capstone Course: General Education Credits [GE2000: Social and Behavioral Studies-Elective]

A-F Grading

Preferred effective term: Fall 2009

GEOG 432 - Political Geography

3 credits

Problems arising where the boundaries of sovereign states fail to separate national groups and where corporate limits fail to encompass all segments of a metropolis.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 418 - Political Geography

3 credits

Problems arising where the boundaries of sovereign states fail to separate national groups and where corporate limits fail to encompass all segments of a metropolis.

Note: Open to graduate students. Graduate students are required to do additional work of a

research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 433 - Geographical Analysis of Urban Systems

3 credits

The theoretical and empirical spatial organization of the metropolitan landscape, emphasizing social and economic function, movement, growth, and policy.

Prerequisites: GEOG 110, 111 or 213, or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, number, and prerequisites to:

ENVI 421 - Geographical Analysis of Urban Systems

3 credits

The theoretical and empirical spatial organization of the metropolitan landscape, emphasizing social and economic function, movement, growth, and policy.

Prerequisites: ENVI 110, 111 or 213, or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 435 - Interpreting American Cityscapes

3 credits

An analysis of the contrasts between laissez faire and planned landscapes in different types of commercial and residential districts and green spaces.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and name to:

ENVI 422 - Interpreting American Cityscapes

3 credits

An analysis of the contrasts between laissez faire and planned landscapes in different types of commercial and residential districts and green spaces.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 440 - Advanced Quantitative Geography

3 credits

The application of statistical techniques within geographical contexts, including descriptive, inferential, and multivariate methodologies. Emphasis is on problem solving in the geosciences.

Prerequisites: GEOG 240 or equivalent or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, number, and prerequisites to:

ENVI 415 - Advanced Quantitative Geography

3 credits

The application of statistical techniques within geographical contexts, including descriptive, inferential, and multivariate methodologies. Emphasis is on problem solving in the geosciences.

Prerequisites: ENVI 240 or equivalent or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 442 - Geographic Information Systems: Applications

3 credits

Application of basic principles of geometric information systems by providing practice in employing this technology to a simulated problem.

Prerequisites: 100 level course or higher in geography or geology or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 401 - Geographic Information Systems: Applications

3 credits

Application of basic principles of geometric information systems by providing practice in employing this technology to a simulated problem.

Prerequisites: 100 level course or higher in geography or geology or consent of instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 446 - Automated Cartography

3 credits

The application and analysis of computer programs as an alternate cartographic technique.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 404 - Automated Cartography

3 credits

The application and analysis of computer programs as an alternate cartographic technique.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

Preferred effective term: Fall 2009

GEOG 448 - Environmental Modeling and Mapping

3 credits

An analysis of how GIS, remote sensing, and other geospatial techniques are applied in environmental studies. Different methods of GIS modeling and GIS-environmental modeling integration are emphasized.

Prerequisites: successful completion of one GIS or remote sensing course, or permission of the instructor.

Note: Open to graduate students. Graduate students are required to do additional work of a

research nature.

Cross-listed: (Also listed as Geology 448.)

Change prefix, number, description, and remove cross-listing to:

ENVI 450 - Environmental Modeling and Mapping

3 credits

An analysis of how GIS, remote sensing, and other geospatial techniques are applied in environmental studies. Different methods of GIS modeling and GIS-environmental modeling integration are emphasized.

Prerequisite: successful completion of one GIS or remote sensing course, or permission of the instructor.

A-F Grading

Preferred effective term: Fall 2009

GEOG 492 - Professional Practice

3 or 6 credits

Full or part-time work activity as an assistant or staff specialist to geoscientists in public and private organizations or agencies.

Prerequisites: consent of course administrator.

Change prefix, title, description, prerequisites, and add repeatable to:

ENVI 492 - Internship

3-6 credits

Student work as an assistant or staff specialist to geoscientists or environmental scientists in public and private organizations or agencies. Designed to provide the student with practical experiences. A written report is required of the student and a written evaluation by the employer must be made to the supervising faculty.

Prerequisite: consent of discipline advisor.

Repeatable: up to six credits

A-F Grading

Preferred effective term: Fall 2009

GEOL 496 - Research in Geology

1-6 credits

Literature, laboratory, and field research of a selected geologic problem.

Prerequisites: 12 credits of geology

Repeatable: up to 6 credits

Note: University Honors students may elect to take this course for Honors credit.

Change prefix, title, and prerequisites to:

ENVI 496 – Advanced Research

1-6 credits

Literature, laboratory, and field research of a selected topic or problem.

Prerequisites: 12 department credits

Repeatable: up to 6 credits

Note: University Honors students may elect to take this course for Honors credit.

A-F Grading

Preferred effective term: Fall 2009

GEOL 497 - Seminar in Advanced Geology

1-9 credits

Department seminar investigating a selected field of advanced geology announced prior to registration.

Prerequisites: 9 credits of geology or consent of instructor.

Repeatable: up to 9 credits.

Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, title, description, and prerequisites to:

ENVI 497 Seminar in Advanced Topics

1-9 credits

Department seminar investigating a selected advanced topic announced prior to registration.

Prerequisites: 9 department credits or consent of instructor.

Repeatable: up to 9 credits.

Preferred effective term: Fall 2009

COURSE BANKING

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ANTH 100 Introduction to Anthropology

ANTH 301 Emergence of Complex

ANTH 304H Research Methods in Cross Cultural Studies

ANTH 306 Peoples of Middle and South America

ANTH 407 Cultural Resource Management Practicum

ANTH 405 Curriculum Development

ANTH 439 Geoarchaeology

GEOG 238 Introduction to Geohistorical Archeology

GEOG 490 Problems in Geography

GEOL 480 Optical Mineralogy

Preferred effective term: Fall 2010

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

GEOG 111 The Physical Environment

GEOG 111L Physical Environment Laboratory

GEOL 160 Introduction to Earth and Sky Sciences

GEOL 160L Introduction to Earth and Sky Sciences Lab

Preferred effective term: Fall 2011

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ANTH 204 Introduction to Cultural Anthropology

ANTH 402 History of Anthropological Thought

Preferred effective term: Fall 2012

COURSE ELIMINATIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ANTH 410 Problems in Anthropology
ANTH 465 Fundamentals of Tree Ring Research
ANTH 499 Senior Thesis
GEOG 391 Seminar for Majors
GEOG 418 Soil Genesis and Classification
GEOG 465 Fundamentals of Tree Ring Research
GEOG 493 Geography Senior Thesis
GEOL 448 Environmental Modeling and Mapping
GEOL 452 Quaternary Environments
Preferred effective term: Fall 2009

NEW PROGRAMS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geochemistry Minor (18 credits)
CIP Code: 400601 Major Code: _____

Brief Summary:

We are proposing a new minor in geochemistry based on current faculty expertise in the department and student interest displayed at national geology conferences. The majority of students visiting our recruitment booth at annual national geology conferences were interested in the geochemistry aspect of our program.

This minor will be advantageous for students wishing to pursue careers in geology, earth sciences, and environmental sciences because geochemistry is an integral part of our understanding of the geodynamics of Earth's environments. Students wishing to pursue this sub-discipline will be provided with broad exposure in the application of geochemical techniques and the interpretation of environmental situations involving geochemistry. In addition, the minor is designed to give students the opportunity to conduct research with faculty on geochemistry-related projects. Research opportunities are enhanced by the recent acquisition of analytical equipment through NSF to conduct geochemical research.

Required courses are Earth Sciences (ENVI 170/170L), General Chemistry I and II (CHEM 105/105L and 106/106L), and 6 credits of electives that include Medical Geology (ENVI 458), Global Biogeochemical Cycles (ENVI 479) Geochemistry (ENVI 481/481L), Advanced Research (ENVI 496), Seminar in Advanced Topics (ENVI 497), Analytical Chemistry (CHEM 321), and Environmental Chemistry (CHEM 371).

Student Learning:

The proposed minor and requirements are based on surveys of alumni and employers (comprehensive surveys conducted in 2005), student interest at national conferences, and student outcomes assessments that highlight the importance of special training (minors) for some

graduates. At present, there are no other science minors with this type of interdisciplinary focus.

The option of the geochemistry minor will enhance student learning by providing valuable, practical training that prepares students for graduate studies and professional employment requiring experience in geochemistry. Program effectiveness will be improved by increasing enrollments in the listed courses. No new resources or changes in time commitment by faculty are necessary for this minor.

Proposed Catalog Copy:

Geochemistry Minor (18 credits)

CIP Code: 400601 Major Code: _____

Required Courses: ENVI 170/170L—4credits; 481-3 credits; CHEM 105/105L—4 credits; CHEM 106/106L—4 credits

Electives (3 credits from the following): ENVI 458—3 credits; 479—3 credits; 496—1to 6 credits; 497—1 to 6 credits.; CHEM 321—4 credits.; 371—3 credits.

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Environmental Sciences Minor (20 credits)

CIP Code: 400601 Major Code: _____

Brief Summary:

The minor in Environmental Sciences provides students with an introduction to the scientific disciplines within the EES department that comprise the environmental sciences. The minor will consist of core courses in Introduction to Environmental Sciences (ENVI 110/110L), Earth Sciences (ENVI 170/170L), Conservation and Sustainability of Natural Resources (ENVI 460), and Human Ecology (ENVI 440) or Human Discovery: Human-Environment Interactions (ENVI 449). In addition, students will complete 6 credit hours in environmentally related sciences at the 300-400 level in consultation with the minor advisor. These electives may be completed in environmentally-oriented courses offered by other science departments.

Student Learning:

Our alumni and industry surveys indicate that additional education is needed in the environmental field. Faculty with training in environmental sciences are scattered in a number of departments on campus. The EES department will have the greatest concentration of these faculty, and thus be a natural home for a program devoted to exposing undergraduates to the environmental sciences and the research programs and expertise of faculty dealing with environmental problems.

Students who complete this minor will have a basic understanding of environmental processes

and the scientific methods necessary to make informed decisions about environmental issues. This minor will specifically enhance the education and career potential of students in other science disciplines that are closely allied to environmental sciences.

Program effectiveness will not be adversely affected by this change as courses in the minor are already taught in the Department. No new resources or changes in time commitment by faculty are necessary for this minor. Additionally, we expect enrollments in classes to increase.

Proposed Catalog Copy:

Environmental Sciences Minor (20 credits)

CIP Code: 400601 Major Code: _____

Required Courses: ENVI 110/110L-4 credits, ENVI 170/170L-4 credits, ENVI 440 or 449-3 credits, ENVI 460-3 credits

Electives: 6 credits at the 300-400 level in environmentally-related science courses selected in consultation with the minor advisor in the EES Department.

Preferred effective term: Fall 2009

PROGRAM REVISIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geography Major (37 credits)

CIP Code: 450701 Major Code: 2123

Brief Summary:

The proposed program changes are in response to the Program Prioritization process. As a result of this process, the geographers in collaboration with anthropologists and geologists have agreed to develop a new undergraduate structure that builds on our collective strengths in the areas of the earth and environmental sciences.

In developing the Human and Environmental Systems major, careful consideration was given to alumni surveys, the curriculum of similar environmental programs, and national standards for training to ensure our graduates are well prepared for graduate studies and professional employment. Students choosing the Anthropology or Geology concentration will be trained in field and laboratory techniques necessary to interpret earth and environmental processes, and human environmental interactions; analyze and evaluate scientific data; and assess new human and environmental situations. Students choosing the GIScience emphasis will be trained in both field and laboratory techniques necessary to effectively deploy geotechnologies for the purpose of interpreting earth and environmental processes and human environmental interactions; analyzing and evaluating scientific data; and assessing new human and environmental situations. GIScience is a relatively new field and recognizes concentrated areas of study at the undergraduate and graduate level. GIScience refers to the science (theory and practice) of spatial data which includes data collection, manipulation, analysis, and the digital representation of real world human and physical processes and patterns—as well as the socio-spatial

implications of these patterns/processes within a digital landscape.

1. Students enrolled in any of the majors in the Department of Earth and Environmental Systems, including the Human and Environmental BS/BA program, will be required to complete 14 hours of integrated courses as a common core that emphasize an understanding of the earth and human and environmental interactions. Shared core courses include ENVI 110/110L Intro to Environmental Sciences; 170/170L Earth Science; 130 World Cultures and Environments; and 460 Conservation and Sustainability of Natural Resources. These courses are designed to emphasize the need to approach environmental issues from a holistic perspective.
2. A common cognate course in statistics is required in this major.
3. The Anthropology concentration has been designed to expose students to important interrelationships of humans and the environment including the human adaptation, the emergence of humans, and the influence of humans on the environment.
4. The Geography concentration has been designed to expose to both human and physical geography. Additionally the program includes geotechniques. The concentration has been structured to facilitate a more balanced and developmental curriculum when compared to the prior geography program.
5. The GIScience concentration has been designed to train students in the full range of spatial analysis tools including statistics, remote sensing, geographic information systems, and remote sensing. The new concentration will focus on the deployment of GIScience frameworks to investigate human-environmental interactions—as well as physical/environmental processes.
4. As part of the package of curricular revisions, the following course actions are being taken: 12 courses are being banked; 19 are being eliminated; 12 are being revised; 11 are being created; 39 are being renumbered; and the remaining courses at the 500 level and below are all having their prefix changed to ENVI.

Brief Summary:

In developing the program, careful consideration was given to the program prioritization process, alumni surveys, the curriculum of similar environmental, anthropology, and environmentally focused geography programs, as well as national standards for anthropological training to ensure our graduates are well prepared for graduate studies as well as professional employment in the environmental sector. Based on geography surveys and observed enrollments, GIScience related courses are popular and the majority of graduates obtain professional positions that utilize GIS, remote sensing, and GPS. For this reason, the creation of the GIScience concentration reflects developments within the discipline, the core strengths of ISU geography, and the interests of our students.

Primary assessment of this outcome will be evaluated through outcomes assessment tests and surveys that are given upon entry and graduation from the program. Students also have the option to choose research projects on which their oral and written presentations will be evaluated. These student-based research projects will provide further hands-on experience, which is part of the Department's mission.

The proposed curricular revision will enable students to achieve the following learning outcomes:

Anthropology - to assess human societies in the present and past, interpret cultural, archaeological, and osteological data, summarize and present research results orally and in written form, and apply an interdisciplinary understanding of behavioral sciences to environmental situations. Program revisions will provide students with critical thinking skills and a more comprehensive, interdisciplinary education to approach human and environmental situations from a more integrated and holistic perspective.

Geography - present data cartographically, understand human-environment interactions, collect/manipulate/analyze spatial data using geotechnologies, understand the spatial dynamics of the human experience, understand environmental/physical systems, and identify spatial patterns and processes. Finally, all students will be prepared to effectively and professionally communicate content knowledge vis-à-vis oral and written presentations. Program revisions will provide students with critical thinking skills and a more comprehensive, interdisciplinary education to approach human and environmental situations from a more integrated and holistic perspective.

GIScience - present data cartographically, understand human-environment interactions, collect/manipulate/analyze spatial data using geotechnologies, identify spatial patterns and processes, and understand the socio-spatial implications of the GIS, remote sensing, and similar technologies. Finally, all students will be prepared to effectively and professionally communicate content knowledge vis-à-vis oral and written presentations. Program revisions will provide students with critical thinking skills and a more comprehensive, interdisciplinary education to approach human and environmental situations from a more integrated and holistic perspective.

We anticipate that these changes will promote a continued increase in enrollments. We currently have faculty with diverse and integrated backgrounds and experiences to teach the courses in the

proposed major. No new resources or changes in time commitment by faculty are necessary for this degree.

Proposed Catalog Copy:

Human and Environmental Systems Major (41-50 credits)

CIP Code: 450701 Major Code: _____

Common Core for all Departmental Concentrations (14 credits)

ENVI 110 Introduction to Environmental Science 3 credits
ENVI 110L Introduction to Environmental Science Lab 1 credit
ENVI 130 World Culture and Environments 3credits
ENVI 170 Earth Science 3 credits
ENVI 170L Earth Science Lab 1 credit
ENVI 460 Conservation and Sustainability of Natural Resources 3 credits

Required Statistics for all HES Majors (3 credits)

Choose one:

ENVI 240 Introduction to Quantitative Geography 3 credits
MATH 241 Principles of Statistics 3 credits
SOC 381 Statistics for Social Research 3 credits
HLTH 340 Health Biostatistics 3 credits
Or another statistics course approved by the Department

Department Electives (6 credits)

Select any ENVI courses.

Anthropology Concentration (27 credits)

ENVI 201 Prehistory and Climate Change 3 credits
ENVI 205 Introduction to Biological Anthropology 3 credits
ENVI 308 Human Evolution 3 credits
ENVI 436 Environmental Archaeology 3 credits
ENVI 440 Human Ecology 3 credits
ENVI 449 Human Discovery 3 credits

Choose three courses from the following:

ENVI 303 Aspects of Culture 3 credits
ENVI 310 Indians of North America 3 credits
ENVI 435 Issues in Biological Anthropology 3 credits
ENVI 442 Medical Anthropology 3 credits
ENVI 443 Forensic Anthropology 3 credits
ENVI 445 Archaeological Methods 3 credits

ENVI 446 Archaeology of Eastern North America 3 credits
ENVI 447 Current Issues in Archaeology 3 credits

Geography Concentration (18 credits)

ENVI 105 Introduction to Human Geography 3 credits
ENVI 211 Physical Geography 3 credits
ENVI 212 Intermediate Cartography 3 credits
1 course from each of the following areas:

Human Systems

ENVI 313 Advanced Economic Geography 3 credits
ENVI 417 Industrial Geography 3 credits
ENVI 418 Political Geography 3 credits
ENVI 419 Global Geography 3 credits
ENVI 420 Urban Geography 3 credits
ENVI 421 Geographical Analysis of Urban Systems 3 credits
ENVI 422 Interpreting American Cityscapes 3 credits
ENVI 423 Geography of the Middle East 3 credits
ENVI 425 Geography of Anglo-America 3 credits

Physical Systems

ENVI 351 Regional Geomorphology 3 credits
ENVI 353 Weather and Climate 3 credits
ENVI 452 Quaternary Environments 3 credits
ENVI 453 Climatology 3 credits
ENVI 454 Introduction to Hydrology 3 credits
ENVI 463 Soil Genesis and Classification 3 credits

Geo-Techniques

ENVI 401 GIS: Applications 3 credits
ENVI 402 The Processing of Spatial Data for Geoscientists 3 credits
ENVI 404 Automated Cartography 3 credits
ENVI 405 Fundamentals of Remote Sensing 3 credits
ENVI 412 Advanced Cartography 3 credits
ENVI 415 Advanced Quantitative Geography 3 credits
ENVI 450 Environmental Modeling and Mapping 3 credits

GIScience Concentration (18 credits)

ENVI 212 Introduction to GIScience 3 credits
ENVI 242 Introduction to Geographic Information Systems 3 credits
ENVI 401 GIS: Applications 3 credits
ENVI 405 Fundamentals of Remote Sensing 3 credits
ENVI 407 Remote Sensing: Digital Analysis of Spectral Data 3 credits
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

**Geology Major (73-76 semester hours including extradepartmental requirements, includes 18 credit hours of General Education courses.)
CIP Code: 400601 Major Code: 2124**

Brief Summary:

The proposed program changes are in response to the Program Prioritization process. This process has given Geology the unique opportunity to join with Anthropology and Physical Geography to develop the atmosphere & surfaces processes and geoscience concentrations within a BS major in Earth and Environmental Sciences.

In developing the program, careful consideration was given to alumni and industry surveys, the curriculum of similar geoscience and environmental geology programs, and national standards for geoscience training to ensure our graduates are well prepared for graduate studies and professional employment. Students choosing the geoscience emphasis will be trained in field and laboratory techniques necessary to interpret earth and environmental processes, analyze and evaluate scientific data, and assess new environmental situations.

Actions:

1. Students enrolled in any of the majors in the Department of Earth and Environmental Systems, including the Earth and Environmental Science BS program, will be required to complete 14 hours of integrated courses as a common core that emphasize an understanding of human and environmental interactions. Shared core courses include ENVI 110/110L Intro to Environmental Sciences; 170/170L Earth Science; 130 World Cultures and Environments; and 460 Conservation and Sustainability of Natural Resource. These courses are designed to emphasize the need to approach environmental issues from a holistic perspective.
2. Our selection of core and cognate required courses in the concentrations is based on surveys, graduate school requirements, and the needs of employers in government agencies and private industry.
3. The electives in the Geosciences concentration are designed to expose students to the interdisciplinary nature of the environmental and geosciences by introducing important sub disciplines of these sciences. Elective categories include environmental processes, water and geochemistry, geobiology, geoarchaeology, physical geosciences, and research.
4. As part of the package of curricular revisions, the following course actions are being taken: 12 courses are being banked; 19 are being eliminated; 12 are being revised; 11 are being created; 39 are being renumbered; and the remaining courses at the 500 level and below are all having their prefix changed to ENVI.
5. It is anticipated that most of the 400-level courses will be taught on a two-year rotation.
6. Total credit hours for the major are comparable with the total credit hours required for similar programs in comparable universities in the region and country (see listing of credit hour requirements for similar programs below). The total credit hours for this program are also comparable to other science programs at ISU (e.g., chemistry 69-75 hours; life sciences 67

hours; physics 61-65 hours)

Examples of Total Credit Credits in Geoscience and Environmental Science Programs at Universities within the region.

University of Evansville, Environmental Sciences	78 credits
University of Southern Indian, Geology	65-69 credits
Indiana University, Geological Sciences	69+ credits
Ball State University, Geology	65-67 credits
Purdue, Geology and Geophysics	82+ credits
DePaul, Environmental Sciences	87 credits
Eastern Illinois University, Geology	72 credits
Northern Illinois University, Geology	65-68 credits
Northern Illinois University, Environmental Geosciences	63-67 credits
University of Illinois-Chicago, Earth and Environ. Sciences	68 credits
Eastern Kentucky Univ., Geology	60+ credits
Murray State University, Geosciences	78 credits
University of Kentucky, Earth and Environmental Sciences	72 credits
Miami University, Geology	69 credits
Ohio Northern University, Geology	82 credits
Michigan State University, Earth Sciences	60 credits
Michigan State University, Geological Sciences	70 credits
Michigan State University, Environmental Geosciences	70 credits

Student Learning:

In developing the program, careful consideration was given to alumni and industry surveys (comprehensive surveys were conducted in 2005), the curriculum of similar environmental geology and geoscience programs, and national standards for geoscience training to ensure our graduates are well prepared for graduate studies and professional employment.

The proposed curricular revision will enable students to achieve the outcomes detailed in the geology program's outcome statement. Students will be able to assess geological features in the environment, interpret mapped data, summarize and present research results orally and in written form, and apply an interdisciplinary understanding of geosciences to new environmental situations. Program revisions will provide students with critical thinking skills and a more comprehensive, interdisciplinary education to approach geological and environmental situations from a more integrated and holistic perspective. We anticipate that these changes will promote a continued increase in enrollments (we have more than doubled our enrollments since 2001).

Primary assessment of this outcome will be evaluated through outcomes assessment tests that are given upon entry and graduation from the program. Additionally, students will be evaluated in the field, based on successful completion of a series of field exercises. Students also have the option to choose research projects on which their oral and written presentations will be evaluated. These student-based research projects will provide further hands-on experience, which is part of the Department's mission.

We currently have faculty with diverse and integrated backgrounds and experiences to teach the

courses in the revised major. No new resources or changes in time commitment by faculty are necessary for this degree.

Proposed Catalog Copy:

Earth and Environmental Health Science Major (59-73 credit)

CIP Code: 400601 Major Code: _____

Common Core for all Departmental Concentrations (14 semester credits)

ENVI 110 Introduction to Environmental Science-3 credits

ENVI 110L Introduction to Environmental Science Lab-1 credit

ENVI 130 World Culture and Environments-3credits

ENVI 170 Earth Science-3 credits

ENVI 170L Earth Science Lab-1 credit

ENVI 460 Conservation and Sustainability of Natural Resources-3 credits

Math and Science Core for Earth and Environmental Science Major:

CHEM 105 General Chemistry I – 3 credits

CHEM 105L General Chemistry I Lab – 1 credit

MATH 131 Calculus I – 4 credits

MATH 132 Calculus II – 4 credits

Choose either:

PHYS 105 General Physics I – 3 credits and

PHYS 105L General Physics I Laboratory – 1 credit

Or

PHYS 205 University Physics I – 3 credits and

PHYS 205L University Physics I Lab – 1 credit

Students must complete one of the following concentrations:

Directed Electives (15 credits)

Atmosphere and Surfaces Concentration (at least one course from each area):

Atmosphere and Hydrosphere:

ENVI 361 Oceanography 3 credits

ENVI 453 Climatology 3 credits

ENVI 454 Introduction to Hydrology 3 credits

Landscapes:

ENVI 351 Regional Geomorphology 3 credits

ENVI 452 Quaternary Environments 3credits

ENVI 463 Soil Genesis and Classification 3 credits

Methods of Environmental Analysis:

ENVI 401 Geographic Information Systems: Applications 3 credits
ENVI 405 Fundamentals of Remote Sensing 3 credits
ENVI 415 Advanced Quantitative Geography 3 credits
ENVI 490 Field Geology of the United States 3 credits

Geoscience Concentration (no more than six credits from any category):

Environmental Processes:

ENVI 350 Geomorphic Processes 3 credits or
ENVI 351 Regional Geomorphology 3 hrs

ENVI 450 Environmental Modeling and Mapping 3 credits
ENVI 452 Quaternary Environments 3 credits
ENVI 463 Soil Genesis and Classification 3 credits
ENVI 471 Quaternary Paleoecology 3 hrs
or up to 3 hrs of other related science courses in consultation with the major advisor

Water and Geochemistry:

ENVI 356 Water and Environmental Health 3 credits
ENVI 361 Oceanography 3 credits
ENVI 454 Introduction to Hydrology 3 credits
ENVI 455 Groundwater Hydrology 3 credits
ENVI 456 Lakes and Wetlands 3 credits
ENVI 481 Geochemistry 3 hrs
or up to 3 credits of other related science courses in consultation with the major advisor

Geobiology:

ENVI 308 Human Evolution 3 credits
ENVI 440 Human Ecology 3 hrs
ENVI 458 Medical Geology 3 credits
ENVI 465 Fundamentals of Tree Ring Research 3 credits
ENVI 470 Paleontology and Geobiology 3 credits
ENVI 479 Global Biogeochemical Cycles 3 credits
or up to 3 credits of other related science courses in consultation with the major advisor

Geoarchaeology:

ENVI 201 Prehistory and Climate Change 3 credits
ENVI 260 Archaeology Lab Practicum 3 credits
ENVI 310 Indians of North America 3 credits
ENVI 436 Environmental Archaeology 3 credits
ENVI 445 Archaeological Methods 3 credits
ENVI 446 Midwestern Archaeology 3 credits
ENVI 447 Current Issues in Archaeology 3 credits
ENVI 491 Archaeological Field School 3 credits
or up to 3 credits of other related archaeology courses in consultation with the major advisor

Physical Geosciences:

ENVI 276 Dinosaurs Quakes and Volcanoes 3 credits
ENVI 276L Dinosaurs Quakes and Volcanoes Lab 1 credits

ENVI 360 General Astronomy 3 credits
ENVI 482 Volcanic Processes and Hazards 3 credits
ENVI 483 Mineral Resources 3 credits
ENVI 484 Energy Resources 3 credits
ENVI 486 Geophysics 3 credits
ENVI 489 Field Geology 3 credits
or up to 3 credits of other related science courses in consultation with the advisor

Research:

ENVI 488 Geoscience Research Methods 3 credits
ENVI 492 Internship 3 or 6 hrs
ENVI 496 Advanced Research 1 to 6 credits
ENVI 497 Seminar in Advanced Topics 1 to 9 credits
ENVI 499 Senior Thesis and Research 3 credits

Atmosphere And Surface Processes Concentration (13 credits)

ENVI 211 Physical Geography 3credits
ENVI 353 Weather and Climate 3 credits
ENVI 350 Geomorphic Processes 3 credits

Choose either:

CHEM 106 General Chemistry II 3 credits and
CHEM 106L General Chemistry II Lab 1 credit
Or
PHYS 106 General Physics II 3 credits and
PHYS 106L General Physics II Lab 1credit

Geoscience Concentration (28 credits)

ENVI 270 Earth History 3 credits
ENVI 380 Mineralogy 3 credits
ENVI 382 Petrology 3 credits
ENVI 385 Structural Geology 3 credits
ENVI 389 Introduction to Field Geology 1 credit
ENVI 389L Introduction to Field Geology Lab 1 credit
ENVI 457 Environmental Geology 3 credits
ENVI 475 Stratigraphy and Sedimentation 3 credits
CHEM 106 General Chemistry II 3 credits
CHEM 106L General Chemistry II Lab 1 credit

Choose either:

PHYS 106 General Physics II 3 credits and
PHYS 106L General Physics II Lab 1credit
OR
PHYS 206 University Physics II 3 credits and

PHYS 206L University Physics II Lab 1 credit
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geography Minor (22 credits)
CIP Code: 450701 Major Code: 2123

Brief Summary:

Minor changes are required because of course prefix/number changes to ENVI and elimination of courses in GEOG resulting from revised major.

Proposed Catalog Copy:

Geography Minor (22 credits)
CIP Code: 450701 Major Code: _____

Geography Minor (22 credits)

Required courses (10 credits): 105-3 credits; 110-3 credits, 110L-1 credit; 112-3 credits

Electives: 12 credits, 6 of which must be at 300/400 level from: ENVI 115-3 credits; 130-3 credits; 201-3 credits; 205-3 credits; 210-3 credits; 211-3 credits; 212-3 credits; 213-3 credits; 240-3 credits; 242 -3 credits; 260-3 credits; 270-3 credits; 313-3 credits; 401-3 credits; 402-3 credits; 404-3 credits; 405-3 credits; 406-3 credits; 407-3 credits; 408-3 credits; 412-3 credits; 415-3 credits; 417-3 credits; 418-3 credits; 419-3 credits; 420-3 credits; 421-3 credits; 422-3 credits; 423-3 credits; 424-3 credits; 425-3 credits; 452-3 credits; 453-3 credits; 454-3 credits; 490-3 credits.

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geology Minor (18-19 semester hours)
CIP Code: 400601 Major Code: 2124

Brief Summary:

We are revising and changing the name of the Geology Minor to provide students with a more broad-based understanding of the Earth Sciences. The current Geology Minor contains required courses (i.e., Mineralogy and Field Methods) that are too narrowly focused. The Department teaches other courses that provide a broader overview of the Earth Sciences, and these have been incorporated into the proposed minor. This minor is also advantageous for students wishing to pursue jobs in the environmental field because Earth Science is an integral part of Environmental Science. The current Geology Minor has attracted students from a wide variety of majors including history, aviation, health and safety, chemistry, anthropology, economics, and English. We anticipate that the revised Earth Science Minor will be even more attractive.

The proposed minor consists of required courses in Earth Science (ENVI 170/170L), Earth History (ENVI 270), Oceanography (ENVI 361), Environmental Geology (ENVI 457), and 6 hours of ENVI electives at the 300/400 level in geology and earth science related departmental courses. Total proposed credit hours (19 hours) are similar to the existing Geology Minor.

Proposed Catalog Copy:

Earth Science Minor (19 credits)

CIP Code: 400601 Major Code: _____

Required Courses: 170/170L—4credits; 270—3credits; 361—3 credits, 457—3credits

Electives: 6 credits at the 300/400 level in geology and earth science related departmental courses in consultation with the minor advisor.

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Anthropology Minor (18 credits)

CIP Code: 450201 Major Code: 2130

Brief Summary:

This is a slight revision of the Anthropology minor to accommodate the elimination of an anthropology course due to a revised degree program in reconfigured department.

Anthropology Minor (18 credits)

CIP Code: 450201 Major Code: _____

Requirements: select 6 credits from: 201-3 credits; 205-3 credits; 303-3 credits

Select 12 additional credits from: 303-3 credits; 308-3 credits; 310-3 credits; 440-3 credits; 442-3 credits; 435-3 credits; 443-3 credits; 445-3 credits; 446-3 credits; 447-3 credits; 449-3 credits; 491-3 credits

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Climatology Minor (20 credits)

CIP Code: 450701 Major Code: 2138

Brief Summary:

There are minor changes required because of course prefix/number changes to ENVI and elimination of courses in GEOG and GEOL that were course prerequisites.

Proposed Catalog Copy:

Climatology Minor (20 credits)

CIP Code: 450701 Major Code: _____

Required Courses (11 credits): 352-2 credits; 353-3 credits; 453-3 credits; 454-3credits (110, MATH 115, PHYS 105 and 105L, or consent of the instructor are prerequisites for 454.)

Electives (9 credits): ENVI 405-3credits; 460-3 credits; 270-3credits; 350 - 3 credits; 361-3 credits; 452 - 3 credits; 455-3 credits; 457-3 credits; BIO 350-3 credits; 452-4 credits; 455-3 hrs; ECON 211- 3 credits;; HLTH 438-1 credit; MATH 131-4 credits; 132-4 hrs; 231-4 credits; 241-3 hrs; 301-3 credits; 335 - 4 credits; PHYS 355-3 credits; 420-3 credits; 460-3 credits Students minoring in climatology must select their additional 9 credits from courses other than their major concentration. Other suitable courses may be approved by the advisor. Entry to the program requires permission of the undergraduate advisor in the Department of Earth and Environmental Systems.

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Conservation Minor for non-Life Sciences Majors (26 credits)

CIP Code: 450701 Major Code: 2127

Brief Summary:

Changes are required to this minor because of course prefix/number changes to ENVI and banking of GEOG courses.

Proposed Catalog Copy:

Conservation Minor for non-Biology Majors (26 credits)

CIP Code: 450701 Major Code: _____

Required Courses: ENVI 110-3 credits; 170- 3 credits; 460-3 credits; Biology 101-3 credits;

BIO 101L – 1 credit; 102-3 credits; 102L – 1 credit; 455-3 credits; 455-3 credits; RSCSM 361-3 credits.

Preferred effective term Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geographic Information Science Minor (18 semester hours)

CIP Code: 450701 Major Code: 2139

Brief Summary:

There are minor changes required because of course prefix/number changes to ENVI and change of GEOG 312 to ENVI 212 as a result of program reconfiguration in the major.

Proposed Catalog Copy:

Geographic Information Science Minor (18 semester hours)

CIP Code: 450701 Major Code: _____

Required Courses: 240 - 3 credits; 212 - 3 credits or 404 - 3 credits

Directed Electives:

One course from: 405 - 3 credits, 406 - 3 credits, 407 - 3 credits, or 408 - 3 credits;

One course from: 401 - 3 credits, 402 - 3 credits, or up to 3 credits of 490;

Two courses from remaining electives: 401 - 3 credits, 402 - 3 credits, 405 - 3 credits, 406 - 3 credits, 407 - 3 credits, 408 - 3 credits, or 490 - 3 credits

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Geographic Information Science Certificate (12 credits)

CIP Code: 450701 Major Code: 2126

Brief Summary:

Minor changes are required for the Geographic Information Science Certificate due to course prefix/number changes to ENVI and the renumbering of GEOG 312 to ENVI 212 as a result of program reconfiguration in the major.

Proposed Catalog Copy:

Geographic Information Science Certificate (12 credits)

CIP Code: 450701 Major Code: _____

Required Course: 212 - 3 credits, or 404 - 3 credits

Directed Electives:

One course from: ENVI 405 - 3 credits., 406 - 3 credits., 407 - 3 credits., or 408 3 credits.;

One course from: ENVI 401 - 3 credits, 402 - 3 credits, or up to 3 credits. of 490;

One course from remaining electives: ENVI 401 - 3 credits, 402 - 3 credits, 405 - 3 credits, 406 - 3 credits, 407 - 3 credits, 408 - 3 credits, or 490 - 3 credits.

Preferred effective term: Fall 2009

PROGRAM ELIMINATIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Anthropology Major (39 credits)

CIP Code: 450201 Major Code: 2130

Preferred effective term: Fall 2009

GRADUATE PROPOSALS

NEW COURSES

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ENVI 536 - Environmental Archaeology

3 credits

An interdisciplinary course where the analytical approaches of the geological and biological sciences are used to solve archaeological problems centered on the adaptation of prehistoric societies. Case studies are used to illustrate this approach.

A-F Grading

Preferred effective term: Fall 2009

ENVI 556 - Lakes and Wetlands

3 credits

Using the principles of biology, chemistry, and geology, freshwater water resources will be studied. The effects of human perturbation on aquatic systems and potential consequences of climate change will be highlighted.

A-F Grading

Preferred effective term: Fall 2009

ENVI 558 - Medical Geology

3 credits

This course introduces students to the basic concepts of medical geology, which is the study of the interaction between earth materials and human and environmental health. Topics include exposure pathways, water and air quality, and environmental contaminants.

A-F Grading

Preferred effective term: Fall 2009

ENVI 579 - Global Biogeochemical Cycles

3 credits

Biogeochemistry is the study of how living systems influence, and are controlled by, the geology and chemistry of the earth. We will explore major chemical, biological, and geological processes that occur within and between terrestrial and aquatic ecosystems on geologic and human time scales.

Prerequisites: CHEM 106

A-F Grading

Preferred effective term: Fall 2009

COURSE REVISIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

Change prefixes of the following courses from GEOG and GEOL to ENVI:

GEOG 505	Fund. Remote Sensing
GEOG 506	Remote Sensing: Image Devel.
GEOG 507	Remote Sensing: Digital Anal.
GEOG 508	Remote Sensing: Digital Analysis
GEOG 512	Advanced Cartography
GEOG 517	Industrial Geography
GEOG 524	Geog. Former Soviet Union
GEOL 552	Quaternary Environments
GEOL 554	Intro Hydrology
GEOL 555	Groundwater Hydrology
GEOL 557	Environmental Geology
GEOL 565	Fund. Tree-Ring Research
GEOL 570	Paleontology and Geobiology
GEOL 571	Quaternary Paleoecology
GEOL 575	Strat. And Sedimentation
GEOL 581	Geochemistry
GEOL 582	Volc. Process. & Hazards
GEOL 583	Mineral Resources
GEOL 586	Geophysics
GEOL 588	Geoscience Research Methods

Preferred effective term: Fall 2009

COURSE BANKING

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ANTH 539 Geoarchaeology

GEOL 580 Optical Mineralogy

Preferred effective term: Fall 2009

COURSE ELIMINATIONS

COLLEGE OF ARTS AND SCIENCES: Geography, Geology, and Anthropology

ANTH 510 Problems in Anthropology
ANTH 565 Fundamentals of Tree Ring Research
GEOG 518 Soil Genesis and Classification
GEOG 565 Fundamentals of Tree Ring Research
GEOL 548 Environmental Modeling and Mapping
Preferred effective term: Fall 2009

UNDERGRADUATE APPROVALS

NEW COURSES

COLLEGE OF ARTS AND SCIENCES: Social Work

SOWK 200 – Topics in Social Work

3 credits

This course will focus on contemporary problems facing families with a focus on the policies, programs, and services in the context of changing life styles, social forces impacting the quality of life, and family preservation. Credits do not count towards the bachelor of social work program. Enrollment is limited to those seeking course credit in the prison setting.

Repeatable: once for credit.

A-F Grading

Preferred effective term: Fall 2009

COURSE REVISIONS

COLLEGE OF ARTS AND SCIENCES: Family and Consumer Sciences

FCS 412 - Apparel Market Experience

2 credits

Supervised work experience with apparel manufacturers and sales representatives in the marketplace. Satisfactory/unsatisfactory grades given.

Prerequisites: senior standing and consent of instructor.

Change course grading from satisfactory/unsatisfactory to:

FCS 412 - Apparel Market Experience

2 credits

Supervised work experience with apparel manufacturers and sales representatives in the marketplace. Satisfactory/unsatisfactory grades given.

Prerequisites: senior standing and consent of instructor.

A-F Grading

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: International Studies

IS 398 - International Studies—ISEP Study Abroad

0 credits

For students who plan to enroll in a or year-long program of study at a foreign university through the International Student Exchange Program (ISEP).

Note: Apply to the Study Abroad Coordinator in the International Affairs Center by spring of the sophomore year.

Change descriptions and add repeatable to:

IS 398 - International Studies—Study Abroad

0 credits

For students who plan to enroll in a or year-long program of study at a foreign university.

Repeatable: Once.

Note: Apply to the Study Abroad Coordinator in the International Affairs Center by spring of the sophomore year.

S-U Grading

Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Military Science

MSL 401 - Developing Adaptive Leaders

4 credits

This course helps cadets develop proficiency in planning, executing, and assessing complex operations; functioning as a member of a staff; and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to Army officers. Cadets analyze, evaluate, and instruct cadets at lower levels. Both classroom and battalion leadership experiences are designed to prepare cadets for the first unit assignment. Cadets identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates.

Co-requisites: MSL 401L.

Change credits to:

MSL 401 - Developing Adaptive Leaders

3 credits

This course helps cadets develop proficiency in planning, executing, and assessing complex operations; functioning as a member of a staff; and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to Army officers. Cadets analyze, evaluate, and instruct cadets at lower levels. Both classroom and battalion leadership experiences are designed to prepare cadets for the first unit assignment. Cadets identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates.

Co-requisites: MSL 401L.

A-F Grading

Preferred effective term: Spring 2010

MSL 402 - Leadership in a Complex World

4 credits

This course explores the dynamics of leading in the complex situations of current military operations in the COE. Cadets examine differences in customs and courtesies, military law,

principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with nongovernmental organizations, civilians on the battlefield, and host nation support. The course places significant emphasis on preparing cadets for their first unit of assignment. It uses case studies, scenarios, and “What Now, Lieutenant?” exercises to prepare cadets to face the complex ethical and practical demands of leading as commissioned officers in the United States Army.

Co-requisite: MSL 402L.

Change credits to:

MSL 402 - Leadership in a Complex World

3 credits

This course explores the dynamics of leading in the complex situations of current military operations in the COE. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with nongovernmental organizations, civilians on the battlefield, and host nation support. The course places significant emphasis on preparing cadets for their first unit of assignment. It uses case studies, scenarios, and “What Now, Lieutenant?” exercises to prepare cadets to face the complex ethical and practical demands of leading as commissioned officers in the United States Army.

Co-requisite: MSL 402L.

A-F Grading

Preferred effective term: Spring 2010

MSL 498 - Advanced Contemporary Leadership Issues I

4 credits

This independent study course examines a specific aspect of contemporary leadership theory with military applications. Cadets develop, propose, conduct, and present research analysis, upon faculty approval, applying the cumulative knowledge and skills gained throughout the cadet’s previous military science instruction.

Prerequisites: Department director’s permission required to enroll.

Co-requisites: MSL 302 and 302L; LDAC.

Change credits to:

MSL 498 - Advanced Contemporary Leadership Issues I

3 credits

This independent study course examines a specific aspect of contemporary leadership theory with military applications. Cadets develop, propose, conduct, and present research analysis, upon faculty approval, applying the cumulative knowledge and skills gained throughout the cadet’s previous military science instruction.

Prerequisites: Department director’s permission required to enroll.

Co-requisites: MSL 302 and 302L; LDAC.

A-F Grading

Preferred effective term: Spring 2010

MSL 499 - Advanced Contemporary Leadership Issues II

4 credits

This independent study course examines a specific aspect of contemporary leadership theory with military applications. Cadets develop, propose, conduct, and present research analysis for faculty approval. A written analysis of findings will be presented, and cadets will undergo an oral examination.

Prerequisites: Department Director's permission required to enroll.

Co-requisites: MSL 302 and 302L; LDAC.

Change credits to:

MSL 499 - Advanced Contemporary Leadership Issues II

3 credits

This independent study course examines a specific aspect of contemporary leadership theory with military applications. Cadets develop, propose, conduct, and present research analysis for faculty approval. A written analysis of findings will be presented, and cadets will undergo an oral examination.

Prerequisites: Department Director's permission required to enroll.

Co-requisites: MSL 302 and 302L; LDAC.

A-F Grading

Preferred effective term: Spring 2010

CORRECTIONS

The proposed new title for the Life Sciences Minor should read Biology Minor. The change is reflected in bold and italics.

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Life Sciences Minor (51 semester hours) including extra-departmental requirements

CIP Code: 260101 Major Code: 2628

Brief Summary:

The Provisional Department of Biology wishes to change the name of its programs to reflect the new name of the Department. Requirements remain the same.

Proposed Catalog Copy:

Biology Minor (51 semester hours) including extra-departmental requirements

CIP Code: 260101 Major Code: _____

Preferred effective term: Fall 2009