March 17, 2011

Abbas Aminmansour, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Aminmansour:

Enclosed is a copy of a proposal from the College of Liberal Arts and Sciences to revise and rename the BSLAS in Earth, Society, and Environment as Earth, Society and Environmental Sustainability.

This proposal has been approved by the LAS Committee on Courses and Curricula. It now requires Senate review.

Sincerely,

Kristi A. Kuntz
Assistant Provost

KAK/njh

Enclosures

c:  S. Marshak  
    J. Tomkin
Office of the Dean
College of Liberal Arts and Sciences
204 Lincoln Hall
702 South Wright Street
Urbana, IL 61801-3631

February 16, 2011

Kritsi Kuntz
Assistant Provost
Swanlund Administration Building
MC-304

Dear Kristi:

The Committee on Courses and Curricula, on behalf of the Faculty of the College of Liberal Arts and Sciences has voted to approve the following proposal:

**Revision and title change of the BSLAS in Earth, Society, and Environment**

Please address all correspondence concerning this proposal to me. This proposal is now ready for review by the Senate Educational Policy Committee for proposed implementation upon approval.

Sincerely,

Ann M. Mester
Associate Dean

enclosure

C:    Dr. Jonathan Tomkin
       Professor Stephen Marshak
       Ms. Amy Elli
Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Revision and title change of the BSLAS in Earth, Society Environment, School of Earth, Society and the Environment, College of Liberal Arts and Sciences

SPONSOR: School of Earth, Society, and Environment

SCHOOL CONTACT: Jonathan Tomkin, Associate Director of Academic Affairs (244-2928, tomkin@illinois.edu)

COLLEGE CONTACT: Ann M. Mester, Associate Dean, College of Liberal Arts and Sciences, 3-1350, mester@illinois.edu

BRIEF DESCRIPTION:

We propose to make three minor changes to the BSLAS in Earth Systems, Environment, and Society to take advantage of newly developed courses and programs at UIUC and to more accurately describe to students, both current and prospective, the important themes and practice of the major.

JUSTIFICATION:

1. Changing the name of the Major from "Earth, Society, and Environment" (ESE) to "Earth, Society and Environmental Sustainability" (ESE).
   This name most accurately reflects the academic content of the major. This name is also better understood by potential students of the program. The program of study (attached) is altered to reflect this goal.

2. Allow advanced “ENSU” courses to satisfy the advanced “ESE” requirement.
   Currently, students must take three advanced courses that are listed or cross-listed as “ESE” (Earth, Society and Environment). The School now administers a related rubric: “ENSU” (Environmental Sustainability) which clearly falls in the remit of the major. The program of study (attached) is altered to reflect this change.

3. Add advanced category classes (with advisor approval) to the category requirements
   Students take 4 introductory classes from the following five categories:
   - Environment and the Human Response
• Sustainability, Policy, and Global Change  
• Visualizing the Earth System  
• Earth’s Physical Systems, Resources, and Hazards  
• Earth’s Biosphere and Ecology

We propose to allow students to take an advanced class (in the same category) in the place of an introductory class to satisfy this requirement, with the permission of the advisor. Some students independently satisfy the pre-requisites for the advanced class in a category without taking an introductory class, and we do not wish to force students to take an introductory class if an advanced class is available and appropriate. This advanced class could not be used to satisfy any other requirement in the major; the same total number of courses and hours would be required. The program of study (attached) is altered to reflect this change. The introductory and advanced class lists are attached (Appendix A).

BUDGETARY AND STAFF IMPLICATIONS:

a. Additional staff and dollars needed: We do not expect these changes to impact staffing or costs – there may be a slight saving in both, as advanced courses that are at under-capacity may experience a small increase in enrollment. The first change only impacts the major name. The second and third changes may increase enrollments in ENSU, but this change is zero-sum, as any student enrolled in an ENSU class is replacing an ESE class requirement. Both courses are within the School, so both the costs and the staffing remains the same.

b. Internal reallocations (e.g., change in class size, teaching loads, student-faculty ratio, etc.): We do not expect these changes to impact reallocations. The first change only impacts the major name. The second and third changes may increase enrollments in ENSU, but this change is zero-sum, as any student enrolled in an ENSU class is replacing an ESE class requirement. Both courses are within the School, so the average student-faculty ratio remains the same.

c. Effect on course enrollment in other units and explanations of discussions with representatives of those departments: The first change only impacts the major name. The second and third changes are purely related to courses within the School – there may be increases in advanced ESE and ENSU class enrollment, but this would only displace classes taken at the introductory ESE level. Any change in numbers would be very modest and impact classes internal to the School.

d. Impact on the University Library: We do not expect the program to have a significant impact on the Library. Any additional classes taken by off-campus students (for example, as part of the existing ENSU certificate program, or over the summer) will not impact physical resources, but there may be some increased usage of on-line library resources.

e. Impact on computer use, laboratory use, equipment, etc.: Students provide their own computers for the online ENSU classes, so there will be no impact on University laboratories and equipment. As the program involves additional student enrollment and instruction, there will be some small impact on the servers that regulate registration and online course instruction (such as Compass and Moodle).

DESIRED EFFECTIVE DATE: Fall 2011

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Earth, Society, and Environmental Sustainability

The major in Earth, Society, and Environmental Sustainability (ESE) offers a unique, multidisciplinary program in the College of Liberal Arts and Sciences (LAS). Students will learn about the interconnectedness of environmental, economic, and social systems of the world; the implications of our actions on the environment; factors that determine the sustainability of human institutions, organizations, cultures, and technologies; finding solutions through innovative approaches; and expanding future options by practicing environmental stewardship. Following the classical definition of sustainability, the aim is to develop citizens, businesses, and societies that meet the needs of the present without compromising the ability of future generations to do the same.

Required introductory coursework provide breadth in the essential natural and social sciences needed for interdisciplinary environmental sustainability study. The major offers two concentrations within which majors gain content expertise: Science of the Earth System, and Society and the Environment. Depth of knowledge is achieved by requiring a minimum of five advanced classes in a coherent field of study.

The major is available to both on-campus and off-campus students. On-campus students need only be eligible to be in LAS to transfer to the degree. The program is also designed so that students with an associates (or equivalent) degree, or who have sufficient previous coursework, can transfer to the University and complete a Bachelor of Science degree entirely off-campus. Students interested in completing the course off-campus, but have less than 60 hours of coursework, should consult with the program advisor.

The degree will prepare students for a variety of career paths in either the private or the public sector, as well as for graduate study. The interdisciplinary background in both scientific and human aspects of environmental problems will prepare students for a variety of positions with businesses, state and federal regulatory agencies, research institutions, consulting firms and nongovernmental education and advocacy organizations. The major also provides a platform for entry into professional schools (e.g. law, business, and public policy programs) as well as graduate study in a variety of physical science and social science disciplines, and in interdisciplinary programs related to the environment.

Major in Sciences and Letters Curriculum

E-mail: program-info@eses.uiuc.edu

Degree title: Bachelor of Science in Liberal Arts and Sciences
Minimum required major and supporting courses equate to 48-58 hours.

General education: Students must complete the Campus General Education requirements.

On-campus UIUC students can transfer to this degree without any special requirements.

Off-campus students who plan to transfer to this degree should have completed, or have in progress, the following: the Composition 1 requirement.

- the third level of high school foreign language or second level of college foreign language.

It is highly recommended that off-campus students complete the following requirements before transferring to the online degree - students who have not completed the following requirements may have to take additional coursework (either at UIUC or elsewhere) and should consult the program advisor:

- the UIUC LAS language requirement should be satisfied (either two foreign languages at the 3rd level or one foreign language at the 4th level).
- the General Education Distribution Requirements of the College of Liberal Arts and Sciences should be completed.
- the Cognate Coursework should be completed.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students who maintain grade point averages of at least 3.3 in all courses within the major and who undertake a faculty-guided individual research project for credit in the major are recommended for graduation with distinction.

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<thead>
<tr>
<th>Hours</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Students must complete the ESE Core Requirements listed below and select one concentration in consultation with an academic advisor.</td>
</tr>
<tr>
<td>12-14</td>
<td>ESE Introductory Core: Students take one approved introductory or advanced course from at least four of the following five areas. Approved courses within these areas are available from the ESE advisor OR in the ESE School office OR at <a href="http://www.earth.illinois.edu/students/guides/">http://www.earth.illinois.edu/students/guides/</a></td>
</tr>
<tr>
<td></td>
<td>Environment and the Human Response</td>
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<tr>
<td></td>
<td>Sustainability, Policy, and Global Change</td>
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<tr>
<td></td>
<td>Earth's Physical Systems, Resources, and Hazards</td>
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<td></td>
<td>Visualizing the Earth System</td>
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<td></td>
<td>Earth's Biosphere and Ecology</td>
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<tr>
<td>6</td>
<td>ESE coursework</td>
</tr>
<tr>
<td></td>
<td>GEOG 379- Introduction to GIS</td>
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<td></td>
<td>ESE 200- Earth Systems</td>
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</tbody>
</table>
### Advanced Courses

A minimum of five additional 300- and 400-level courses, from the approved list and in an academically coherent program approved by an advisor, are required. At least three of these five advanced courses must be listed or cross-listed as either an ESE or ENSU course. Courses taken to satisfy the “ESE Introductory Core” requirement cannot simultaneously be used to satisfy the Advanced Course requirement. These courses should be used to help meet the LAS requirement of 21 hours of 300- or 400-level courses overall, and 12 hours of 300- or 400-level courses in the major. It is strongly recommended that students complete the LAS requirement with 21 hours of 300- or 400-level courses related to the ESE curriculum.

### Society and the Environment (SAE) Concentration

<table>
<thead>
<tr>
<th>Hours</th>
<th>Requirements</th>
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<tbody>
<tr>
<td>16-18</td>
<td>Cognate Course Work</td>
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<tr>
<td></td>
<td>10-12 hours-Introductory Social Science (Select three courses from approved list)</td>
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<td>3 hours-Statistics (Select one course from approved list)</td>
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<td></td>
<td>3 hours-Economics ECON 102</td>
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<td></td>
<td>Highly recommended: CHEM 101 or 102</td>
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### Science of the Earth System (SES) Concentration

<table>
<thead>
<tr>
<th>Hours</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>15-18</td>
<td>Cognate Course Work</td>
</tr>
<tr>
<td></td>
<td>3 hours-CHEM 102-General Chemistry I or CHEM 202 Accelerated Chemistry I</td>
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<tr>
<td></td>
<td>1 hour-CHEM 103-General Chemistry Lab I or CHEM 203- Accelerated Chemistry Lab I</td>
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<tr>
<td></td>
<td>4-5 hours-MATH 220-Calculus I or MATH 221- Calculus I</td>
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<tr>
<td></td>
<td>3 hours-STAT 100-Statistics</td>
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<td></td>
<td>4-5 hours-PHYS 101- College Physics: Mech &amp; Heat or PHYS 211- University Physics: Mechanics</td>
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<td></td>
<td>Highly recommended: ECON 102</td>
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</tbody>
</table>

All students wishing to attend graduate school in any field should discuss necessary supplementary course work with their advisor as early as possible.

Twelve hours of 300- or 400-level courses must be taken on this campus.

Second majors or campus-wide minors may be used to fulfill this requirement upon approval of an advisor.
Substitutions may be made with advisor approval.

All foreign language requirements must be satisfied.

A Major Plan of Study form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Study abroad courses may be substituted for major and minor requirements with approval of advisor.
CLEARANCES:

Signatures:

[Signature]
School of Earth, Society and the Environment

[Signature]
College of Liberal Arts and Sciences

Date:
12/10/10

Date:
2/14/11

Provost Representative:

Date:

Educational Policy Committee Representative:

Date:
Appendix A: Course Lists
ESE Introductory Course Lists

• Environment and the Human Response
  GEOG 106  Geographies of Globalization
  GEOG 210  Contemp Social & Env Problems
  NRES 287  Environment and Society
  ACE 210  Environmental Economics
  ACE 251  The World Food Economy
  HIST 282  Nature and American Culture
  SOC 160  Global Ineq and Social Change

• Sustainability, Policy, and Global Change
  ANTH 278  Climate Change & Civilization
  ATMS 140  Climate and Global Change
  ATMS 202  Soc Impacts Weather & Climate
  GEOL 208  Earth System History
  GEOG 214  Conserv Natural Resources
  NPRE 101  Energy Sources
  NPRE 201  Energy Systems
  PS 225 *  Environmental Politics
  LA 250  Environmental Site Analysis
  SOC 270  Population Issues

• Earth's Physical Systems, Resources, and Hazards
  ATMS 100  Introduction to Meteorology
  ATMS 120 *  Severe and Unusual Weather
  ATMS 201  General Meteorology
  GEOG 103  Earth's Physical System
  GEOG 222  Big Rivers of the World
  GEOL 100 *  Planet Earth
  GEOL 101  Introductory Physical Geology
  GEOL 103  Planet Earth QR II
  GEOL 104  Geology of the National Parks
  GEOL 107  Physical Geology
  GEOL 117  The Oceans
  GEOL 118  Natural Disasters

• Visualizing the Earth System
  GEOG 105  The Digital Earth

• Earth's Biosphere and Ecology
  GEOL 143  History of Life
  IB 126  Extinction: Dinosaurs to Dodos
  IB 100  Biological Sciences
  IB 101  Biological Sciences
  IB 102  Plants, People & Environment
  IB 103  Introduction to Plant Biology
  IB 105  Environmental Biology
  IB 107  Global Warming, Biofuels, Food
  IB 150  Organismal & Evolutionary Biol
  MCB 150 *  Molec & Cellular Basis of Life
ESE Advanced Core Course Lists
* denotes that this course has an on-line version available on or before Fall 2011.

**Environment and the Human Response**

- **ATMS 322** * Soc Impacts Weather & Climate
- **GEOG 381** Environmental Perspectives
- **GEOG 384** Population Geography
- **GEOG 455** Geog of Sub-Saharan Africa
- **GEOG 465** Transp and Sustainability
- **GEOG 483** Urban Geography
- **ACE 310** Natural Resource Economics
- **ACE 406** Environmental Law and Policy
- **AGCM 330** Environmental Communications
- **AGCM 430** Comm in Env Social Movements
- **CHLH 469** Environmental Health
- **LA 450** Ecology of Land Restoration
- **NRES 472** * Environmental Psychology
- **SOC 447** Environmental Sociology
- **UP 405** Watershed Ecology and Planning
- **UP 442** Environmental Policy and Law

**Sustainability, Policy, and Global Change**

- **ESES 482** Challenges of Sustainability
- **ENSU 303** * Sustainable Business I
- **GEOG 466** Environmental Policy
- **GEOG 446** * Sustainable Planning Seminar
- **ATMS 447** Climate Change Assessment
- **ATMS 449** Biogeochemical Cycles
- **CPSC 431** Plants and Global Change
- **CPSC 336** Tomorrow's Environment
- **LA 370** * Environmental Sustainability
- **NPRE 480** Energy and Security
- **NRES 325** * Natural Resource Policy Mgmt
- **NRES 439** Env and Sustainable Dev
- **TSM 311** Humanity in the Food Web

**Earth's Physical Systems, Resources, and Hazards**

-- **CHEM 104/105** and one from **GEOL 100, 101, 107, or 208**, are recommended; other courses on the list may have specific prerequisites.

- **ESES 320** * Water Planet, Water Crisis
- **ESE 445** * Earth Resource Sustainability
- **ENSU 310** * Renewable and Alternative Energy
- **ATMS 420** Atmospheric Chemistry
- **GEOG 401** Watershed Hydrology
- **GEOG 406** Fluvial Geomorphology
- **GEOG 408** Watershed Analysis
- **GEOG 467** Dynm Simul of Nat Res Problems
- **GEOL 333** Earth Materials and the Env
- **GEOL 380** Environmental Geology
- **GEOL 401** Geomorphology
- **GEOL 460** Geochemistry
- **GEOL 470** Introduction to Hydrogeology
- **CEE 330** Environmental Engineering
- **CHEM 360** Chemistry of the Environment
- **CHEM 460** Green Chemistry
NRES 351  Environmental Chemistry

- **Visualizing the Earth System**
  - ATMS 305  Computing and Data Analysis
  - ATMS 411  Satellite Remote Sensing
  - ATMS 421  Earth System Modeling
  - CPSC 440  * Applied Statistical Methods
  - GEOG 371  Spatial Analysis
  - GEOG 468  Biological Modeling
  - GEOG 469  Spatial Ecosystem Modeling
  - GEOG 476  * Applied GIS to Environ Studies
  - GEOG 477  Introduction to Remote Sensing
  - GEOG 460  * Anal & Interp Aerial Photos
  - GEOL 451  Methods in Applied Geophysics
  - GEOG 479  Advanced Geog Info Systems
  - NRES 454  * GIS in Natural Resource Mgmt
  - NRES 455  * Adv GIS for Nat Res Planning

- **Earth's Biosphere and Ecology**
  -- Note: IB 150, MCB 150, and IB 203 may be required as pre-requisites.
  - CPSC 431  Plants and Global Change
  - IB 363  Plants and Their Uses
  - IB 405  Ecological Genetics
  - IB 439  Biogeography
  - IB 444  Insect Ecology
  - IB 445  Chemical Ecology
  - IB 446  Tropical Ecology
  - IB 447  Field Ecology
  - IB 451  Conservation Biology
  - IB 452  Ecosystem Ecology
  - IB 453  Community Ecology
  - IB 470  Field Botany
  - IB 493  Statistical Ecology
  - IB 449  Limnology
  - NRES 348  Fish and Wildlife Ecology
  - NRES 419  * Env and Plant Ecosystems
  - NRES 420  * Restoration Ecology
  - NRES 429  * Aquatic Ecosystem Conserv.
  - NRES 474  * Soil and Water Conservation