Academic Notes

September 8, 2009 **AN 2009-2010**

FIELD TRIPS

UNIVERSITY HONORS PROGRAM

Marilyn Bisch will lead a cultural/historical walking tour of Terre Haute on the second Saturday of each month of Fall 09 for all Indiana State University Honors Program students, support staff and faculty.

On Saturday Sept 12, 2009, the "Second Saturday Stroll" will include downtown Terre Haute featuring the Swope Art Gallery.

A list of participating students will be on file in the office of Dr. Greg Bierly, Director of the University Honors Program.

UNIVERSITY HONORS PROGRAM

The University Honors Program is hosting the annual President's Scholars Retreat the weekend of September 12-13, 2009 at the Indiana State University Field Campus in Brazil, IN. Those invited include the President's Scholars, Academic Excellence Scholars, as well as the recent Scholar graduates. The retreat will begin at 5:00 PM on Saturday, September 12 and will conclude the following afternoon.

Greg Bierly, Director of the University Honors Program as well as several Honors faculty will be participating in this year's retreat.

ISU President Daniel Bradley will be joining the retreat participants for breakfast on Sunday morning.

A list of the participating students will be on file in the office of Dr. Greg Bierly.

ACADEMIC NOTES PUBLICATION SCHEDULE FOR FALL 2009

Below is the circulation schedule for the electronic copy of *Academic Notes* through December 14, 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 FALL 2009

Deadline for Items	Issue Date
September 9	September 14
September 16	September 21
September 23	September 28
September 30	October 5
October 7	October 12
October 14	October 19
October 21	October 26
October 28	November 2
November 4	November 9
November 11	November 16
November 18	November 23
November 25	November 30
December 2	December 7
December 9	December 14

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.

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

CURRICULUM

INDEX

UNDERGRADUATE APPROVALS

NEW COURSES

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

ENVI 276 - Dinosaurs, Quakes, and Volcanoes
3 credits
The history and characteristics of dinosaurs, earthquakes and volcanoes will be explored. Topics include the scientific method, causes of extinction, facts and myths about dinosaurs, the consequences of earthquakes and volcanoes, examples from the geologic record, and the nature and mitigation of natural disasters caused by earthquakes and volcanoes.
Co-requisite: Concurrent enrollment in ENVI 276L.
A-F Grading
Preferred effective term: Fall 2009

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 389L - Introduction to Field Geology Laboratory
1 credit
Field geology camp at a remote location selected in conjunction with the student and the geology faculty. The field experience should include exposure to all major facets of field geology in an area of excellent geologic outcrops.
Prerequisites: ENVI 170, 270, 385, and 475.
S-U 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.
Prerequisite: 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 314 - Meteorology
2 credits
This course is designed to give the student an understanding of the physical processes responsible for daily weather changes. Designed specifically for aerospace technology majors.
Prerequisites: GEOG 111 or 160, or consent of instructor.
Change prefix, number, and prerequisites to:
ENVI 352 - Meteorology
2 credits
This course is designed to give the student an understanding of the physical processes responsible for daily weather changes. Designed specifically for aerospace technology majors.
Prerequisites: ENVI 110, or consent of instructor.
A-F Grading
Preferred effective term: Fall 2009

GEOG 316 - Weather and Climate
3 credits
Examination of the physical processes responsible for daily weather changes and their relationships to regional climates.
Prerequisites: GEOG 111 or GEOL 160, or consent of instructor.

General Education Credit: [GE2000: Scientific and Mathematical Studies-Elective]

Change prefix, number, and prerequisites to:

ENVI 353 - Weather and Climate
3 credits
Examination of the physical processes responsible for daily weather changes and their relationships to regional climates.
Prerequisites: ENVI 110, or consent of instructor.
General Education Credits: [GE2000: Scientific and Mathematical Studies-Elective]
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 415 - Field Geography of the United States
1-6 credits
Field geography traverse of a selected area of the United States. Amount of credit depends upon area studied.
Prerequisites: 85 credits of course credit and 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 490 - Field Geography of the United States
1-6 credits
Field geography traverse of a selected area of the United States. Amount of credit depends upon area studied.
Prerequisites: 85 course credits and 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 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 444 - The Processing of Spatial Data for Geoscientists
3 credits
The application of a computer language to the processing of geographic (spatial) data.

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 402 - The Processing of Spatial Data for Geoscientists
3 credits
The application of a computer language to the processing of geographic (spatial) data.
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 418 - Soil Genesis and Classification
3 credits
An analysis of how soils are formed through interactions of climate, vegetation/biotic features, parent material, and slope over time. Classification and distribution of soils are emphasized.
Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix and number to:

ENVI 463 - Soil Genesis and Classification
3 credits
An analysis of how soils are formed through interactions of climate, vegetation/biotic features, parent material, and slope over time. Classification and distribution of soils are emphasized.
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

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, or 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.
A-F Grading
Preferred effective term: Fall 2009

GEOL 499 - Senior Seminar and Research
1-3 credits
Seminars on important geologic subjects and in-depth independent research in some area of student interest.
Prerequisites: GEOL 170 and consent of instructor.
Note: University Honors students may elect to take this course for Honors credit.

Change prefix, title, and prerequisites to:

ENVI 499 - Senior Thesis and Research
1-3 credits. In-depth independent research in some area of student interest.
Prerequisites: consent of faculty advisor.
Repeatable: up to 3 credits
A-F Grading
Preferred effective term: Fall 2009

ANTH 201 - Introduction to Prehistory
3 credits
An overview of world prehistory from the beginning of human culture, including discussion of

glacial-period hunters, later hunter-gatherers, the beginnings of agriculture, and the emergence of complex societies in selected areas of the Old and New Worlds.

Change prefix, title, and description to:

ENVI 201 - Prehistory and Climate Change
3 credits
An overview of prehistoric adaptation to climate change from the beginning of human culture, including discussion of glacial-period hunters, hunter-gatherers, and the beginnings of agriculture in selected areas of the Old and New Worlds.
A-F Grading
Preferred effective term: Fall 2010

ANTH 308 - Human Emergence
3 credits
Emphasis is on the study of human evolution. Topics of study include a review of extant primate species, the primate fossil record, major debates in the field, and current research in paleoanthropology.

Change prefix and title to:

ENVI 308 - Human Evolution
3 credits
Emphasis is on the study of human evolution. Topics of study include a review of extant primate species, the primate fossil record, major debates in the field, and current research in paleoanthropology.
A-F Grading
Preferred effective term: Fall 2009

ANTH 315 - Indians of North America
3 credits
The culture, areas, and tribes of American Indians north of the Rio Grande, with particular emphasis on representative tribes.
General Education Credits: [GE2000: Multicultural Studies-U.S. Diversity]

Change prefix and number to:

ENVI 310 - Indians of North America
3 credits
The culture, areas, and tribes of American Indians north of the Rio Grande, with particular emphasis on representative tribes.
General Education Credits: [GE2000: Multicultural Studies-U.S. Diversity]
A-F Grading
Preferred effective term: Fall 2009

ANTH 401 - Human Ecology
3 credits
The purpose of this course is two-fold: first to introduce evolutionary theory, models, and concepts used to investigate animal behavior and second to review the literature and apply these models to primates including humans. Topics will include living in groups, sexual selection, contests over resources, and the evolution of cooperation.

Change prefix and number to:

ENVI 440 - Human Ecology
3 credits
The purpose of this course is two-fold: first to introduce evolutionary theory, models, and concepts used to investigate animal behavior and second to review the literature and apply these models to primates including humans. Topics will include living in groups, sexual selection, contests over resources, and the evolution of cooperation.
A-F Grading
Preferred effective term: Fall 2009

ANTH 409 - Medical Anthropology
3 credits
Study of health and disease patterns in human populations. This course draws on qualitative,

demographic, and epidemiological methods and various theoretical perspectives to investigate changing disease patterns in prehistoric, historic, and modern populations.
General Education Credit: [GE2000: Social and Behavioral Studies-Elective]

Change prefix and number to:

ENVI 442 - Medical Anthropology
3 credits
Study of health and disease patterns in human populations. This course draws on qualitative, demographic, and epidemiological methods and various theoretical perspectives to investigate changing disease patterns in prehistoric, historic, and modern populations.
General Education Credit: [GE2000: Social and Behavioral Studies-Elective]
A-F Grading
Preferred effective term: Fall 2009

ANTH 415 - Archaeological Method and Theory
3 credits
Scientific methods and theories used to study human cultural evolution; emphasis on the design of research projects and the interdisciplinary nature of archaeology.
Prerequisites: ANTH 201
Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, number, title, description, and remove prerequisite to:

ENVI 445 - Archaeological Methods
3 credits
Scientific methods used to study human cultural evolution; emphasis on the analysis of artifacts and other archaeological remains.
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

ANTH 420 - Archaeology of Eastern North America
3 credits
An in-depth study of prehistoric cultures of the Eastern Woodlands, from Paleoindian through Mississipian periods. Considers the interaction of climate change, subsistence, settlement, and socio-political organization as reflected in the archaeological record.
Note: Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, number, title, and description to:

ENVI 446 - Midwestern Archaeology
3 credits
An in-depth study of prehistoric cultures of the Midwest U.S., from Paleoindian through Mississipian periods. Considers the interaction of climate change, subsistence, settlement, and socio-political organization as reflected in the archaeological record.
A-F Grading
Preferred effective term: Fall 2009

ANTH 425 - Issues in Biological Anthropology
3 credits

In-depth study of a particular topic in biological anthropology such as forensic identification, disease patterns, or human biology.
Note: The Schedule of Classes will indicate the major emphasis; may be repeated for credit under a different topic.

Change prefix, number, and add repeatable to:

ENVI 435 - Issues in Biological Anthropology
3 credits
In-depth study of a particular topic in biological anthropology such as forensic identification, disease patterns, or human biology.
Repeatable: up to six credits under a different topic.
Note: The Schedule of Classes will indicate the major emphasis.
A-F Grading
Preferred effective term: Fall 2009

ANTH 430 - Current Issues in Archaeology
3 credits
In-depth study of a particular topic in archaeology such as prehistoric hunter-gatherers, landscape archaeology, or cultural resource management law and practice.
Note: The Schedule of Classes will indicate the major emphasis; may be repeated for credit under a different topic. Open to graduate students. Graduate students are required to do additional work of a research nature.

Change prefix, number, description, and repeatable to:

ENVI 447 - Current Issues in Archaeology
3 credits
In-depth study of a particular topic in archaeology such as prehistoric hunter-gatherers, landscape archaeology, or cultural resource management law and practice.
Note: The Schedule of Classes will indicate the major emphasis. Open to graduate students. Graduate students are required to do additional work of a research nature.
Repeatable: may be repeated for credit under a different topic.
A-F Grading
Preferred effective term: Fall 2009

ANTH 450 - Forensic Anthropology
3 credits
Introduction to the practice of forensic anthropology through intensive study of human skeletal anatomy and basic methods of identification from skeletal remains. Principles learned in the course are applied in simulated forensic case investigations.

Change prefix and number to:

ENVI 443 - Forensic Anthropology
3 credits
Introduction to the practice of forensic anthropology through intensive study of human skeletal anatomy and basic methods of identification from skeletal remains. Principles learned in the course are applied in simulated forensic case investigations.
A-F Grading
Preferred effective term: Fall 2009

ANTH 469 - Archaeological Field School
6 credits

Intensive training in surveying, excavation, and laboratory analyses at a selected field station.

Change prefix and number to:

ENVI 491 - Archaeological Field School
6 credits
Intensive training in surveying, excavation, and laboratory analyses at a selected field station.
A-F Grading
Preferred effective term: Fall 2009

ANTH 498 - The Human Discovery
3 credits
This course explores the discovery of the human self and the current research on understanding the physical human, the mental and emotional human, and the social human.
Prerequisites: at least 78 credits and seven of nine required Liberal Studies courses.
Note: See the General Education section of the Catalog for a complete description of the capstone requirement.
General Education Credit: [GE2000: Capstone Course]
Capstone Course: Capstone Course

Change prefix, number, and description to:

ENVI 449 - Human Discovery
3 credits
This course explores the discovery of the human self and the current research on how the mental and the social human creates and reacts to changes in nature.
Prerequisites: at least 78 credits and seven of nine of the Liberal Studies courses.
Note: See the General Education section of the Catalog for a complete description of the capstone requirement.
General Education Credit: [GE 2000: Capstone Course]
Capstone Course: Capstone Course
A-F Grading
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 Geoarcheology
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

PROGRAM REVISIONS

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Conservation Minor (27 credits)
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:

Conservation Minor (27 credits for Biology Majors)
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Life Sciences Major (67 credits) including extra-departmental requirements
CIP Code: 260101 Major Code: 2621

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 Major (67 credits) including extra-departmental requirements
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009

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

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Clinical Laboratory Sciences Major (3-plus-1 Program) (64 credits)
CIP Code: 260101 Major Code: 2634

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:

Clinical Laboratory Science Major (3-plus-1 Program) (64 credits)
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009

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 geotechonologies, 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 geotechonologies, 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

Electives (3 credits)

Select any ENVI course
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 Sciences 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 3credits 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 3credits
ENVI 471 Quaternary Paleoecology 3hrs
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 Biocgeochemical 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 Archaelogy 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 3credits
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; RCSM 361-3 credits.
Preferred effective term: Fall 2009

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

Geographic Information Science Minor (18 credits)
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 credits)
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 APPROVALS

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

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

GEOG 515 - Field Geography of the United States
1-6 credits
Field geography traverse of a selected area of the United States. Amount of credit depends upon area studied.
Prerequisites: 85 credits of course credit and consent of instructor.
Change prefix and number to:
ENVI 590 - Field Geography of the United States
1-6 credits
Field geography traverse of a selected area of the United States. Amount of credit depends upon area studied.
Prerequisites: 85 credits of course credit and consent of instructor.
A-F Grading
Preferred effective term: Fall 2009

GEOG 516 - Climatology
3 credits
Elements of physical synoptic and applied climatology viewed in the context of world regional climates.
Change prefix and number to:
ENVI 553 - Climatology
3 credits
Elements of physical synoptic and applied climatology viewed in the context of world regional climates.
A-F Grading

Preferred effective term: Fall 2009

GEOG 520 - Geography of Anglo-America
3 credits
Regional analysis of Canada and the United States in terms of population, culture, and economy.
Change prefix and number to:
ENVI 525 - Geography of Anglo-America
3 credits
Regional analysis of Canada and the United States in terms of population, culture, and economy.
A-F Grading
Preferred effective term: Fall 2009

GEOG 532 - 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.
Change prefix and number to:
ENVI 518 - 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.
A-F Grading
Preferred effective term: Fall 2009

GEOG 533 - 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: 110, 111 or 213, or consent of instructor.
Change prefix, number, and prerequisites to:
ENVI 521 - 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 105 or 213, or consent of instructor.
A-F Grading
Preferred effective term: Fall 2009

GEOG 535 - 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.
Change prefix and number to:
ENVI 522 - 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.
A-F Grading

Preferred effective term: Fall 2009

GEOG 540 - 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: 240 or equivalent or consent of instructor.
Change prefix and number to:
ENVI 515 - 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.
A-F Grading
Preferred effective term: Fall 2009

GEOG 542 - 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.
Change prefix and number to:
ENVI 501 - 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.
A-F Grading
Preferred effective term: Fall 2009

GEOG 544 - The Processing of Spatial Data for Geoscientists
3 credits
The application of a computer language to the processing of geographic (spatial) data.
Prerequisites: 100-level course or higher in geography or geology or consent of instructor.
Change prefix and number to:
ENVI 502 - The Processing of Spatial Data for Geoscientists
3 credits
The application of a computer language to the processing of geographic (spatial) data.
Prerequisites: 100-level course or higher in geography or geology or consent of instructor.
A-F Grading
Preferred effective term: Fall 2009

GEOG 546 - Automated Cartography
3 credits
The application and analysis of computer programs as an alternate cartographic technique.

Change prefix and number to:

ENVI 504 - Automated Cartography
3 credits
The application and analysis of computer programs as an alternate cartographic technique.
A-F Grading
Preferred effective term: Fall 2009

GEOG 548 - 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.
Cross-listed: Also listed as Geology 548.

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

ENVI 550 - 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.
A-F Grading
Preferred effective term: Fall 2009

GEOG 590 - Problems in Geography
1-6 credits
Investigations of original sources of geographic literature, statistics, and field work on geographic problems.
Prerequisites: consent of instructor.

Change prefix, number, and description to:

ENVI 596 - Advanced Research
1-6 credits
Literature, laboratory, or field research of a selected topic or problem. Repeatable up to 6 credits. **Prerequisite:** consent of instructor.
A-F Grading
Preferred effective term: Fall 2009

GEOL 518 - Soil Genesis and Classification
3 credits
An analysis of how soils are formed through interactions of climate, vegetation/biotic features, parent material, and slope over time. Classification and distribution of soils are emphasized.

Change prefix and number to:

ENVI 563 - Soil Genesis and Classification

3 credits
An analysis of how soils are formed through interactions of climate, vegetation/biotic features, parent material, and slope over time. Classification and distribution of soils are emphasized.
A-F Grading
Preferred effective term: Fall 2009

GEOL 597 - Seminar in Advanced Geology
1-9 credits
Department seminar investigating a selected field of advanced geology (topic announced prior to registration.)
Prerequisites: 9 credits of geology or consent of instructor.
Repeatable: up to 9 credits.
Change prefix, title, and prerequisites to:
ENVI 597 - Seminar in Advanced Topics
1-9 credits
Department seminar investigating a selected field of advanced geology (topic announced prior to registration.)
Prerequisites: 9 semester hours of department credit or consent of instructor.
Repeatable: up to 9 credits.
A-F Grading
Preferred effective term: Fall 2009

ANTH 515 - Archaeological Method and Theory
3 credits
Scientific methods and theories used to study human cultural evolution; emphasis on the design of research projects and the interdisciplinary nature of archaeology.
Prerequisites: 201
Change prefix, number, title, description, and remove prerequisites to:
ENVI 545 Archaeological Methods
3 credits
Scientific methods used to study human cultural evolution; emphasis on the analysis artifacts and other archaeological remains.
A-F Grading
Preferred effective term: Fall 2009

ANTH 520 - Archaeology of Eastern North America
3 credits
An in-depth study of prehistoric cultures of the Eastern Woodlands, from Paleo-Indian through Mississippian periods. Considers the interaction of climate change, subsistence, settlement, and socio-political organization as reflected in the archaeological record.
Change prefix, number, title, and description to:
ENVI 546 - Midwestern Archaeology
3 credits
An in-depth study of prehistoric cultures of the Midwest U.S., from Paleoindian through Mississipian periods. Considers the interaction of climate change, subsistence, settlement, and socio-political organization as reflected in the archaeological record.
A-F Grading
Preferred effective term: Fall 2009

ANTH 530 - Current Issues in Archaeology
3 credits
In-depth study of a particular topic in archaeology such as prehistoric hunter-gatherers, landscape archaeology, or cultural resource management law and practice.
Note: The schedule of classes will indicate the major emphasis; may be repeated for credit under a different topic.

Change prefix, number, description, and add repeatable to:

ENVI 547 - Current Issues in Archaeology
3 credits
In-depth study of a particular topic in archaeology such as prehistoric hunter-gatherers, landscape archaeology, or cultural resource management law and practice.
Repeatable: may be repeated for credit under a different topic.
Note: The schedule of classes will indicate the major emphasis.
A-F Grading
Preferred effective term: Fall 2009

ANTH 569 - Archeological Field School
6 credits
Intensive training in surveying, excavation, and laboratory analyses at a selected field station.

Change prefix and number to:

ENVI 591 - Archeological Field School
6 credits
Intensive training in surveying, excavation, and laboratory analyses at a selected field station.
A-F Grading
Preferred effective term: Fall 2009

ANTH 601 - Advanced Archaeological Theory
3 credits
An intensive study of archaeological theory with an emphasis on current concepts employed in archaeological research and interpretation.

Change prefix, title, and description to:

ENVI 601 - Geoarchaeology Seminar
3 credits
Advanced study of geoarchaeological approaches with an emphasis on current concepts employed in archaeological and geoscience research and interpretation.
A-F Grading
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

PROGRAM REVISIONS

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

M.S. Life Sciences (32 credits minimum) Thesis and Non-Thesis Options
CIP Code: 260101 Major Code: 2660

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:

M.S. Biology (32 credits minimum) Thesis and Non-Thesis Options
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Ph.D. Life Sciences (Physiology) (83 credits minimum)
CIP Code: 260101 Major Code: 2663

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:

Ph.D. Biology (Physiology) (83 credits minimum)
CIP Code: 260101 Major Code:_____
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Ph.D. Life Sciences (Ecology) (83 credits minimum)
CIP Code: 260101 Major Code: 2661

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:

Ph.D. Biology (Ecology) (83 credits minimum)
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009

COLLEGE OF ARTS AND SCIENCES: Provisional Department of Biology

Ph.D. Life Sciences – Microbial and Cellular Biology (83 credits minimum)
CIP Code: 260101 Major Code: 2662

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:

Ph.D. Biology (Microbiology) (83 credits minimum)
CIP Code: 260101 Major Code: _____
Preferred effective term: Fall 2009