

Sandmeyer, Bob

From: Atwood, David A
Sent: Thursday, August 26, 2010 9:00 AM
To: Sandmeyer, Bob
Subject: Invitation to Join Advisory Board to Create new Environmental BA and BS Degrees

Dear Bob,

The Dean of A&S has appointed me as the new director of the Environmental Studies Program. My primary mandate is to create an Environmental Studies BA Degree and an Environmental Sciences BS Degree. The BA Degree will have options for various areas of concentration. I am in the process of creating an Advisory Board made up of A&S faculty and staff who have an interest in environmental courses and who might also wish to teach courses that would be included in the Degree Programs. I am writing to invite you to be a member of this Advisory Board.

The Advisory Board will make the ultimate decisions on what the BA and BS Degrees entail and all of our deliberations will be transparent and freely accessible to anyone interested in following our progress. I will provide the Board with a beginning suggestion of what the two degrees would look like to open up the discussion. From there I would incorporate any comments and suggestions in a "Planning Document" that would be shared with everyone periodically. I anticipate that we will meet once or twice as a group to discuss the possibilities. I would also like to meet or speak with the Board members individually to ensure that everyone's concerns, and the departments each Board member represents, are being addressed.

I hope you will be willing to help create these exciting, and greatly needed, set of new degrees for A&S, and the University. We have an ambitious timeline to get this program before the A&S and Faculty Senate by Nov. 1 of this year.

Thanks,
David

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ENVIRONMENTAL & SUSTAINABILITY STUDIES

New Bachelor of Arts Degree

College of Arts & Sciences

***Note to Educational Program Committee*

This is a revised version of the document that was submitted and approved by the EPC in spring 2011. After submission, the Geography Department requested time to study the Program and to make suggestions for changes. The primary changes to the current document entail: 1) making ENS 395 optional rather than required, 2) adding a second Geography faculty member to the Advisory Board, 3) changes to the list of GEO courses included in the document.

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November 17, 2011

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****Print copies of Signature Routing Logs provided separately for:**

A. Program

B. New Course: ENS 201

C. New Course: ENS 202

REQUEST TO CLASSIFY PROPOSED PROGRAM

Section I (REQUIRED)

1.	The proposed new degree program will be (please check one): <input checked="" type="checkbox"/> Undergraduate* <input type="checkbox"/> Masters* <input type="checkbox"/> Doctoral* <input type="checkbox"/> Professional*		
2.	Have you contacted the Associate Provost for Academic Administration (APAA)? YES <input checked="" type="checkbox"/> Date of contact: Sept. 20, 2010 NO <input type="checkbox"/> (Contact the APAA prior to filling out the remainder of this form.)		
3.	Degree Title:	Bachelor of Arts	
4.	Major Title:	Environmental & Sustainability Studies	
5.	Option:	Areas of Expertise: 1) Economics and Policy, 2) Ecosystems, 3) Energy and Land, 4) Society, 5) Water Resources	
6.	Primary College:	Arts & Sciences	
7.	Primary Department:	None, Degree is Trans-Departmental	
8.	CIP Code (supplied by APAA)	03.0103	
9.	Accrediting Agency (if applicable):	CPE	
10.	Who should be contacted for further information about the proposed new degree program:		
	Name: Prof. David Atwood Mrs. Kari Burchfield	Email: datwood@uky.edu klburc2@uky.edu	Phone: 257-7304 257-1994
11.	Has the APAA determined that the proposed new degree program is outside UK's band?		
	<input type="checkbox"/> YES (Continue with the Section II* on a separate sheet.)		
	<input checked="" type="checkbox"/> NO (This form is complete. Print PAGE ONE & submit with appropriate form for new program.)		

Section II (Attach separate pages.)

- I. Submit a one- to two- page abstract narrative of the program proposal summarizing: how this program will prepare Kentuckians for life and work; any plans for collaboration with other institutions; and any plans for participation in the Kentucky Virtual University.
- II. Provide a comprehensive program description and complete curriculum. For undergraduate programs include: courses/hours; college-required courses; University Studies Program; pre-major courses; major courses; option courses; electives; any other requirement. Include how program will be evaluated and how student success will be measured. Evaluative items may include, but are not limited to retention in the major from semester to semester; success rate of completion for core courses; and academic performance in suggested program electives.

* After filling out this form, you must also submit a form for New Undergraduate Program, New Master's Program, or New Doctoral Program. There is no form for new professional programs.

REQUEST TO CLASSIFY PROPOSED PROGRAM

III. Explain resources (finances, facilities, faculty, etc.) that are needed and available for program implementation and support.

Answers to the questions below are also required by Kentucky's Council on Postsecondary Education for proposed new programs outside of UK's band. Please visit their website (<http://cpe.ky.gov/planning/keyindicators/>) for more information about the questions.

IV. Academic Program Approval Checklist

1. Are more Kentuckians prepared for postsecondary education?

A. Entrance requirements:

1. Test scores (GRE, GMAT, LSAT, MCAT, ACT, SAT, etc.).
2. High school/college GPA.
3. Other required discipline knowledge unique to the proposed program.

B. Transfer requirements:

1. College transfer GPA.
2. Recommended/required preparatory courses (prerequisite courses).

C. Recruitment plans

1. Plans to ensure success of students coming from "feeder institutions" (either colleges or high schools).
2. Recruitment and marketing strategies to enroll a diverse student population.

2. Are more students enrolling?

A. Explain the demand for the program by providing the following information:

1. Anticipated number of students from other majors (including undeclared).
2. New students entering the programming (including transfers).

B. Detail recruitment plans (include specific plans to attract non-traditional students, including minorities, and to address gender related issues.)

C. Contact the Associate Vice President for Employment Equity to obtain EEO plan and status information.

3. Are more students advancing through the system?

A. What is the anticipated time-to-graduation for full-time students entering the program?

B. Explain any cooperative or practicum experience required to complete the program.

C. Why do you desire to offer the program? (See 2A) Why is UK the right place to offer this program?

1. Include a list of other Kentucky institutions offering similar or related programs at this and other levels.

REQUEST TO CLASSIFY PROPOSED PROGRAM

2. List courses from in-state institutions that will transfer into the program.

- a. 48 Hour General Education Transfer Component.
- b. 12 Hour Transfer Articulation Agreement.

3. List courses offered that will transfer into similar programs at other state institutions.

4. Provide information about completed, signed articulation agreements.

D. Delivery

1. What plans are in place for delivering this program through the Kentucky Virtual University or other distance learning technologies? (Council on Postsecondary Education wants special attention given to KVVU courses.)

2. What courses can be offered in a non-traditional mode?

E. Collaborative Efforts

- 1. Future proposals must provide evidence of consultation with other programs in the state and either documentation of collaborative agreements or strong arguments for why they are not feasible.
- 2. Collaborative agreements should define shared use of resources to improve program quality, efficiency, and student placement.

4. Are we preparing Kentuckians for life and work?

- A. How does the program prepare Kentuckians for life and work?
- B. What are the accreditation expectations for this program?
- C. Are there licensure, certification or accreditation requirements for graduates of this program?
- D. What are the projected degree completions?

5. Are Kentucky's people, communities and economy benefiting?

- A. Describe external advisory groups involved in the development of this program (e.g., disciplinary groups, community, government, business, labor interests).
- B. What are the employment expectations for graduates? Document the contributions of the program to current workforce needs in the state.
- C. What other benefits to the Kentucky's community and economy will the program provide?
- D. Explain specific benefits of the program.

SECTION II. REQUEST TO CLASSIFY PROPOSED PROGRAM

I. Program Description

A. Abstract

The Bachelor of Arts Major in Environmental & Sustainability Studies (ENS) will be an important addition to the University's Degree possibilities. The Degree was created through the combined efforts of the ENS Advisory Board members within the College of Arts & Sciences and in consultation with faculty and staff throughout the University. The ENS B.A. degree will educate students in a broad range of fundamental environmental studies with concepts of sustainability integrated throughout the curriculum. The programmatic focus on sustainability will place the University at the forefront of degree programs offering courses in this new, critical area of academic endeavor. The coursework requirements consist of 18 credit hours of core courses and 24 credit hours of electives from courses organized in the Areas of Economics and Policy, Ecosystems, Energy and Land, Society, and Water Resources. In order to ensure depth of knowledge and expertise 15 credit hours must be taken within one Area. To provide breadth of knowledge, six credit hours must be taken in a second Area and three credit hours in a third Area. The elective requirements would be fulfilled by taking five courses in one Area, two courses in a second Area, and one course in a third Area. This is called the "5:2:1 Rule". The students will have the freedom to select any combination of courses fulfilling the 5:2:1 Rule. The Areas were created and named to provide a multidisciplinary education not specific to any single discipline or department. Separating the elective courses into "humanities" and "natural sciences" was intentionally avoided. Sustainability is transdisciplinary and most suitably taught in a holistic manner by drawing needed information from disciplinary subjects.

The grouping of courses in each Area provides the students the possibility of selecting thematic clusters of courses according to their own interests and educational aspirations. As examples, the Themes of "Environmental Justice" and "The Built Environment" were created out of the Society Area of Expertise. Many other Themes could be created by the students, such as "Biodiversity" and "Conservation" within the Ecosystems Area, and "Global Climate Change" and "Renewable Energy" within the Energy and Land Areas. As various new Themes emerge over the years, based on the interests of the students and their career goals, they will be provided as options within the Program to provide guidance for future generations of students.

The Environmental & Sustainability Program will create a community of ENS scholars who will graduate with a unique set of transdisciplinary skills and an understanding of the interrelationships that exist between society and our global environment. This will be obtained through the courses and participation in various service-learning activities. The Program intends to play a significant role in helping the College of Arts & Sciences attain the goal of being defined by four key characteristics: innovative preparation for life and career, multidisciplinary scholarly research, connectivity with the world, and substantive community involvement (*Ampersand*: Envision 2020, Fall 2010).

B. Preparing Kentuckians for Life and Work

1. Student Skills Development

Active learning will be employed as the basis of the ENS Core courses. This will be promoted through each student's independent research for the assignments in the Core courses, various engagement activities (on and off campus), through the Independent Study course, ENS 395, and the Capstone course, ENS 400. Environmental subjects and issues are ideally suited to be taught by active learning techniques given the rapidly changing developments that take place. However, these must be examined critically, particularly with regard to how the issues are portrayed in popular publications and the news media. Thus, a primary outcome of the program will be to produce graduates with the ability to think critically and independently. This will be an attribute the students can employ throughout their lives and will make them more successful in their careers. Another important outcome will be to train the students to communicate effectively through written and oral media. These skills will be developed throughout the Core courses, but specifically in ENG 205 and PHI 336. The best of the students' written documents and presentations will be incorporated into the Program Website to educate the public about existing and emerging environmental issues.

The abilities to think critically and to communicate effectively will require a rigorous academic foundation. The factual basis for the social, scientific, economic, and policy issues facing society today will be provided through the new courses, ENS 201 and ENS 202, ideally taken by the students in their first year. Greater expertise in subjects of the students' own interest will be provided by the courses listed in the five areas of expertise following the "5:2:1 Rule".

The lives of the students and those around them will be substantially improved by training in the concepts and practice of Sustainability. This will be manifested, for example, by the graduating students having a clear understanding of the social problems and ecosystem impacts associated with the world's current use of non-renewable resources through energy and water consumption, land use, and commodities used on a daily basis. This will result in Environmental & Sustainability Studies graduates who make wise decisions about the activities they conduct in their lives and work, making them well-informed, global citizens.

The *Student Learning Outcomes* will be:

- 1) Development and utilization of critical thinking skills
- 2) Ability to work independently in the creation of new knowledge
- 3) Demonstration of excellence in communication, with an emphasis on writing
- 4) Factual academic knowledge in a broad range of environmental issues
- 5) Expertise in a specific area of environmental studies
- 6) Understanding the importance of sustainability and ability to implement in life and career.

2. Career Opportunities

The ENS B.A. degree will provide graduating students with a broad liberal-arts education in environmental studies within the context of sustainability. It will provide a strong foundation for a student intending to continue their education at the M.S. or Ph.D. levels. The degree will

also prepare the students for a wide range of career opportunities in city, state and federal government, non-profit organizations, professional societies, and in the private sector. The students will be particularly well-prepared for careers where communication skills are essential. This will be an advantage the ENS B.A. students will have compared to students graduating with traditional “environmental science” degrees and more discipline-specific B.S. degrees. There are many websites that advertise potential career choices including one titled “Environmental Career Opportunities” (<http://www.ecojobs.com/>). The ENS website will provide external links to selected websites that describe careers having an environmental or sustainability component. This will allow the students to determine whether the ENS B.A. is suitable for their goals in life, before entering the Program, and assist with career selection after graduation. As the ENS Program begins producing high-quality graduates and placing them in various careers it is anticipated that potential employers will eventually contact the Program looking for potential hiring opportunities. Additionally, members of the External Advisory Board will provide guidance and help identify career opportunities.

With their broad-based academic training, graduating ENS students would be well-suited to become educators throughout the P-12 grades. They could pursue careers at the state-level. In Kentucky this could be in the Department for Environmental Protection (KDEP; Divisions of Waste Management, Air Quality, and Water). At the federal level there will be career opportunities in the U.S. National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA).

There are many possibilities for employment with non-profit organizations and professional societies, with some examples being Conservation International, Environmental Defense Fund, National Wildlife Federation, the American Planning Association, North American Lake Management Society, and the Society for Ecological Restoration. They could also find employment with newspapers, magazines, and other media-based companies. In these and other career opportunities the students will be able to understand, evaluate, and communicate the meaning and impact of new environmental developments.

The ENS Degree provides a great deal of flexibility in the electives the students may choose, so the students will be able to tailor the courses they select within an Area of Expertise for the career they consider to be ideal.

C. Collaborations with other Institutions

Many of the potential career opportunities listed above, and particularly the KDEP, will provide work-study and internship possibilities for the students. It will be important to begin building a strong relationship with the KDEP as early as possible. Members of the Advisory Board have already met with Secretary Len Peters who was interested in connecting to the new ENS Program. He provided the name and contact information for the Assistant Director of the Division of Carbon Management, who will be the first member of the ENS External Advisory Board. There will also be opportunities for the students to collaborate with various non-profit groups located in Lexington and the state. For example, several ENS Minor students worked with the Kentucky Conservation Committee to review state legislation with potential

environmental impacts. If this collaborative, engagement activity continues then it could receive credit through ENS 395 Independent Study. The students will be introduced to the many possibilities for collaborations in ENS 201 and ENS 202 and encouraged to begin their optional independent study activities as early as possible.

After the ENS Program is established, student exchange programs will be developed with other KY institutions. For example, Atwood is currently working with Prof. Alice Jones and Dr. Tammy Horn at ECU to submit an EPA Environmental Education Regional Grant to support a UK-ECU collaboration on the use of reclaimed mine sites for bee-keeping and the production of pesticide-free beeswax and honey.

It would be ideal to have several of the UK students spend a semester at Berea College to participate and learn from their Sustainability and Environmental Studies Program. This would include studying Berea's famous Ecovillage and how it operates. Other KY institutions have unique expertise and capabilities that would be valuable for UK ENS students to obtain. Likewise, the ENS Program could provide similar opportunities to students from other institutions. Collaborative exchanges with these institutions will be sought once the ENS Program is sufficiently established to host off-campus students, and provide support for ENS students to travel to other institutions.

Collaborations with leading programs outside of KY will be important for the growth of the ENS Program, student development and the generation of new ideas for courses and engagement activities. The first three universities to be explored for this possibility are: Washington (Environmental Studies BA), Pennsylvania State (Energy and Sustainability Policy BA) (two UK benchmarks) and Oregon (Environmental Studies BA). It is anticipated that the "exchange" will initially be one-way with ENS students spending a semester taking courses at the other institution in their 3rd year at UK. This might also entail having one of our faculty visit the host institution to give a seminar and to observe their environmental program. After the UK ENS Program is established it should become a host to students from other institutions leading to a mutually beneficial two-way exchange.

D. Participation in the Kentucky Virtual University

The ENS Program will participate in the KVU. While the ENS Core courses will not be taught online, the ENS 300 Special Topics courses will be well-suited to be offered as virtual courses since they will cover a range of topics that are likely to be of interest to students outside of UK. For example, PS391/ENS 300 "Urban Sustainability in North America" (Prof. Yanarella) was taught online in the summer of 2010 and was taught again in summer 2011.

E. Program Creation and Advisory Board

In consultation with Dean Kornbluh and Associate Dean Schatzki, Prof. Atwood assembled a Program Advisory Board comprised of faculty and staff who would be important participants in the new ENS B.A. Program. The Advisory Board members represent all the A&S College Departments in which relevant ENS elective courses are currently being taught. The Advisory Board met several hours at least once a week throughout fall 2010 to build upon ideas

for a new environmental degree that had been discussed across the College for several years.

Prof. Atwood provided all of the Advisory Board members with emailed copies of the deliberations and plans that were discussed at each meeting. The Board Members were encouraged and expected to share this information with their colleagues in their home departments and elsewhere. Prof. Atwood provided information to interested individuals upon request. Thus, the deliberative process was completely transparent at all stages of the Program development.

F. Program Structure

The ENS Program is interdisciplinary and will be located in the College of Arts & Sciences. Mrs. Kari Burchfield, a participant in the creation of the Program, is responsible for coordinating interdisciplinary studies in the College of Arts & Sciences.

The ENS Advisory Board will make all the decisions regarding the courses to incorporate into the Program, new courses to be developed, and any other programmatic or curricular issues. The Advisory Board will also oversee the design and content of the Program Website, the Guest Lecture Program, suitable Engagement Activities, Student Scholarships, the selection of an External Advisory Board and any other activities the Program engages in. The Director will manage the day-to-day operation of the Program including the placement of students into appropriate ENS 395 projects. The Director will obtain approval for any decisions that would affect the Program as a whole.

G. The Need for a Program in Environmental & Sustainability Studies

There is an immediate, imperative need to prepare students for a 21st century that will be more significantly impacted by environmental issues than any of the previous generations of students. For example, the next generation of graduating students will need to have a fundamental understanding of the following issues:

- i. Energy consumption, and associated ecological, social and political impacts
- ii. Natural resource consumption, and associated impacts
- iii. Climate change impacts on ecosystems and society
- iv. Population growth to nine billion by the end of this century
- v. The ecosystem and social impacts of common consumer products
- vi. Educating the general public on current and impending environmental problems

Advisory Board Members

1. David Atwood (Chemistry; ENS Director)
2. Arne Bathke (Statistics)
3. Shannon Bell (Sociology)
4. Kari Burchfield (Interdisciplinary Programs)
5. Lisa Cliggett (Anthropology)
6. Alan Fryar (Earth and Environmental Sciences)
7. Rebecca Glasscock (BCTC, ENS 200)
8. Jim Krupa (Biology)
9. Jeff Osborn (Biology; AMSP)
10. Tad Mutersbaugh (Geography)
11. Eric Reece (English)
12. Bob Sandmeyer (Philosophy)
13. Ted Schatzki (Associate Dean, A&S)
14. Shane Tedder (Sustainability Coordinator)
15. Alice Turkington (Geography)
16. Ernie Yanarella (Political Science)

It has become clear that the world's resources cannot continue to be utilized in a manner that leads to their depletion and the consequent environmental degradation and ecosystem losses. Society must learn how to manage the world's limited resources in a more sustainable manner. Sustainable development is defined minimally as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission of the United Nations, 1987). Future college graduates must be able to implement sustainable development, specifically, and understand sustainability in its broadest meaning, to be able to succeed in a world with less abundant resources. In doing so, they will become the new leaders of their generation in achieving success while limiting the impacts of society on the carrying-capacity of the Earth. Sustainability is not a separate discipline of academic endeavor but a means of using fundamental academic environmental concepts to solve societal environmental, and by extension, human and economic problems. Sustainability creates and emphasizes inter-relationships among typically separate fields and departments of environmental studies, in recognition that appropriate solutions to environmental problems require the erasure of divisional boundaries. When applied to ecosystem protection sustainability *"is intended to complement, not replace, the more familiar effort to preserve biological diversity through the creation of national parks, wilderness areas, and nature preserves. The idea is to adapt human economic activity to the existing ecosystem rather than destroy those ecosystems..."* (Earth's Insights (1994) Callicott, p. 136). Adaptation is a key term in this quotation, but successfully adapting to a world undergoing environmental change requires knowledge and expertise in the relevant environmental subjects, and sustainable activities to limit or forestall catastrophic environmental changes.

The new Environmental & Sustainability Studies Bachelor of Arts Degree represents the logical, and essential, evolution from department-specific studies, through cross-disciplinary studies, to one that emphasizes sustainability within the context of fundamental environmental concepts. The ENS Program will be among the first in the nation to provide a transdisciplinary, holistic approach to understanding, and making changes in, the relationship between humans and their environment.

H. Environmental Programs at Benchmark Institutions

The University of Kentucky Benchmark Institutions are variable with regards to the types of environmental degrees they offer. However, the majority are B.S. degrees in some type of "environmental science". There are six B.A. degrees at high-ranking public universities (U.S. News & World Report, 2011). Specifically these are, Pennsylvania State University (15), the Universities of Florida (17), Iowa (29), Michigan (4), Virginia (2), and Washington (11) (highlighted in the Table below). The University of Kentucky is # 63 in this ranking. Thus, the new environmental degree program will be another achievement in attempting to attain higher national status. More importantly, however, is the potential for the University of Kentucky to be *ahead* of most institutions by creating a degree incorporating sustainability. Of the benchmark institutions only Pennsylvania State University has such a degree and it is called: "Energy and

Sustainability”. The University of Kentucky would join higher ranked schools by creating a new environmental degree, would be following the precedent set by the 15th ranked school, but more importantly, UK would be unique in offering a broad-based environmental degree that includes sustainability.

Environmental Degree Programs at UK’s Benchmark Institutions		
	Institution	Degree Title (Degree; All are BS unless indicated otherwise)
1	Michigan State	Env. Sciences and Agriscience, Env. Sciences and Management
2	N.C. State	Env. Design in Architecture, Env. Engineering, Env. Science-Air Quality, Env. Science- Soil Science, Env. Science-Geology, Env. Science-Statistics, Env. Science-Watershed Hydrology, Env. Technology, Env. Sciences
3	Ohio State	Env. Engineering, Env. Policy and Management, Env. Science
4	Penn. State	Env. Resource Management, Energy Business and Finance, Energy Engineering, Energy and Sustainability Policy (BA)
5	Purdue	Env. and Natural Resources Engineering, Env. Health Sciences, Env. Plant Studies, Env. Soil Science, Env. Studies
6	Texas A&M	Environmental Studies, Bioenvironmental Sciences
7	Arizona	Environmental Research Labs (Center)
8	UCLA	Environmental Science
9	Florida	Env. Engineering, Env. Management in Agriculture and Natural Resources, Environmental Science (BA and BS)
10	Georgia	Agriscience and Env. Systems, Env. Chemistry, Env. Economics and Management, Env. Engineering, Env. Health Science
11	Illinois	Nat. Res. and Env. Sciences, Environmental Sciences (BA and BS)
12	Iowa	Environmental Sciences (BA and BS)
13	Maryland	Env. Science and Technology, Env. Science and Policy
14	Michigan	Program in the Environment (Concentration) (BA and BS)
15	Minnesota	Env. and Natural Resources, Env. Horticulture, Env. Science, Env. Science Policy and Management
16	North Carolina	Environmental Studies (BA and BS)
17	Virginia	Environmental Sciences (BA and BS)
18	Washington	Environmental Studies (BA)
19	Wisconsin	Community and Environmental Sociology (BS)

I. ENS Major Student Enrollment and Benchmark Programs

The ENS Program intends to enroll students that otherwise would not have chosen UK for their undergraduate degree. Initially, the majority of the students are likely to be from the U.S. but as the program grows and becomes more widely publicized it is hoped that a significant number of international students will come to UK for the ENS Program. The A&S *Passport to the World Program* will provide unique opportunities to recruit international students into the ENS Program. Minority and Appalachian student recruitment will be coordinated with the Louis Stokes Alliance for Minority Participation (LSAMP) and the Appalachian and Minority Science, Technology, Engineering, and Mathematics Majors (AMSTEMM) Programs.

The benchmark enrollments for the institutions that made this information accessible are shown in the table on the following page (the first and last three years of each program). The B.A. and B.S. numbers for Florida and Virginia were not listed separately so the enrollments are combined, and thereby larger than what they would be for a separate B.A. program. The general trend is for increasing enrollment which would generally track the overall increase in enrollment at the university. The exception is Maryland who's Environmental Science and Policy numbers increased ~ six-fold in ten years. This could probably be attributed to the proximity of the University to Washington, D.C. and the result of some political occurrence during that time period. The enrollment for Michigan and Texas A&M is similar to the current ENS Minor. Based on these numbers a B.A. program having ~ 100 students would be similar in size to Florida and Virginia, ranked #17 and #2 for public institutions. The ENS B.A. program is likely to be able to reach an enrollment of ~ 100 students in the coming years.

Benchmarks, Programs, and Year : Student Enrollment		
Florida	Maryland	Michigan
Env. Sci. (BA/BS)	Env. Sci. and Policy (BS)	Env. Econ. and Policy (BS)
2009: 158 2008: 140 2007: 120 ----- 2001: 140 2000: 157 1999: 167	2010: 205 2009: 204 2008: 194 ----- 1999: 161 1998: 97 1997: 38	2010: 45 2009: 48 2008: 42 ----- 2004: 22 2003: 17 2002: 19
Texas A&M	Virginia	Washington
Env. Studies (BS)	Env. Sci. (BA/BS)	Commun. and Env. Soc. (BS)
2010: 20 2009: 15 2008: 10 2007: 16 2006: 11 2005: 7	2008: 134 2007: 108 2006: 82 ----- 1993: 210 1992: 170 1991: 127	2009: 52 2008: 45 2007: 29 ----- 1991: 39 1990: 49 1989: 41

The timing for the creation of the ENS B.A. is fortuitous as it coincides with the Biology Department making their core degree requirements more stringent. It appears likely that a good number of potential BIO Majors will elect to pursue a different major and the ENS B.A. degree would provide the opportunity to pursue a major in the ENS Ecosystems Area of Expertise. With ≈ 1,500 current majors and associated pressure on teaching and resources the Biology Department will benefit from having the ENS possibility available to the students. The ENS

Program will benefit from having solid enrollment in the beginning years of the program, possibly like the more recent years for Florida and Maryland, two Top-20 universities.

An informal email poll of the students currently planning to graduate with an ENS Minor indicated that they *would not* have elected for an ENS B.A. in preference to the major they are currently enrolled in. Thus, the number of ENS Minor students graduating in the past cannot be used to estimate how many students the ENS B.A. degree program would potentially have. However, a significant proportion of the current ENS Minor students indicated that they would have elected to double major with the ENS B.A. being their secondary degree. It is likely, then, that the ENS B.A. will prove to be an important “companion” degree alongside traditional B.A. and B.S. degrees, and for students with an interest in business or law.

Thus, in the first years of the ENS B.A. program the student enrollment will probably be comprised of students with an interest in biology, those pursuing double-majors, and relatively few students switching from the ENS Minor to the ENS Major. As the ENS Major becomes more established and more widely recognized it is anticipated that the enrollment will be largely comprised of students who would not have come to UK in the absence of the B.A. degree.

The ENS B.A. degree is designed to provide a broad transdisciplinary education in the interrelated areas of environmental and sustainability studies. The degree is structured to provide students with the greatest possible freedom in designing and selecting their elective courses. The program will be ideal for students wishing to continue their education in other areas and for those interested in immediate employment in careers requiring a breadth of knowledge of environmental subjects coupled with strong communication and critical thinking skills. Students planning for more specialized careers in the physical sciences would be better served by more discipline-specific B.S. degrees, or the Natural Resources and Environmental Sciences B.S. offered by the College of Agriculture.

J. Relationship to Environmental Studies Minor

1. Program Description

The Environmental Studies Minor was created in 2002 to “*provide students with the opportunity to become conversant in a range of environmental topics, whether as private citizens in their daily lives or as professional members of corporate, government, legal, medical, and educational circles. The minor draws on topics and perspectives from the natural and physical sciences, the social sciences, and the humanities to underscore the interdisciplinary nature of environmental issues and problems. Students taking the minor are encouraged to integrate the program with their major study focus in order to gain a competitive advantage in grappling with environmental topics.*” (Yanarella, Undergraduate Bulletin).

The minor in Environmental Studies requires 18 hours of course work including ENS 200, six credits in sociocultural perspective electives, six credits from science and technology perspective electives, and ENS 400. At least six of the twelve elective credits must be at the 300-

level or higher (this will satisfy the College requirement of at least 24 credits at the 300 level or higher). The elective courses must be taken outside the student's major. A total of 31 students have graduated with an ENS Minor from a variety of departments as shown in the table.

2. Revisions to the Minor

Once the Environmental & Sustainability Studies B.A. is established the Program Advisory Board will evaluate the Environmental Studies Minor with regards to its structure, the list of suitable electives and the impact the degree has had on graduated students. Based on Board meetings and individual conversations between the Director and Board members the list of activities and outcomes listed below are anticipated to take place after the ENS Major has been approved. This listing and potential decisions will need to be formally discussed and approved by the Board before implementation.

ENS Minor Graduates and Degree Majors									
MAJOR	03	04	05	06	07	08	09	10	Tot
Ag-Ed. Com.	1								1
Ag-Biotech.			1						1
Ag-Individ.					1				1
Anthropology		1	1						2
Architecture				2					2
Biology	1	1		2	1	1		1	7
English	1	1						1	3
Geography		1					3	2	6
Marketing		1							1
Ag-NRCM					2				2
Philosophy				1					1
Political Sci.						1		1	2
Spanish					1				1
Telecom.							1		1
Total	3	5	2	5	5	2	4	5	31

- i) The Environmental Studies Minor will be changed to a Minor in Environmental & Sustainability Studies to make the Minor consistent with the Major.
- ii) ENS 200, Introduction to Environmental Studies, will be phased out over the next several years and replaced by ENS 201. This will bring continuity to the Minor and Major Programs, foster relationships and collaborations among all the ENS students, and make it easier for students to move from the Minor into the Major.
- iii) ENS 300 (Special Topics) and ENS 395 (Independent Study) will be common, elective, courses in the Minor and Major degrees.
- iv) The list of elective courses suitable for the Minor will be broadened to include the relevant courses listed as electives for the ENS Major. It is critical to have the Minor and Major electives overlap to allow Minor students to seamlessly shift to the Major, if desired. Another benefit to having the same classes listed for both degrees is to create a cohort of students, from both degrees, with similar interests and experience working together.

v) ENS 400 Senior Seminar in Environmental & Sustainability Studies will be a common course for the Minor and Major.

vi) Students in both degrees will be tracked and their post-graduation successes evaluated in the same manner. This will allow a comparison of the relative merits of each degree and reveal the career choices that are most suitable for each.

vii) The ENS Minor and Major degrees will be evaluated with the same metrics to allow direct comparison of the relative merits of each degree.

K. Relationship to Existing UK Environmental Programs

There are five undergraduate degree programs specifically related to environmental subjects currently being offered at the University of Kentucky (according to the 2011-2012 Bulletin). These are: the Topical Major B.S. in Environmental Science in Earth and Environmental Sciences, the Human Geography Tracks (B.A. and B.S.) in Geography, the B.S. in Natural Resources and Environmental Sciences (formerly Natural Resources and Conservation Management, NRCM) in the College of Agriculture, and a Major (B.S) and Minor in Sustainable Agriculture (SAG).

The EES and NRES are B.S. degrees and have Pre-Major requirements in CHE, MA and BIO (NRES only). The ENS B.A. does not have any Pre-major or Major requirements in the physical sciences or mathematics beyond the A&S requirements. The Major requirements for EES are all intra-departmental courses and those for NRES are all within the College of Agriculture (with one exception), as expected given the specific disciplinary goals of the two B.S. degrees. Likewise, the Human Geography B.A. Track within Geography is comprised of GEO courses.

In distinction to the existing UK environmental programs, the ENS degree is consciously interdisciplinary. Consequently, in order to fulfill the 5:2:1 Major Requirement, students must select courses that have at least three different departmental prefixes. This will avoid the unlikely possibility of a student creating a “B.A.-like” disciplinary departmental degree through their ENS selections.

It would be highly unlikely that a student would inadvertently, or intentionally, take courses within the ENS Program that would somehow overlap significantly with the NRES B.S. degree. B.A. degree programs, such as the ENS degree, are, by design, broad-based with substantial flexibility in the courses that students could choose. By contrast, a B.S. degree program is more structured, with clearly defined math and science pre-Major and Major requirements and focused on a disciplinary subject, or range of subjects, in the sciences. The NRES B.S. degree requires that students take nine credits in Analytical Skill Development in either of the areas of Economic and Policy Analysis or Field and Laboratory Analysis of Ecosystems and nine credit hours in one of the Environmental System Emphasis Areas of: Conservation Biology, Human Dimensions and Natural Resource Planning, Environmental Soil Science, Water Resources, or Wildlife Management. The ENS “Economics and Policy” Area, by contrast, has six courses out of thirty-four, and “Water Resources six out of twenty-five courses,

in common with the NRES Program. Roughly half of the twelve overlapping courses have prerequisites that are more suitable for a B.S. degree compared to a B.A. degree. Consequently, the ENS B.A. is designed to be attractive and useful to students with an interest in the environmental and sustainability aspects of the humanities and social sciences, while obtaining sufficient knowledge to be conversant with a range of physical science subjects.

Despite the significant differences between a B.A. in ENS and a B.S. in NRES, there could be substantial, mutually beneficial opportunities between the two programs to collaborate and strengthen UK's environmental course and degree options. For example, it would be ideal to have the B.A and B.S. students from both programs participate in new inter-college courses of mutual interest and need.

Students interested in attending UK in order to obtain an environmentally-focused degree would benefit from having all the various UK environmental programs advertised together. This would allow the students to select the programs, or combination of programs, that best fit their interests and aspirations. Such a comprehensive environmental degree advertisement would also advertise UK's strength in environmental subjects.

II. Comprehensive Program Description and Complete Curriculum

A. General Education Requirements

For students in the ENS Program there are some very good courses with direct relevance to an ENS Degree that would fulfill the General Education (UK Core) requirements. These courses are listed below and would be used in advising ENS students during their first year at UK. The two courses preceded by an asterisk are electives in the ENS Area requirements and, importantly, would count towards the A&S requirement for 39 credits at the 300-level and above.

With only three of the UK Core sub-categories containing environmental and/or sustainability courses, there will be opportunities for developing new UK Core courses within the ENS Program. This could take place through the ENS 300 Special Topics course. This will be useful to the students in meeting the A&S B.A. requirement for courses at the 300-level and above.

Natural Sciences

GEO 130: Earth's Physical Environment

GEO 135: Global Climate Change

General Education Requirements	Cr
I. Intellectual Inquiry	
a. Humanities	3
b. Natural, Physical, Mathematical Sciences	3
c. Social Sciences	3
d. Creativity & the Arts	3
II. Composition and Communication	
a. CC-1	3
b. CC-2	3
III. Quantitative Reasoning	
a. Quantitative Foundations	3
b. Statistical Inferential Reasoning	3
IV. Citizenship	
a. Community, Culture and Citizenship in US	3
b. Global Dynamics	3
Total Credit Hours	30

GLY 110: Endangered Planet: An Introduction to Environmental Geology

GLY 120: Sustainable Planet: The Geology of Natural Resources

Social Sciences

SOC 360: Environmental Sociology

SOC 350: Special Topics: Environmental Justice (To become
SOC 363 when approved)

Citizenship: Global Dynamics

ANT 225: Culture, Environmental and Global Issues

ANT 311: Global Dreams and Realities in a “Flat World”

GEO 162: Introduction to Global Environmental Issues

SAG 201: Cultural Perspectives on Sustainability

B. College of Arts & Sciences Requirements

The current Environmental Studies courses, ENS 200 and
ENS 400, would satisfy the A&S natural sciences requirement.

When approved ENS 201 would also qualify as an A&S natural
science. The lists of ENS Area electives contain many other
possibilities for satisfying the A&S requirements. Courses with
the prefixes, BIO, CHE, and GLY would satisfy the A&S natural
Sciences requirement. The ENS Core Requirement, PHI 336, will

satisfy one of the A&S humanities requirements. ENG 205, however, would not. There are ENS
Area courses with the prefixes, ANT, ECO, GEO, PS, and SOC that would satisfy the A&S
social sciences requirement. This will provide the students a great deal of flexibility in meeting
the A&S requirement of completing 90 credit hours in A&S or 120 credit hours acceptable to
A&S, and make graduation within four years easily achievable.

C. ENS Core Requirements

The Core courses are designed to
introduce the students to a broad range of
environmental topics, policy needs,
current issues, and fundamental
environmental knowledge. ENS 201 and
ENS 202 will serve as introductory
courses to provide a foundation in
environmental and sustainability studies
within the humanities, social and natural
sciences, and policy. Most importantly,
the students will learn, in their first year of
study, that the concept of sustainability
can be applied to all academic subjects.
The Advisory Board has selected a single

A&S Requirements	Cr
I. Natural Sciences	
a. NS-1	3
b. NS-2	3
II. Humanities	
a. H-1	3
b. H-2	3
III. Social Sciences	
a. SS-1	3
b. SS-2	3
IV. Language (3rd and 4th)	6
V. Free Electives (2x3 cr)	6
VI. Lab or Field Exp.	3
VII. Grad. Writing Req.	3
Total Credit Hours	36

Required Core Courses		
Course	Cr	Title
ENS 201	3	Environmental & Sustainability Studies I: Humanities and Social Sciences
ENS 202	3	Environmental & Sustainability Studies II: Natural Sciences and Policy
ENG 205	3	Intermediate Writing
ENS 300	3	Special Topics in Environmental Studies
PHI 336	3	Environmental Ethics
ENS 400	3	Capstone Course: Senior Seminar in Environmental & Sustainability Studies
Total	18	

textbook, Environmental Science (8th Edition) by Daniel Chiras, to use for ENS 201 and ENS 202. Among the multitude of potential textbooks that are available, and despite the term “Science” in the title, Chiras’ book had the best coverage of environmental studies and sciences information. The book has two other critical features: 1) It contains organized, thought-provoking sections designed to introduce and practice Active Learning techniques, and 2) sustainability is linked to the basic textual information from the first chapter through the last. ENS 201 and 202 will thereby provide an ideal foundation upon which to build the student’s capabilities in environmental studies and sustainability.

D. Core Course Descriptions

1. ENS 201 - Environmental & Sustainability Studies I: Humanities and Social Sciences

This new course exposes students to core ideas, theoretical concerns and practical approaches to environmental studies framed within the disciplines of the humanities and social sciences. Students will study human interactions with the environment, both natural and built, and inter-human relations conditioned by local and global environmental factors. Core ideas surveyed in this class include: the meaning of an environmental philosophy, historical and cultural perspectives (Eastern and Western philosophies) of nature, the social construction of nature, environmental justice, environmental racism, local-global linkages, population, consumption and commodity chains, and political ecology. The New Course Form and Syllabus for ENS 201 is included in this document.

Student Learning Outcomes. Upon completion of this course students will be able to:

1. Explain the differences in historical, cultural, and philosophical traditions towards the environment.
2. Analyze and critique a specific sustainability management program instituted at the local level.
3. Evaluate the roles that stakeholder and societal diversity play in environmental concerns.
4. Explain how and why environmental toxins and hazards disproportionately affect people of color, low income communities, women, and people of the Global South.
5. Analyze the link between local and global environmental concerns.
6. Apply knowledge gained through the course to reveal social, cultural, gendered, racial and other dimensions of diversity to a given environmental issue (such as a “commodity chain”).

2. ENS 202 - Environmental & Sustainability Studies II: Natural Sciences and Policy

This second new course is an introduction to Natural Science and Policy as they pertain to understanding environmental concepts and sustainability issues. The core ideas include understanding how the ecological theories of population dynamics, community structure, and ecosystem dynamics lay a scientific foundation to understanding the nature of current environmental issues and how they might be addressed individually and through governmental legislation. The course will provide core concepts that will be utilized and developed further in the degree electives. The New Course Form and Syllabus for ENS 202 is included in this document.

Student Learning Outcomes. Upon completion of this course students will be able to:

1. Understand basic ecological theory from a scientific perspective.
2. Explain the reasons for existing environmental problems.
3. Understand different approaches and strategies to solve existing environmental problems.
4. Show how environmental policies require fundamental scientific developments.
5. Understand the implications of environmental policies for the public well-being.

3. ENG 205 - Intermediate Writing

This nonfiction writing course will train students to improve their writing and critical thinking skills in the context of environmental issues. The course could also incorporate engagement activities, particularly through the study of Robinson Forest in sections taught by Erik Reece. The underlying goal of making this a required course is to train students to be able to communicate effectively in writing, a skill that is particularly critical when describing environmental subjects. The students will also be required to make oral presentations related to their writing assignments. The course will further develop students' critical thinking skills and ability to conduct independent scholarly research.

Student Learning Outcomes. Upon completion of this course students will be able to:

1. Understand the origins and purposes of environmental writing.
2. Write effective, clear, and concise descriptions of environmental subjects.
3. Communicate effectively, in written and oral form.
4. Write literature reviews for specific, targeted audiences.
5. Observe the importance of clear, factual writing in educating the public.

4. ENS 300 - Special Topics in Environmental & Sustainability Studies

This course will serve two primary purposes within the ENS B.A. Degree:

- a) It will provide a means of introducing new courses that are needed within the Major Requirements within the Degree Themes. For example, the Program needs an Ecology course that does not have the requirements associated with BIO 325 (prerequisites: BIO 150 and BIO 152). A new Ecology course could be created, with approval and assistance from the BIO department, as ENS 300 with a title such as Special Topics: Ecosystems. Once approved and given a specific course number (3XX) the course could be cross-listed within Biology as BIO 3XX. It would have the *minimum* prerequisites of ENS 201 and ENS 202. After successfully being offered and with commitments to continue offering the course regularly, it would be listed under the Areas of "Ecosystems" and "Water Resources" in the listing of Major Courses.
- b) The course will allow the introduction of new, important topics into the degree program, possibly on a multi-year basis or more frequently. With approval from the Advisory Board the course could become listed in the appropriate Major Requirement Theme. For example, Prof. Yanarella has created the course: "Urban Sustainability in North America" as PS 391 and cross-listed as ENS 300. Sustainability is a primary theme within the ENS Degree program. However,

there are very few courses currently offered at UK that focus on this critical theme. Another course that might be taught within ENS 300 is Prof. Atwood's DSP 130 course: "Energy and Sustainability" where unsustainable energy use is contrasted with renewable energy sources. This course, or one similar in content, is needed in the "Energy and Land" Area of Expertise.

5. PHI 336 - Environmental Ethics

This course will provide an introduction to moral problems that arise in human interaction with the natural environment. Topics to be addressed include questions such as: what is man's place in nature? Do nonhuman animals or ecosystems have intrinsic moral worth, and if so, how can it be respected? What problems and ambiguities arise in attempting to live in an environmentally responsible fashion? How can we adjudicate conflicts between social and environmental values?

Student Learning Outcomes:

1. Account for one's own connection to local, regional, and global community
2. Identify and differentiate the historical and cultural presuppositions underlying different ethical standpoints
3. Analyze ethical issues pertaining to the environment as they arise both in public policy and regarding individual lifestyle
4. Formulate potential responses to these issues based on widely respected ethical theories such as utilitarianism, deontology, virtue ethics, social constructivism, and feminist critique
5. Evaluate the strengths and weaknesses of a range of such responses
6. Evaluate different environmental strategies implemented on both a regional and a global scale
7. Defend one's own view on these issues.

6. ENS 400 - Capstone Course in Environmental and Sustainability Studies

ENS 400 will be the culmination of the students' activities in the ENS Major. It will be taught by a single instructor. This will be the course where the student's training, education, and engagement are applied to a specific project (activity or study) of the student's own choosing. It will create the transdisciplinary learning that is the over-arching goal of the entire Program. The students will use the skills they have developed, their fundamental knowledge of core concepts, and Area expertise, to complete a Capstone Project. The Capstone Project could be one of the many activities the Office of Sustainability at has identified for UK's campus or one that the students identify and create themselves, either individually or as teams of students.

The Capstone Project will be planned and conducted during the semester the students take ENS 400. However, the students will be encouraged to think about and start planning their Capstone Projects when they take ENS 201, ENS 202, ENG 205, and PHI 336. The ENS Website will provide information and guidelines about the Capstone Project. After the ENS Program has been in operation, the Capstone Projects conducted by previous graduates will be located on the ENS Website to provide guidance for future students. The students could, as an option, begin their Capstone Project through ENS 395 with approval from the Director. The Capstone Project must be completed before the end of the semester in which ENS 400 is taken.

Descriptions of the Capstone Projects will be placed on the ENS Website. This would include the student's presentation describing the Project and, when appropriate, the student's written description of the Project. The deliverables for this project will be:

1. Oral presentations and discussions with peers during the course meeting times (these will ideally be set for longer periods, as in a Wed. class from 2-4:30 p).
2. A presentation, using visual or audio media, describing the entirety of the Capstone Project. The presentation will be prepared in a format suitable to have it located on the ENS Website.
3. A written description of the project in the format of a *Kaleidoscope* article. As appropriate, the written description may be submitted to *Kaleidoscope* for publication.

7. ENS 395 - Independent Study (Optional Elective)

This optional course will have a variety of potential uses including having the students contribute to campus sustainability projects, engagement activities on and off campus, independent research (writing projects for publication in *Kaleidoscope*, and other scholarly publications, laboratory research related to sustainability, field studies, etc.). The Independent Study course could be used to develop and begin projects that would be described, discussed, and debated in the Capstone Course, ENS 400. ENS students will be introduced to ENS 395 in their first year and, ideally, begin thinking about and planning their own project. The first-year students will be encouraged to participate in ongoing ENS 395 projects to whatever extent they are able. Examples of activities the students could engage in, with support from UK's Sustainability Coordinator, Shane Tedder, are listed below.

Where appropriate the EPA P3 (People Prosperity and the Planet-<http://www.epa.gov/P3>) program will be investigated as a potential source of funding for these projects. The UK Student Sustainability Council (<http://www.sustainability.uky.edu/SSC>) will be invited to partner with the ENS Program for the projects. Other campuses develop RFPs to send out to local organizations to solicit project proposals.

Potential Independent Study and/or Capstone Projects

- i. Carbon Emission Inventories and Comparisons. These could be at individual through institution levels. Emission inventories are a very relevant skill set and are frequently referenced in popular and peer-reviewed literature. They are also required in some circumstances by the EPA and are a major component of the American College and University President's Climate Commitment.
- ii. Craft, conduct and analyze a survey of campus attitudes and behaviors toward certain ideas, products or behaviors. This could range from transportation choices, to food choices, to computer settings and printing defaults.
- iii. Research the human/economic/ecologic impacts of the textile products (uniforms, sweatshirts etc) that are licensed to bear the UK brand. This could take many forms and investigate many issues including: labor conditions, economic impacts on the state, environmental impact of production transportation and marketing, and consumer awareness of implications (what do they know, what do they care about).
- iv. Conduct an Environmental Impact Report of a proposed campus renovation or new construction.

- v. Develop proposals for increasing participation in UK's Recycling Program. This could include strategic systemic changes to the existing system. It should include a triple-bottom-line analysis of the impacts of recycling on our campus. Partnership with industry could allow for pilot testing of new student-generated ideas.
- vi. Get on the bus. Design a deployable marketing and public relations campaign to encourage students and staff to use public transportation. This would address the City of Lexington's goal to improve traffic conditions and impacts in Lexington.
- vii. What does carbon neutral look like at UK? Using existing utility data and projected growth develop multiple scenarios in which the University achieves a net zero balance in carbon emissions while meeting current/projected needs.
- viii. Conduct research to determine barriers to behavior change that is sustainability-oriented (though not necessarily sustainability motivated) among different sectors of UK's population.
- ix. Ecological Literacy. Do UK students have it? Do they learn it here? Do they need it? What are the best channels to deliver it?
- x. Begin an evaluation of Organic Farming with a visit to the local Farmer's Market. Determine what the impact would be to UK and the local economy if all of UK's food was purchased from organic farms. How could this be achieved?

E. Major Requirements

Courses will be offered in the five Areas of Expertise: 1. Economics and Policy, 2. Ecosystems, 3. Energy and Land, 4. Society, and 5. Water Resources. These are listed below and on the following pages. The requirement is that 21 credits must be taken, with fifteen credits in one Area, two credits in a second Area and one credit in a third Area. This is the "5:2:1" Rule for the ENS B.A. Degree. The courses selected for the Major Requirements must have at least three different departmental designations in keeping with the interdisciplinarity that is the basis of the ENS B.A. Moreover, this requirement prevents a student from using the ENS B.A. to obtain a "disciplinary-like" degree without taking the core requirements for the disciplinary degree. The Areas of Expertise are designed to be very general in order to ensure that the topics incorporated aspects of traditional disciplinary subjects, while not being restricted by such boundaries. The course listings are sufficiently extensive to maximize the students' ability to craft a B.A. degree according to their interests and career goals, while remaining within a structured program. Thematic Concentrations will be developed based on the clusters of courses selected by the students that provide the greatest career potential. This will allow the Program to evolve over the years in step with the changing nature of environmental and sustainability issues and needs. It is anticipated that the ENS Program will eventually become defined by the Thematic Concentrations and that the designation of Areas of Expertise will primarily serve as a means of organizing the courses. More information on the Thematic Concentrations is provided in Section F.

1. Economics and Policy Area of Expertise Course Listing

A sustainable balance must be made between economic gain and protection of natural resources. Governments must determine policy and institute laws to provide the necessary protection of natural resources, and provide the guidelines for any development. The courses in this Area will provide the students with training in the interconnectedness of economics, policy and development. The students will have the freedom to select clusters of courses suited to their career goals. For example, students anticipating careers in business may select more courses related to economics and those planning to go to Law School may focus on policy courses. However, any combination of courses in this Area will provide the necessary foundation for future careers where expertise in business and law are important.

Course	Cr	Title	Prereqs	Offered
ECO 202	3	Principles of Economics II	ECO 201	S,F 10,11
ANT 225	3	Culture, Environment, and Global Issues	none	F10, F11
GEO 231	3	Environment and Development	none	Not in 11
GEO 235	3	Environmental Management and Policy	none	F08, 09, 10, 11
GEO 255	3	Geography of the Global Economy	none	F10, F11
GEO 260	3	Geographies of Development in the Global South	none	S10, S11, F11
FOR 280	2	Forest Policy	none	S11
STA 291	3	Statistical Methods	MA 113, 123	S,F 10, 11
NRC 301	3	Natural Resource Conservation and Management	ENG 104, soph.	F10
AEC 303	3	Microeconomic Concepts in Agricultural Economics	ECO 201	S11, F11
ANT 311	3	Global Dreams and Local Realities in a “Flat” World	none	F10, F11
STA 320	3	Introductory Probability	MA 213	S,F 10, 11
GEO 321	3	Land, People, and Development in Appalachia	GEO 130, 152, or 172	S10, F10, F11
ANT 322	3	Ancient Mexican Civilizations	None	F10
AEC 324	3	Agricultural Law	AEC 101	S,F 10, 11
FOR 325	3	Economic Botany: Plants and Human Affairs	PLS 104, 210 1yrBIO	F08, 09, 10, 11
NRC 330	3	NEPA Compliance	NRC 301 W, CI	Not Yet
ANT 338	3	Economic Anthropology	9h cult. ANT,CI	S07, S09
ANT 340	3	Development and Change in the Third World	none	F05, 07, 09, 11
ANT 375	3	Ecology and Social Practice	none	Not in 10, 11
NRC 381	3	Natural Resource Policy Analysis	NRC 301	S09, S10, S11
ENS 395	3	Independent Study: Economics and Policy	None	Not Yet
ECO 401	3	Intermediate Microeconomic Theory	ECO 202	S,F 10, 11
AEC 424	3	Principles of Environmental Law	AEC 101 or ECO 201	S,F 10, 11
GEO 442G	3	Political Geography	none	S10, F11
AEC 445G	3	Introduction to Resource and Env. Economics	ECO 201	S,F 10, 11
GEO 455	3	Economic Geography	GEO 152, 160 or 172	F10
ANT 470G	3	Regional American Ethnology	ANT 220	F07, F09
ECO 473G	3	Economic Development	ECO 401	S10, F10
AEC 479	3	Public Economics (CL ECO 479)	ECO 401	S,F 10, 11
AEC 483	3	Regional Economics	ECO 202	S10, S11
ANT 532	3	Anthropology of the State	9h cult. ANT CI	Not Yet
AEC 532	3	Agriculture and Food Policy	AEC 305	S07, 08, 10, 11
ANT 543	3	Cultural Resource Management	9h cult. ANT CI	F01, S03
AEC 545	3	Resource and Env. Economics (CL NRC 545)	ECO 201	F08, F09, F10

2. Ecosystems Area of Expertise Course Listing

The courses within this Area will provide a fundamental understanding of ecosystems and the need to interact with natural environments in a sustainable manner. Biology and Ecology are the primary disciplinary bases of this Area.

Course	Cr	Title	Prerequisites	Offered
FOR 219	4	Dendrology	None	F09, F10, F11
FOR 230	3	Conservation Biology	None	F10, F11
ANT 240	3	Introduction to Archeology	None	S09, S10, S11
ENT 300	3	General Entomology	None	F09, F10, F11
BIO 303	4	Introduction to Evolution	BIO 150, BIO 155	F11
BIO 325	4	Introduction to Ecology	BIO 303	S,F 10, 11
GEO 321	3	Land, People, and Dev. in Appalachia	GEO 130, 152, or 172	S,F 10, 11
GEO 331	3	Global Environmental Change	GEO 130 or equiv.	Not Yet
ANT 342	3	North American Archaeology	ANT 240 or CI	not 10, 11
BIO 361	3	Ecology of Kentucky Flora	1yr BIO	F08, F09, F10
BIO 351	3	Plant Kingdom	BIO 150	F09, F10, F11
FOR 340	4	Forest Ecology	BIO 103 or BIO 150	F09, F10, F11
ANT 342	3	North American Archeology	ANT 240 or CI	not 10, 11
FOR 370	4	Wildlife Biology and Management	None	S11
ANT 375	3	Ecology and Social Practice	None	Not 10, 11
BIO 375	3	Behavioral Ecology and Sociobiology	1yr BIO	F09, F10, F11
ENS 395	3	Independent Study: Ecosystems	none	Not Yet
ENT 402	3	Forest Entomology (CL FOR 402)	1yr BIO	F09, F10, F11
GEO 431	3	Political Ecology	None	S11, F11
BIO 452G	2	Laboratory in Ecology	BIO 325	S09, S10, S11
GEO 530	3	Biogeography and Conservation (CL BIO)	6h BIO, Phys Geo, or CI	F09, S11
GEO 531	3	Landscape Ecology	6h BIO, Phys Geo or CI	Not yet
CE 555	3	Microbial Aspects of Env. Engineering	CHE 105, 107, ENGR, CI	F10, F11
BIO 559	4	Ornithology	1 yr BIO	S07, S09
PLS 566	3	Soil Microbiology	PLS 366	S09, 10, 11

3. Energy and Land Area of Expertise Course Listing

Obtaining energy from non-renewable sources typically involves land use. Forests have historically been humans' primary source of energy, and continue to be a source of fuel (albeit minor) throughout the world. Coal mining, particularly surface mining, causes substantial changes to land features, and their associated ecosystems. With the emergence of tar sands and shale oil as sources of petroleum, the need to understand the connection between energy and land has grown more important. The listing of courses in this Area will provide a multidisciplinary education in this subject area. To supplement the absence of energy courses in this list, additional courses on this subject will be offered through ENS 300. For example, Prof. Atwood's DSP-130 course, "Energy and Climate" could be easily modified to provide a stronger emphasis on traditional and renewable energy sources.

Course	Cr	Title	Prerequisites	Offered
GLY 220	4	Principles of Physical Geology	None	S,F 10, 11
ANT 225 <i>OR</i>	3*	Cultural, Env., Global Issues	None	F10, F11
GEO 231 <i>OR</i>	3*	Environment and Development	None	Not in 11
GEO 235	3*	Environmental Management and Policy	None	F08, 09, 10, F11
PHY 231	4	General University Physics	MA 113	S,F 10, 11
ANT 240	3	Introduction to Archeology	None	S09, S10, S11
EGR 240	3	Energy Issues (as EGR 199 SR)	Engr. Standing, CI	F10
FOR 240	2	Forestry and Natural Resource Ethics	None	S11
HIS 240	3	History of Kentucky	None	S,F 10, 11
ANT 241	3	Origins of Old World Civilization	None	S10, S11
ANT 242	3	Origins of New World Civilization	None	F10, S11, F11
STA 291	3	Statistical Methods	MA 113 or 123	S,F 10, 11
GEO 321 <i>OR</i>	3*	Land People and Development in Appalachia	GEO 130, 152, or 172	S10, F10, F11
GEO 322	3*	Geography of Kentucky	GEO 152, 160, or 172	infrequent
GEO 331	3	Global Environmental Change	GEO 130	Not Yet
ANT 340	3	Development and Change in the Third World	None	F05, 07, 09, 11
GLY 341 <i>OR</i>	3*	Landforms	GLY 220	S01, S02, S03
GEO 351	3*	Physical Landscapes	GEO 130	S,F 10, 11
ANT 351	3	Special Topics: Appropriate Subtitle	tbd	F11
GLY 360	4	Mineralogy	CHE 105, GLY220 and GLY 230 or 235	S11
ENS 395	3	Independent Study: Energy and Land	None	Not Yet
ENG 401	3	Nature Writing	2yrENG	S10
BAE 504	3	Biofuels Production and Properties	BAE 503	F10, F11
GEO 531	3	Landscape Ecology	6h Phys. Geogr. or BIO	Not Yet
GEO 550	3	Sustainable Resource Development and Environmental Management	GEO 130 or 210	Not Yet
CHE 565	3	Environmental Chemistry	CHE 105, 107	S08, 09, 10, 11
*Only one of the courses marked with an asterisk and separated by "or" can be taken.				

4. Society Area of Expertise Course Listing

This Area explores the way that human society interacts with the environment. Recent research has revealed “coupled human- natural systems” (as labeled by NSF) are a primary driver of environmental change, and also a key source of solutions to environmental problems. This Area will build students’ knowledge base of the mutually influencing human-environment dynamic, with a solid grounding in the social sciences.

Course	Cr	Title	Prerequisites	Offered
SAG 201	3	Cultural Perspectives on Sustainability	None	S10, S11
LA 205	3	Introduction to Landscape Architecture	None	S08, 09, 10, 11
ANT 221	3	Native People of North America	None	S09, 10, 11
ANT 225	3	Culture, Environment, and Global Issues	None	F10, F11
GEO 231	3	Environment and Development	None	F11
ANT 245	3	Food, Culture, and Society	None	Not Yet
GEO 285	3	Introduction to Planning	None	S10, F10, F11
SOC 302	3	Sociological Research Methods	SOC	S,F 10, 11
ANT 303	3	Topics in Anthropology of Food	None	Not Yet
ANT 311	3	Global Dreams and Local Realities	None	F10, F11
ARC 314	3	History and Theory: 20 th Century and Contemporary Architecture	ARC 111, 212, 231	F08, 09, 10, 11
ARC 315	3	History and Theory: Urban Forms	ARC 314, or CI	S09, 10, 11
ARC 325	3	Theories of Urban Forms	None	Not Yet
GEO 321	3	Land, Development, & People in Appalachia	GEO 130, 152 or 172, or IC	S10, F10, F11
GEO 331	3	Global Environmental Change	GEO 130 or CI	Not Yet
ANT 340	3	Development and Change in the Third World	None	F05, 07, 09, 11
ANT 342	3	North American Archeology	ANT 240 or CI	Not in 10, 11
SOC 350	3	Special Topics: Environmental Justice (This Topic to become SOC 363 if approved)	SOC 101, CLD 102 or ENS 201	F10, S11, F11
SOC 360	3	Environmental Sociology	SOC 101 or CLD 102	S,F 10, 11
PHI 361	3	Biology and Society	3 hr BIO or CI	S09, S10, S11
ANT 375	3	Ecology and Social Practice	None	Not in 10, 11
SOC 380	3	Globalization: A Cross-Cultural Perspective	SOC 101 or CLD 102	S,F 10, 11
PS 391 ENS 300	3	Urban Sustainability in North America	none	Su 09, 10, 11
ENS 395	3	Independent Study: Society	None	Not Yet
SOC 420	3	Sociology of Communities	SOC 302 or 304 or CLD 405 or CI	S10, F10, S11
ANT 431G	3	Culture and Society in Sub-Saharan Africa*	ANT 220 or CI, *change ANT 326	S11
GEO 431	3	Political Ecology	None	S11, F11
ANT 470G	3	Regional American Ethnology	ANT 220 or CI	F09
GEO 485G	3	Urban Planning and Sustainability	GEO 285 or CI	S09, F09, S11
PS 491	3	Sustainable Urban Design	none	F06
SOC 517	3	Rural Sociology	CI	F06, F08, F10
ANT 525	3	Applied Anthropology	9 hr ANT or CI	S04, F07, S08
SOC 534	3	Sociology of Appalachia	CI	F10, S06, S07
ANT 545	3	Historical Archeology	ANT 240	S11
ANT 555	3	Eastern North American Archeology	ANT 240	S11

5. Water Resources Area of Expertise Course Listing

Students taking courses in this Area may select clusters that are more human-oriented with conservation, policy, and literature offerings, or more science-oriented with geography, geology, and engineering offerings. Water is expected to become a limited resource in the near future as the Earth's population continues expanding. Thus, graduates with training in the various aspects of water resources (sources, conservation, policy, economics, human impacts) will become more valuable with the coming years.

Course	Cr	Title	Prerequisites	Offered
GLY 210	3	Habitable Planet: Evolution of the Earth System	None	S05, 06, 07
GLY 220	3	Principles of Physical Geology	None	S,F 10, 11
ANT 225	3	Culture, Environment, and Global Issues	None	F10, F11
ANT 240	3	Introduction to Archeology	None	S09, S10, S11
GEO 230	3	Weather and Climate (CL ANT)	GEO 130	F08, 09, 10, 11
ENG 232	3	Literature and Place	None	S10, F10, S11
GEO 235	3	Environmental Management and Policy	None	F08, 09, 10
NRC 320	3	Data Collection Techniques	BIO 150, 152, CHE 105	F08, 09, 10, S11
GEO 331	3	Global Environmental Change	GEO 130	Not Yet
ENG 336	3	Appalachian Literature	None	F10, S11
GLY 341	3	Landforms	GLY 220	S01, 02, 03
GEO 351	3	Physical Landscapes	GEO 130	S,F 10, 11
GLY 385	3	Hydrology and Water Resources	GLY 220	F09, F10, F11
ENS 395	3	Independent Study: Water Resources	None	Not Yet
ENG 401	3	Special Topics: Nature Writing	UK WRITING REQ	S10
GEO 451G	3	Fluvial Forms and Processes	GEO 351 or GLY 341	S09, S10, F11
NRC 455G	3	Wetland Delineation	BIO 150, 152	F07, 08,09,10
FOR 460G	3	Forest Watershed Management	CHE 104, MA 109, FOR 200, PLS 366	F08, 09, 10, 11
GEO 530	3	Biogeography and Conservation	None	F09, S11
GLY 530	3	Low-Temperature Geochemistry	GLY 360, MA114 or CI	F09, 10, 11
BAE 532	3	Introduction to Stream Restoration	CE 341, ENGR or CI	S08, 09, 11
BAE 538	3	GIS for Water Resources	BAE 347, CE 461G, CI	F08, 09, 10, 11
CE 555	3	Microbial Aspects of Env. Engineering	CHE 105, 107, Engr. CI	F10, F11
CHE 565	3	Environmental Chemistry	CHE 105, 107	S08, 09, 10, 11
GLY 585	3	Hydrogeology	GLY 220 ,MA 113or123	S08, 09, 10, 11

F. Course Listings for Examples of Thematic Concentrations

As an option, students may create their own **Thematic Concentration** by taking a cluster of related courses within an **Area of Expertise**. Examples of two of these are shown on this and the following page. The students will not be required to select a Theme; these will be provided so the students can easily determine what courses are most relevant for the subject they are most interested in. This will also provide insight into which faculty mentors would be most suitable to collaborate on the student's ENS 395 and ENS 400 project. Another outcome from the use of informal Themes will be to more readily determine what courses are needed to strengthen a nascent Theme, or to identify the courses that are needed to create a Theme that would strengthen the Program. Some examples of potential future Themes are shown in section 3. Additional Thematic Concentrations will be identified over the coming years based upon the clusters of courses selected by the students. It is anticipated that each Area of Expertise will ultimately have a group of associated Themes that will be useful in advertising the Program, and again, to provide guidance for the students' selection of courses.

1. Environmental Justice (within Society Area of Expertise)

This theme explores in detail the power issues and social inequalities tied to environmental change, problems and crises, and pathways for a more just society in relation to the environment. Particular attention is given to the ways that environmental risks and hazards disproportionately affect people of color, low income communities, women, and people of the Global South, as well as the ways that power plays out across social and environmental landscapes.

Course	Cr	Title	Prerequisites	Offered
ANT 225	3	Culture, Environment, and Global Issues	None	F10, F11
GEO 231	3	Environment and Development	None	F11
ANT 311	3	Global Dreams and Local Realities in a "Flat" World	none	F10
GEO 321	3	Land, People, and Development in Appalachia	GEO 130, 152, or 172	S10, F10, F11
ENG 336	3	Appalachian Literature	None	F10, F11
SOC 350	3	Special Topics: Public Sociology (to become SOC 363: Environmental Justice)	SOC 101/ CLD 102 or ENS 201	S,F 10, 11
GEO 321	3	Land, Development, & People in Appalachia	GEO 130, 152 or 172, CI	S10, F10, F11
ANT 340	3	Development and Change in the Third World	None	F07, 09, 11
SOC 380	3	Globalization: A Cross-Cultural Perspective	SOC 101 or CLD 102	S10, F10, S11
GEO 431	3	Political Ecology	None	S11, F11

2. The Built Environment (within Society Area of Expertise)

Courses within this Theme will describe how urban and rural development currently takes place and emphasize the need, and means, of creating more sustainable places for human habitation. For example, a substantial portion of the global energy demand is lost due to inefficiencies in commercial and residential buildings. “Urban sprawl” has progressed essentially without limit, and has threatened the very qualities of the regions that made them attractive for living and working to begin with. The expertise provided in this Area will be critically needed as the Earth’s cities continue to grow, and the natural resources these cities rely upon, become less readily available.

Course	Cr	Title	Prerequisites	Offered
LA 205	3	Introduction to Landscape Architecture	None	S08, 09, 10, 11
GEO 222	3	Cities of the World	None	S,F 10, 11
GEO 285	3	Introduction to Planning	None	S10, F10, S11
ANT 311	3	Global Dreams Local Realities in a “Flat” World	None	F10, F11
ARC 314	3	History and Theory: 20 th Century and Contemporary Architecture	ARC 111, 212, 231	F08, 09, 10, 11
ARC 315	3	History and Theory: Urban Forms	ARC 314, or CI	S09, 10, 11
ARC 325	3	Theories of Urban Forms	None	Not Yet
ANT 340	3	Development and Change in the Third World	None	F05, 07, 09, 11
PS 391/ENS 300	3	Urban Sustainability in North America	None	Su 09, 10, 11
SOC 420	3	Sociology of Communities	SOC 302 or 304 or CLD 405 or CI	S10, F10, S11
GEO 422	3	Urban Geography	GEO 152, 160, 172 or 222, or CI	F08, F09, S11, F11
GEO 485G	3	Urban Planning and Sustainability	GEO 285 or CI	S09, F09, S11
PS 491	3	Sustainable Urban Design	None	F06
GEO 545	3	Transportation Geography	GEO 455 or CI	F03, 04, 05

3. Other Potential Thematic Concentrations

The coursework organization by **Areas of Expertise** allows for the identification of various new **Thematic Concentrations**. The identification of a particular Theme could be based on a combination of instructor interests, student interests, and career potential. The thematic concentrations would ideally be in areas that are of particular interest to participating faculty who could serve as mentors during a student’s time in the Program, and potentially as a research advisor for the ENS 395 option (and departmental ---395 research). For example, the Themes of “Environmental Justice” and “The Built Environment” were based on the specific interests of Profs. Bell and Yanarella, respectively. It is anticipated that several important new Thematic Concentrations will be identified shortly after students begin the program. Thus, the Themes can be tailored to a student’s interest. Finally, the Themes can be organized around subjects for which there is significant career potential. These could be identified by the External Advisory

Board (with members from state and federal government, and corporations) and by graduating ENS students (some of whom should be included in the External Advisory Board). A list of potential future themes is provided here:

- i. Economics and Policy: Resources and Products, Commodity Chains, Life Cycle Assessment
- ii. Ecosystems: Biodiversity, Conservation, Invasive Species
- iii. Energy and Land: Global Climate Change, Renewable Energy, Robinson Forest, Mining
- iv. Society: Environmental Health, History of Environmental Issues, World Citizenship
- v. Water Resources: Water Contaminants, Water Conservation.

G. Measures of Student Success

1. Student Learning Outcomes

i) Curriculum Map

The specific targeted outcomes for the Program and the courses where the outcomes are addressed are shown in the Table below. The outcomes will provide the students with the four key characteristics that are the general goals of the College of Arts & Sciences. These are: innovative preparation for life and career, multidisciplinary scholarly research, connectivity with the world, and substantive community involvement (*Ampersand*: Envision 2020, fall 2010). Specific outcomes will be associated with developing skills and knowledge that the students will utilize to build successful careers and to live healthy, productive lives as global citizens. This will be an evolutionary process and will keep pace with the continuous changes taking place in the human-nature relationship. The Advisory Board will assess the Outcomes at the end of each semester and make any changes that are identified. The Tables shown on the next two pages represent the ENS Curriculum Map for the Core courses and the five Areas of Expertise.

ii) Annual Student Learning Outcomes

Year One: After taking ENS 201 and ENS 202 the students will demonstrate a basic understanding of all the most significant environmental concepts and issues in the areas of the humanities, social and natural sciences, and policy. They will understand the connection between economics and natural resources in the context of sustainability. The specific Outcomes expected are listed in the Table on the previous page.

Years Two and Three: The students will take the Core courses, ENG 205, ENS 300, and PHI 336, in this time period. This group of courses will substantially develop the students' basic "Skills and Training" Outcomes (Section A. in the Table above). At the end of years 2 and 3 the students will demonstrate an ability to think critically, communicate effectively, and conduct independent research. The students will demonstrate an understanding of sustainability, what it means, where it is needed, and begin thinking about how to achieve sustainability-oriented goals. The students will have begun taking their Area courses and started developing an expertise in the Area of their choice. Sustainability will be a significant component of the Core courses, and the students will be able to apply concepts of sustainability to other courses they are taking.

Year Four: The learning outcomes will be centered on ENS 400 and the 300-level and above courses the students take in their Area of expertise. The students will demonstrate mastery of sustainability and how the concept relates to subjects in the humanities, social sciences, and natural sciences. They will be able to use their skills and training to demonstrate this mastery. They will demonstrate an ability to apply sustainability concepts to achieving the goals of their Capstone Project. The students will demonstrate expertise in a specific, single Area of study, and general knowledge in two other Areas.

Curriculum Map	Core Courses						Areas of Expertise				
<div> I = Outcome is Introduced R = Outcome is Reinforced E = Outcome is Emphasized L = Reinforcement Likely </div>	ENS 201: Hum. & Soc. Sci.	ENS 202: Nat. Sci. & Policy	ENG 205: Interned. Writing	ENS 300: Special Topics	PHI 336: Environ. Ethics	ENS 400: Capstone Course	Economics and Policy	Energy and Land	Ecosystems	Society	Water Resources
Outcomes											
A. Skills and Training											
1. Critical Thinking	I	R	R	R	E	E					
2. Written Communication	I		E	L	E	E	All of Section A. Utilized Here				
3. Oral Communication	I	R			E	E					
4. Independent Study	I	I		L	R	E					
5. Research Techniques		I	R		R	E					
B. Core Concepts, Understand											
1. Historical and Current Views of Environment	I		R		E					R	
2. Ethical Theories for Human-Env. Relationship	I				E					R	
3. Impacts of Population on Natural Resources		I						R	R	L	R
4. Link Between Local and Global Impacts	I		R		E		R	L		R	
5. Ecological Theories		I						R	R		R
6. Biological Diversity		I	R					L	R		L
7. Pollution: Local and Global	I	R					R	R	R	R	R
8. Basis of Environmental Problems		I	R		R		R	R	R	R	R
9. Solutions to Environmental Problems		I	R		E		R	R	L	R	L
10. Connection Between Policy and Science		I	R				E	R		L	L
11. Traditional Energy Sources		I					R	R		L	
12. Renewable Energy		I					R	R			
13. Natural Resources		I					R	R	R		R
14. Climate Change and Impacts		I					R	R	L	R	L

Curriculum Map (continued)	Core Courses						Areas of Expertise				
<div> I = Outcome is Introduced R = Outcome is Reinforced E = Outcome is Emphasized L = Reinforcement Likely </div>	ENS 201: Hum. & Soc. Sci.	ENS 202: Nat. Sci. & Policy	ENG 205: Interned. Writing	ENS 300: Special Topics	PHI 336: Environ. Ethics	ENS 400: Capstone Course	Economics and Policy	Energy and Land	Ecosystems	Society	Water Resources
Outcomes											
C. Sustainability Knowledge											
1. Natural Resource Consumption	I	R	R	L	L	R	R	R		L	R
2. Conservation Needs		I				L		R	R		R
3. Energy Sources and Use		I				R	R	R		L	
4. Local Management Program	I			L		L	R				R
5. Recycling		I				L	R	L		L	
6. Land Use	I	R	L	L		L	R	R	R	L	R
7. Commodity Chains	I					R	R			R	
8. Appropriate Urban Development	I	R				L	R			R	
9. Agriculture and Food Supply	I	R				L	R	R			
10. Applied to Global Problems	I	R			R	R	R	R	R	R	R
11. Applied to National and State	I	R		L		L	R	R	R	R	R
12. Applied to City and University	I	R		L		R	L				
13. Applied to Community, Individual	I			L	R	R		L		L	L
14. and Global Citizenship	I	R			R	R	R			R	
D. Engagement Activities											
1. University and City	I			L		R					
2. Environmental Organizations	I	R		L		R		L	L		L
3. Study/Conservation of Local Natural Resources		I	R	L	R	R		L	L		L
4. On-Campus Events	I	R		R		R	L	L	L	L	L

2. Student Retention and Success Rate for Completion of Degree

Students will be monitored through the University's APEX Degree Audit system throughout their time in the Program. Each semester the Director will obtain a list of the students in the ENS Program and check their progress. If any problems are found they will be reported to the Advisory Board and the corrective action taken. Student monitoring will be facilitated by the Assessment Plan described in the next section.

H. Program Assessment

1. Oversight by ENS Advisory Board

The Program will be reviewed on the six-year cycle set by the University. The Advisory Board will create additional methods of evaluation and review all of the information that is produced and take the necessary actions.

2. Periodic Assessments

It will be important to foster, monitor, and assess student development as they progress through the Program. This will give the ENS faculty the opportunity to solve problems or correct mistakes the students are making and to better advise the students in selecting courses and making career plans. It will provide the information needed to make changes in the core and elective courses being offered. Furthermore, it will ensure that the ENS students are graduating with the requisite skills and fundamental knowledge to succeed in their eventual careers. This level of attention will lead to greater student success, ensure high-quality graduates, and continually increase the reputation of the Program. The Advisory Board, in conjunction with UK's Assessment Office, will create an Assessment Plan comprising three periodic assessments. These could take place, for example, in the first week of the entry-level course, ENS 201, after the student completes their 3rd Area Course (out of the 5 required in a single Area of Expertise), and in the final week of the Capstone Course, ENS 400. The Table shown on the following page was patterned after the article by Rowles, Ewen, Underwood, and Watkins: "Assessing Professional & Personal Development in Contemporary Graduate Education" (<http://www.uky.edu/IRPE/assessment/presentations/Assessment%20Conf-103006.pdf>). It will provide the starting point for the ENS Advisory Board to work from.

Periodic Student Assessments						
Evaluation Metrics		Assessment Schedule				
		ENS 201 Week 1		3 rd Area Course		ENS 400 Final Week
		Score	Mean	Score	Mean	Score
A. Intellectual Growth						
specific questions						
B. Factual Content						
1. Core Courses: specific questions						
2. Area of Expertise (5): specific questions						
3. Area Breadth Courses (1 each): specific questions						
C. Sustainability Concepts						
specific questions						
D. Critical Thinking						
specific questions						
E. Engagement						
specific questions						
F. Current Events						
specific questions						
G. Personal Growth*						
1. Involvement and Commitment						
2. Emotional Well-Being and Stress Management						
3. Time Management						
4. Physical Health						
*From Rowles, Ewen, Underwood and Watkins						

III. Resources

A. Commitment from the Dean of the College of Arts & Sciences

*The support letter from Dean Kornbluh is attached as Appendix I

B. Existing Courses (Included as Core Courses within the ENS B.A. Degree)

1. ENG 205 - Intermediate Writing.

Four sections of this course are taught each semester. It will train students to improve their writing and critical thinking skills in the context of environmental issues. The course could also incorporate engagement activities, particularly through the study of Robinson Forest in sections taught by Erik Reece. The underlying goal of making this a required course is to train students to be able to communicate effectively in writing, a skill that is particularly critical when describing environmental subjects. The course will further develop students' critical thinking skills and ability to conduct independent scholarly research. A letter from Prof. Mountford

giving permission to incorporate this course as a Core Requirement in the ENS Degree is attached as Appendix II.

2. PHI 336 - Environmental Ethics.

Robert Sandmeyer and other instructors will teach this course once a semester. It will provide students with the philosophical underpinnings of the most significant environmental sciences that have developed and are still in the process of evolving today. The course will provide the ethical basis for understanding the relationship of humans to the environment. The course also has an underlying goal of developing students' critical thinking skills and will incorporate a significant amount of independent scholarly research. A letter from Prof. Bradshaw giving permission to incorporate this course as a Core Requirement in the ENS Degree is attached as Appendix III.

C. New Courses

ENS 201 and ENS 202 were created specifically for the ENS B.A. Degree Program. They are designed to provide a foundation in social sciences and humanities (ENS 201) and natural science and policy (ENS 202). The two courses may be taught by members of the Advisory Board, or other faculty or instructors, with expertise in the areas covered by the two courses. The concepts that will be learned in the two courses will be expanded and developed more fully in subsequent courses. The textbook, *Environmental Science* 8th Edition by Chiras, was chosen primarily because it integrated sustainability throughout each chapter and was one of the few textbooks that included the social implications of environmental impacts. Sustainability is the underlying theme for the ENS B.A. degree. Additionally, the textbook included active learning exercises and "point-counter point" discussions in each chapter.

D. Potential New Courses

1. BIO 3XX: Ecosystems. During the planning of the ENS Degree it became apparent that a general Ecology course was needed (BIO 3XX) that did not have the prerequisites of the existing Biology courses covering this subject. This course would substantially strengthen the coursework in the Ecosystems Area of Expertise. The development of this course would require the approval and assistance of the BIO department.

2. ANT 3XX: Environmental Archeology. Changes in climate, abrupt and long-term, have had critical impacts on past regions and civilizations. Moreover, humans have induced local environmental changes that have often been beneficial, but more frequently detrimental. Through new techniques, and access to areas of the world not previously open to study, Archeology has steadily revealed important information about the how humans interacted with their local environments in the past. Interest in Environmental Archeology (a sub-discipline of Anthropology) has grown substantially in the past decade since it provides detailed information on how past societies have responded to climate change. Lessons from the past should be used as guides and warnings for behaviors today. This new archeology course will teach students how detailed environmental information is obtained through archeological techniques to provide an understanding of the human-environment relationship over long periods of time.

3. HIS 3XX: Environmental History of “Region”. The Advisory Board also noted the absence of “Environmental History” courses. Courses on this subject could be named “The Environmental History of X” where X = a region or country. Understanding what has happened to past societies can provide critical information about how societies today should respond to environmental changes. A recently published book on this subject could be used as a starting point for such a course: *The Retreat of the Elephants: An Environmental History of China* (Mark Elvin, 2004). This course would be distinguished from the ANT course, “Environmental Archeology” through the use of print media (historical documents and works of art) to elucidate how past civilizations viewed and chronicled environmental changes, and their associated responses. It could utilize and synthesize factual information obtained through environmental archeology techniques.

4. Energy Courses. The “Energy and Land” listing of courses would benefit from having a new course that specifically describes conventional and renewable energy sources. Prof. Atwood’s existing DSP-130 course “Energy and Sustainability” would be ideally suited for this purpose and could be taught as ENS 300. Courses at the 300 and 400 levels could be taught by Engineering faculty, including those in the Center for Applied Energy Research (CAER).

5. Theme-Specific Courses. Specific Themes would be potentially based on the interests or courses of specific faculty or groups of faculty. For example, The Built Environment Theme was inspired by a course created by Prof. Yanarella titled: “Urban Sustainability in the United States and Canada”. The Environmental Justice Theme originated from the interests of Prof. Bell who developed and taught a new special topics (SOC 350) course in fall 2011 titled “Environmental Justice”. When approved, this course will be taught regularly as SOC 363: Environmental Justice.

6. Research Methods Course(s). There are disciplinary courses that teach students how to conduct research such as ANT 490: Anthropological Research Methods, GEO 300: Geographic Research and SOC 302: Sociological Research Methods. All research methods courses incorporate some interdisciplinary aspects but are ultimately focused, necessarily, on the disciplinary subject. Research Methods in Environmental & Sustainability Studies will have components of most, if not all the disciplines in A&S. This would include, at a minimum, training students to read, understand, critically assess, and utilize information from print and verbal media (and possibly visual media). For research where data is obtained, it would be ideal for the students to have a foundation in the application of statistics in drawing factual, reasonable conclusions from the information they generate or gather. Thus, the new Research Methods course would most likely comprise fundamental concepts and techniques from A&S disciplinary departments and, where applicable, coupled with statistical analyses.

7. TOX 3XX. Prof. Mary Vore, Chair of Toxicology, has expressed an interest in potentially developing a course on the subject of Environmental Human Health.

NEW UNDERGRADUATE PROGRAM FORM
(Attach completed "Application to Classify Proposed Program"¹)

1. General Information:

College: <u>Arts & Sciences</u>	Department: <u>N/A Degree is trans-departmental</u>
Major Name: <u>Environmental & Sustainability Studies</u>	Degree Title: <u>Bachelor of Arts</u>
Formal Option(s), if any: <u>Areas of Expertise:</u> <u>1) Economics and Policy</u> <u>2) Ecosystems</u> <u>3) Energy and Land</u> <u>4) Society:</u> <u>5) Water Resources</u>	Specialty Field w/in Formal Options, if any: <u>Thematic Concentrations can be created by students in any Area of Expertise. Examples are:</u> <u>1) Environmental Justice</u> <u>2) The Built Environment</u>
Date of Contact with Assoc. Provost for Academic Administration ¹ : <u>Sept. 20, 2010</u>	Today's Date: <u>Nov. 17, 2011</u>
Accrediting Agency (if applicable): <u>CPE</u>	
Requested Effective Date: <input type="checkbox"/> Semester following approval. OR <input checked="" type="checkbox"/> Specific Date ² : <u>Aug. 1, 2012</u>	
Contact Person in the Dept: <u>Prof. David Atwood</u> <u>Mrs. Kari Burchfield</u>	Phone: <u>257-7304</u> <u>257-1994</u> Email: <u>datwood@uky.edu</u> <u>klburc2@uky.edu</u>

2. General Education Curriculum for this Program:

The new General Education curriculum is comprised of the equivalent of 30 credit hours of course work. There are, however, some courses that exceed 3 credits & this would result in more than 30 credits in some majors.

- There is no foreign language requirement for the new Gen Ed curriculum.
- There is no General Education Electives requirement.

General Education Area	Course	Credit Hrs
I. Intellectual Inquiry (one course in each area)		
Arts and Creativity	<u>Any</u>	<u>3</u>
Humanities	<u>Any</u>	<u>3</u>
Social Sciences	<u>Any</u>	<u>3</u>
Natural/Physical/Mathematical	<u>Any</u>	<u>3</u>
II. Composition and Communication		
Composition and Communication I	CIS or WRD 110	3
Composition and Communication II	CIS or WRD 111	3
III. Quantitative Reasoning (one course in each area)		
Quantitative Foundations ³	<u>Any</u>	<u>3</u>
Statistical Inferential Reasoning	<u>Any</u>	<u>3</u>
IV. Citizenship (one course in each area)		
Community, Culture and Citizenship in the USA	<u>Any</u>	<u>3</u>

¹ Prior to filling out this form, you MUST contact the Associate Provost for Academic Administration.

² Programs are typically made effective for the semester following approval. No program will be made effective unless all approvals, up through and including Board of Trustees approval, are received.

³ Note that MA 109 is NOT approved as a Gen Ed Quantitative Foundations course. Students in a major requiring calculus will use a calculus course (MA 113, 123, 137 or 138) while students not requiring calculus should take MA 111, PHI 120 or another approved course.

NEW UNDERGRADUATE PROGRAM FORM

Global Dynamics	Any	3
Total General Education Hours		30

3. Explain whether the proposed new program (as described in sections 4 through 12) involve courses offered by another department/program. Routing Signature Log must include approval by faculty of additional department(s).

There are two required courses that are not listed with the ENS prefix:

- 1) ENG 205 (Intermediate Writing; to become WRD 205) Prof. Roxanne Mountford, Chair
- 2) PHI 336 (Environmental Ethics) Prof. David Bradshaw, Chair

4. How will University Graduation Writing Requirement be satisfied?

<input checked="" type="checkbox"/> Standard University course offering	Please list: _____
<input type="checkbox"/> Specific course	Please list: _____

5. How will college-level requirements be satisfied?

<input checked="" type="checkbox"/> Standard college requirement	Please list: <u>I. Foreign Language requirement (9 cr).</u> <u>II. Disciplinary requirement (18 cr) will be satisfied by ENS B.A. requirement that five courses be taken in one Area, two in a 2nd Area and one in a 3rd Area. The Areas: Economics and Policy, Ecosystems, Energy and Land, Society, Water Resources, provide the breadth of interdisciplinary knowledge that is the goal of the A&S Disciplinary Requirements.</u> <u>III. The Lab/Field Work requirement (1cr) could be satisfied by ENS 395 or ENS 400 projects that require field work (upon petition), in addition to the laboratory courses listed in the Undergraduate Bulletin.</u> <u>IV. The Cross-Cultural requirement (6 cr) will be fulfilled by courses other than those listed in the five Areas. There are no preferred courses for IV. based on the ENS degree.</u>
<input type="checkbox"/> Specific required course	Please list: _____

6. List pre-major or pre-professional course requirements, including credit hours (if applicable):

N.A.

7. List the major's course requirements, including credit hours:

1. ENS 201, 3 cr, Environmental & Sustainability Studies I: Humanities and Social Sciences
2. ENS 202, 3 cr, Environmental & Sustainability Studies II: Natural Sciences and Policy
3. ENG 205, 3 cr, Intermediate Writing (to become WRD 205)
4. ENS 300, 3 cr, Special Topics in Environmental & Sustainability Studies
5. PHI 336, 3 cr, Environmental Ethics
6. ENS 400, 3 cr, Capstone Course in Environmental & Sustainability Studies
7. Five courses (15 cr) in one Area of Expertise, two in another (6 cr), and one in a third Area (3 cr)

8. Does program require a minor?

☐ Yes ☒ No

If so, describe, including credit hours. _____

9. Does program allow for an option(s)?

☒ Yes ☐ No

NEW UNDERGRADUATE PROGRAM FORM

If so, describe option(s) below, including credit hours, and also specialties and subspecialties, if any:
24 cr will be taken as electives in three Areas of Expertise following the "5:2:1" plan with 5 cr in one Area, 6 cr in a 2nd Area, and 3cr in a 3rd Area of Expertise for a total of 24 cr. ENS 395 (Independent Study) is an optional course that can be included in any of the five Areas of Expertise.

10. Does the program require a certain number of credit hours outside the major subject in a related field?

☐ Yes ☒ No

If so, describe, including credit hours: _____

11. Does program require technical or professional support electives?

☐ Yes ☒ No

If so, describe, including credit hours: _____

12. Is there a minimum number of free credit hours or support electives?

☐ Yes ☒ No

If so, describe, including credit hours: _____

13. Summary of Required Credit Hours.

a. Credit Hours of Premajor or Preprofessional Courses:	_____	Not Applicable <input checked="" type="checkbox"/>
b. Credit Hours for Major Requirements:	42	
c. Credit Hours for Required Minor:	_____	Not Applicable <input checked="" type="checkbox"/>
d. Credit Hours Needed for Specific Option:	24	Not Applicable <input type="checkbox"/>
e. Credit Hours Outside of Major Subject in Related Field:	_____	Not Applicable <input checked="" type="checkbox"/>
f. Credit Hours in Technical or Prof. Support Electives:	_____	Not Applicable <input checked="" type="checkbox"/>
g. Minimum Credit Hours of Free/Supportive Electives:	_____	Not Applicable <input checked="" type="checkbox"/>
h. Total Credit Hours Required by Level:		
100:	none	200: 9-16 300: min = 24 400-500: 3 or more
i. Total Credit Hours Required for Graduation: 42		

14. Rationale for Change(s) – if rationale involves accreditation requirements, please include specific references to those.

This is a new program

15. List below the typical semester by semester program for a major. If multiple options are available, attach a separate sheet for each option.

YEAR 1 – FALL: (e.g. "BIO 103; 3 credits")	<u>*Four-Year Graduation Plans for each Area provided in a separate file</u>	YEAR 1 – SPRING:	_____
YEAR 2 - FALL :	_____	YEAR 2 – SPRING:	_____
YEAR 3 - FALL:	_____	YEAR 3 - SPRING:	_____
YEAR 4 - FALL:	_____	YEAR 4 - SPRING:	_____

NEW UNDERGRADUATE PROGRAM FORM

Signature Routing Log

General Information:

Major Name and Degree Title: _____

Proposal Contact Person Name: _____

Phone: _____ Email: _____

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ⁴
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

⁴ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

Four Year Graduation Plan
 Bachelor of Arts in Environmental & Sustainability Studies
 General Course Listing

Year 1					
<u>Fall</u>			<u>Spring</u>		
		<u>Credits</u>			<u>Credits</u>
	Gen Ed Global Dyamics	3		Foreign Language 102	4
	Foreign Language 101	4		Gen Ed Statistical Reason	3
	Gen Ed Quantitative Found	3		Gen Ed N/P/M	3
	Gen Ed Comp/Com	3		Gen Ed Comp/Com	3
		<u>13</u>		A&S Lab	1
					<u>14</u>
Year 2					
<u>Fall</u>			<u>Spring</u>		
		<u>Credits</u>			<u>Credits</u>
	Foreign Language 201	3		Foreign Language 202	3
	Gen Ed Humanities	3		Gen Ed SS	3
	Gen Ed Arts/Creativity	3		A&S NS	3
Core	ENS 201	3	Core	ENS 202	3
	+Elective*	3		+Elective*	3
		<u>15</u>			<u>15</u>
Year 3					
<u>Fall</u>			<u>Spring</u>		
		<u>Credits</u>			<u>Credits</u>
Core	ENG 205 / 2nd Tier Writing	3	Th2	ENS 395	3
Core	ENS 300	3		A&S NS	3
Th1	300+ A&S HU	3	Core	PHI 336 / A&S HU	3
Th1	300+ Theme (1) / A&S SS	3	Th1	300+ Theme (1) / A&S SS	3
	Gen Ed Citizenship US	3		300+ Elective(s)*	4
		<u>15</u>			<u>16</u>
Year 4					
<u>Fall</u>			<u>Spring</u>		
		<u>Credits</u>			<u>Credits</u>
Th1	300+ Theme (1)	3	Th2	300+ Theme (2)	3
Th1	300+ Theme (1)	3	Th3	300+ Theme (3)	3
	300+ Elective*	3	Core	ENS 400 / A&S NS	3
	300+ Elective*	3		+Elective*	3
	+Elective*	4		+Elective*	4
		<u>16</u>			<u>16</u>

TOTAL CREDITS: 120

»Incoming students do not have to enroll in ENG 104 if they have any of the following: 1) An ACT English score of 32 or higher; 2) an SAT Verbal score of 700 or higher; 3) or a score of 4 or 5 on the English Language AP exam. In these situations, the student should replace ENG 104 with electives. If ENG 104 must be taken, it can be taken any time in the 1st year of study at UK.

*To be discussed with your academic advisor.

+ 6 hours of 'free' electives - that do not count toward any other requirement - must be taken. Additional electives may be required to reach the required minimum of 120 hours. Consider pursuing a 2nd major or minor with these elective hours.

Four Year Graduation Plan
Bachelor of Arts in Environmental & Sustainability Studies
Area of Expertise: Economics and Policy

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Social Science	3	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Statistical Reason	3
Gen Ed Quantitative Found	3	Gen Ed Comp/Com	3
Gen Ed Comp/Com	3	P GEO 160 / Gen Ed Global Cit	3
	<u>#</u>	A&S Lab	1
			<u>14</u>
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed Humanities	3	Th1 GEO 235	3
Gen Ed Arts/Creativity	3	Gen Ed Citizenship US	3
Core ENS 201	3	Core ENS 202	3
P ECO 201	3	P ECO 202	3
	<u>#</u>		<u>15</u>
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	Th2 ENS 395	3
Core ENS 300	3	A&S NS	3
Th1 NRC 301	3	Core PHI 336 / A&S HU	3
Th1 ANT 311/ A&S SS	3	Th1 300+ Elective / A&S SS	3
A&S NS	3	300+ A&S HU	3
	<u>#</u>		<u>15</u>
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Th2 300+ Elective	3	Th1 AEC 445G	3
Th1 GEO 455	3	Th3 300+ Elective	3
Gen Ed N/P/M	3	Core ENS 400 / A&S NS	3
300+ Elective*	3	300+ Elective	3
+ Elective*	4	+ Elective*	4
	<u>#</u>		<u>16</u>

TOTAL CREDITS: 120

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Four Year Graduation Plan

Bachelor of Arts in Environmental & Sustainability Studies

Area of Expertise: Ecosystems

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com	3	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Comp/Com	3
MA 111 / Gen Ed QF	3	P BIO 148	3
Gen Ed Humanities	3	Gen Ed Statistical Reason	3
	<u>13</u>	BIO 151	<u>1</u>
			14
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed Social Science	3	Gen Ed N/P/M	3
P BIO 152	3	A&S SS	3
Core ENS 201	3	Core ENS 202	3
Gen Ed Citizen Global	3	Gen Ed Citizen US	3
	<u>15</u>		<u>15</u>
			15
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	300+ Elective	3
Core ENS 300	3	A&S NS	3
Th1 ENT 402	3	Core PHI 336 / A&S HU	3
Th1 BIO 361/ A&S NS	3	Elective	4
300+ Gen Ed Humanities	3	Gen Ed A/C	3
	<u>15</u>		<u>16</u>
			16
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Th1 BIO 375	3	Th1 ENS 395	3
Th1 PLS 566	3	Th2 300+ Elective	3
300+ A&S HU	3	Core ENS 400 / A&S NS	3
Th2 300+ Elective	3	Th3 300+ Theme (3)	3
300+ Elective*	4	+Elective*	4
	<u>16</u>		<u>16</u>
			16

TOTAL CREDITS: 120

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Four Year Graduation Plan

Bachelor of Arts in Environmental & Sustainability Studies

Area of Expertise: Energy and Land

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com	4	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Statistical Reason	3
MA 111 / Gen Ed QF	3	Gen Ed Comp/Com	3
Gen Ed Citizen US	3	GEO 130	3
	<u>14</u>		<u>13</u>
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed Humanities	3	Gen Ed Social Science	3
Gen Ed N/P/M	3	Th1 HIS 240 / A&S HU	3
Core ENS 201	3	Core ENS 202	3
P ECO 201	3	A&S NS	3
	<u>15</u>	A&S Lab	1
			<u>16</u>
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	Th2 ENS 395	3
Core ENS 300	3	Th1 GEO 321 /A&S NS	3
Gen Ed Citizen Global	3	PHI 336 / A&S HU	3
Th1 ANT 340/ A&S SS	3	Th1 300+ Elective / A&S SS	3
300+ Elective*	3	300+ Elective(s)*	3
	<u>15</u>		<u>15</u>
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Th1 ENG 401	3	300+ Elective	3
Th1 GEO 351	3	Th3 300+ Elective	3
Th2 300+ Elective	3	Core ENS 400 / A&S NS	3
300+ A&S HU	3	Gen Ed A/C	3
+Elective*	4	+Elective*	4
	<u>16</u>		<u>16</u>

TOTAL CREDITS: 120

^The USP Math and Inference Requirements can be satisfied with 1 calculus course. If at any point you complete a calculus course, future courses marked with a ^ may be replaced with electives.

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*To be discussed with your academic advisor.

be required to reach the required minimum of 120 hours. Consider pursuing a 2nd major or minor with these elective hours.

Four Year Graduation Plan
Bachelor of Arts in Environmental & Sustainability Studies
Area of Expertise: Society

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com	3	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Comp/Com	3
MA 111 / Gen Ed QF	3	Gen Ed N/P/M	3
Gen Ed Citizen US	3	Gen Ed Citizen Global	3
	<u>13</u>	A&S Lab	1
			<u>14</u>
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed Humanities	3	SOC 101 / Gen Ed SS	3
Gen Ed A/C	3	GEO 130 / A&S NS	3
Core ENS 201	3	Core ENS 202	3
+Elective*	3	Gen Ed Statistical Reason	3
	<u>15</u>		<u>15</u>
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	Th2 ENS 395	3
Core ENS 300	3	SOC 304	3
+Elective*	4	Core PHI 336 / A&S HU	3
Th1 GEO 321 / A&S SS	3	Th1 SOC 380 / A&S SS	3
A&S NS	3	Th1 PS 391	3
	<u>16</u>		<u>15</u>
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
300+ Elective	3	Th1 SOC 360	3
Th1 GEO 321	3	Th3 300+ Elective	3
300+ Elective*	3	Core ENS 400 / A&S NS	3
Th2 300+ A&S HU	3	300+ Elective*	3
+Elective*	4	+Elective*	4
	<u>16</u>		<u>16</u>

TOTAL CREDITS: 120

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Four Year Graduation Plan
Bachelor of Arts in Environmental & Sustainability Studies
Area of Expertise: Water Resources

Year 1					
<u>Fall</u>		<u>Credits</u>		<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com		3		Foreign Language 102	4
Foreign Language 101		4		Gen Ed Comp/Com	3
MA 111 / Gen Ed QF		3	P	CHE 105 / Gen Ed N/P/M	3
Gen Ed A/C		3	P	GEO 130	3
		<u>13</u>		CHE 105 / A&S Lab	1
					<u>14</u>
Year 2					
<u>Fall</u>		<u>Credits</u>		<u>Spring</u>	<u>Credits</u>
Foreign Language 201		3		Foreign Language 202	3
Gen Ed Humanities		3	P	BIO 150	3
P-Th1	GLY 220	3		A&S HU	3
Core	ENS 201	3	Core	ENS 202	3
Gen Ed Statistical Reason		3		Gen Ed Social Science	3
		<u>15</u>			<u>15</u>
Year 3					
<u>Fall</u>		<u>Credits</u>		<u>Spring</u>	<u>Credits</u>
Core	ENG 205 / 2nd Tier Writing	3	Th2	ENS 395	3
Core	ENS 300	3		A&S NS	3
Th1	GLY 385	3	Core	PHI 336 / A&S HU	3
Th1	300+ Elective / A&S SS	3	Th1	GEO 351 / A&S SS	3
Gen Ed Citizen Global		3		300+ Elective(s)*	3
		<u>15</u>			<u>15</u>
Year 4					
<u>Fall</u>		<u>Credits</u>		<u>Spring</u>	<u>Credits</u>
Th1	ENG 401	3		300+ Elective*	3
Th1	GEO 331	3	Th3	300+ Elective	3
Th2	300+ Elective	3	Core	ENS 400 / A&S NS	3
300+ Elective*		3		Gen Ed Citizen US	3
+Elective*		4		+Elective*	4
		<u>16</u>			<u>16</u>

TOTAL CREDITS: 120

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*To be discussed with your academic advisor.

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Four Year Graduation Plan

Bachelor of Arts in Environmental & Sustainability Studies

Thematic Concentration: Environmental Justice within Area of Expertise: Society

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com	3	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Statistical Reason	3
MA 111 / Gen Ed QF	3	Gen Ed Comp/Com	3
Gen Ed Citizen US	3	Gen Ed N/P/M	3
	<u>13</u>	A&S Lab	1
			<u>14</u>
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed A/C	3	Gen Ed Social Science	3
Gen Ed Humanities	3	A&S NS	3
Core ENS 201	3	Core ENS 202	3
+Elective*	3	+Elective*	3
	<u>15</u>		<u>15</u>
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	Th2 ENS 395	3
Core ENS 300	3	A&S NS	3
300+ A&S HU	3	Core PHI 336 / A&S HU	3
Th1 300+ Elective / A&S SS	3	Th1 300+ Elective / A&S SS	3
300+ Elective*	3	300+ Elective(s)*	4
	<u>15</u>		<u>16</u>
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Th1 300+ Elective	3	300+ Elective*	3
Th1 300+ Elective	3	Th3 300+ Elective	3
Th2 300+ Elective	3	ENS 400 / A&S NS	3
300+ Elective*	3	Gen Ed Citizen Global	3
+Elective*	4	+Elective*	4
	<u>16</u>		<u>16</u>

TOTAL CREDITS: 120

*To be discussed with your academic advisor.

+ 6 hours of 'free' electives - that do not count toward any other requirement - must be taken. Additional electives may be required to reach the required minimum of 120 hours. Consider pursuing a 2nd major or minor with these elective hours.

Four Year Graduation Plan

Bachelor of Arts in Environmental & Sustainability Studies

Thematic Concentration: The Built Environment within Area of Expertise: Society

Year 1			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Gen Ed Comp/Com	3	Foreign Language 102	4
Foreign Language 101	4	Gen Ed Statistical Reason	3
MA 111 / Gen Ed QF	3	Gen Ed Comp/Com	3
ARC 111	3	Gen Ed N/P/M	3
	<u>#</u>	A&S Lab	1
			<u>14</u>
Year 2			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Foreign Language 201	3	Foreign Language 202	3
Gen Ed Humanities	3	SOC 101 / Gen Ed SS	3
+Elective*	4	GEO 222 / A&S SS	3
Core ENS 201	3	Core ENS 202	3
ARC 212	3	ARC 213	3
	<u>16</u>		<u>15</u>
Year 3			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Core ENG 205 / 2nd Tier Writing	3	Th2 ENS 395	3
Core ENS 300	3	Th1 SOC 304	3
300+ A&S HU	3	Core PHI 336 / A&S HU	3
Th1 ANT 340 / A&S SS	3	A&S NS	3
ARC 314	3	Th1 ARC 315	3
	<u>15</u>		<u>15</u>
Year 4			
<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
Th2 300+ Elective	3	Th1 SOC 420	3
Th1 GEO 422	3	Th3 300+ Elective	3
Gen Ed A/C	3	Core ENS 400 / A&S NS	3
Gen Ed Citizen Global	3	Gen Ed Citizen US	3
+Elective*	4	+Elective*	4
	<u>16</u>		<u>16</u>

TOTAL CREDIT: 120

*To be discussed with your academic advisor.

+ 6 hours of 'free' electives - that do not count toward any other requirement - must be taken. Additional electives may be required to reach the required minimum of 120 hours. Consider pursuing a 2nd major or minor with these elective hours.

NEW COURSE FORM

1. General Information.				
a.	Submitted by the College of: Arts & Sciences	Today's Date:	Nov. 17, 2011	
b.	Department/Division: Interdisciplinary Programs			
c.	Contact person name: David Atwood	Email: datwood@uky.edu	Phone:	257-7304
d.	Requested Effective Date: <input type="checkbox"/> Semester following approval OR <input checked="" type="checkbox"/> Specific Term/Year ¹ : Fall 2012			
2. Designation and Description of Proposed Course.				
a.	Prefix and Number: ENS 201			
b.	Full Title: Environmental & Sustainability Studies I: Humanities and Social Sciences			
c.	Transcript Title (if full title is more than 40 characters): Env. & Sust. Stud. I: Hum. & Soc. Sci.			
d.	To be Cross-Listed ² with (Prefix and Number): N/A			
e.	Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours ³ for each meeting pattern type.			
	3 Lecture	_____ Laboratory ¹	_____ Recitation	_____ Discussion
	_____ Clinical	_____ Colloquium	_____ Practicum	_____ Research
	_____ Seminar	_____ Studio	_____ Other – Please explain: _____	
f.	Identify a grading system: <input checked="" type="checkbox"/> Letter (A, B, C, etc.) <input type="checkbox"/> Pass/Fail			
g.	Number of credits: 3			
h.	Is this course repeatable for additional credit?			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES:	Maximum number of credit hours:	N/A	
	If YES:	Will this course allow multiple registrations during the same semester?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
i.	Course Description for Bulletin:	This course will provide a foundation in the core ideas, theoretical concerns and practical approaches to environmental studies framed within the disciplines of the humanities and social sciences. Students will study human interactions with the environment, both natural and built, and inter-human relations conditioned by local and global environmental factors. Students will obtain a basic conceptual and historical understanding of the nature and value of their local, regional, and global environment.		
j.	Prerequisites, if any: None			
k.	Will this course also be offered through Distance Learning?			YES ⁴ <input type="checkbox"/> NO <input checked="" type="checkbox"/>
l.	Supplementary teaching component, if any: <input type="checkbox"/> Community-Based Experience <input type="checkbox"/> Service Learning <input type="checkbox"/> Both			

¹ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

² The chair of the cross-listing department must sign off on the Signature Routing Log.

³ In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

⁴ You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

NEW COURSE FORM

3.	Will this course be taught off campus?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
4.	Frequency of Course Offering.		
a.	Course will be offered (check all that apply):	<input checked="" type="checkbox"/> Fall	<input type="checkbox"/> Spring <input type="checkbox"/> Summer
b.	Will the course be offered every year?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If NO, explain: _____		
5.	Are facilities and personnel necessary for the proposed new course available?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If NO, explain: _____		
6.	What enrollment (per section per semester) may reasonably be expected?	30	
7.	Anticipated Student Demand.		
a.	Will this course serve students primarily within the degree program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
b.	Will it be of interest to a significant number of students outside the degree pgm?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES, explain: This course would be appropriate for General Education Credit under categories I.a and I.c		
8.	Check the category most applicable to this course:		
	<input checked="" type="checkbox"/> Traditional – Offered in Corresponding Departments at Universities Elsewhere		
	<input type="checkbox"/> Relatively New – Now Being Widely Established		
	<input type="checkbox"/> Not Yet Found in Many (or Any) Other Universities		
9.	Course Relationship to Program(s).		
a.	Is this course part of a proposed new program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES, name the proposed new program: B.A. in Environmental & Sustainability Studies		
b.	Will this course be a new requirement ⁵ for ANY program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES ⁵ , list affected programs: B.A. in Environmental & Sustainability Studies		
10.	Information to be Placed on Syllabus.		
a.	Is the course 400G or 500?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
	If YES, the <i>differentiation for undergraduate and graduate students must be included</i> in the information required in 10.b . You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.)		
b.	<input checked="" type="checkbox"/> The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached.		

⁵ In order to change a program, a program change form must also be submitted.

NEW COURSE FORM

Signature Routing Log

General Information:

Course Prefix and Number: ENS 201

Proposal Contact Person Name: David Atwood Phone: 257-7304 Email: datwood@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ⁶
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

⁶ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

SYLLABUS
ENS 201-001: Environmental and Sustainability Studies I: Humanities and Social Sciences
MWF tba
Location

Contact Information	Required Texts
<ul style="list-style-type: none"> Instructor Name Office Office Ph. Email Office Hours (or by appointment) 	<ul style="list-style-type: none"> Chiras, Daniel 2010. Environmental Science 2010 (8th edition). Sudbury, MA: Jones and Bartlett Publishing. King, Leslie and Deborah McCarthy (eds) 2009. <i>Environmental Sociology: From Analysis to Action</i>. Lanham, MD: Roman and Littlefield Texts and handouts available through the class Blackboard shell

Overview of course

This course exposes students to core ideas, theoretical concerns and practical approaches to environmental studies framed within the disciplines of the humanities and social sciences. Students will study human interactions with the environment, both natural and built, and inter-human relations conditioned by local and global environmental factors. Core ideas surveyed in this class include: the meaning of an environmental ethic philosophy, historical and cultural perspectives (Eastern and Western philosophies) of nature, the social construction of nature, environmental justice, environmental racism, local-global linkages, population, consumption and commodity chains, and political ecology. Students will obtain a basic conceptual and historical understanding of the nature and value of their local, regional, and global environment. This understanding will form the basis by which the student will analyze many of the problems pertinent to human social reality.

Course Goals/Objective:

Through this course, students will gain a foundational knowledge of environmental ethics, environmental writing, and the interactions between the environment and the social world. This knowledge will be utilized in the humanities and social science courses taken by the student in the areas necessary for the completion of the ENS B.A. degree.

Student Learning Outcomes:

Upon completion of this course students will be able to:

- Explain the differences in historical, cultural, and philosophical traditions towards the environment.
- Analyze and critique a specific sustainability management program instituted at the local level
- Evaluate the roles that stakeholder and societal diversity play in environmental concerns.
- Explain how and why environmental toxins and hazards disproportionately affect people of color, low income communities, women, and people of the Global South.
- Analyze the link between local and global environmental concerns.
- Apply knowledge gained through the course to reveal social, cultural, gendered, racial and other dimensions of diversity to a given environmental issue (such as a “commodity chain”).

Grading:

The course consists of three components for the grade:

Exams

Midterm Exam	20 %
Final Exam	30 %

Assignments

Sustainability Project	20 %
Commodity Chain Analysis	20 %

Participation

10 %

Grading Scale

A = 90% and above
 B = 80-89%
 C = 70-79%
 D = 60-69%
 E = 59% and below

Course Requirements:

Students must satisfactorily complete all assignments and exams in order to pass the class. Students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on these criteria completed to that date.

Exams (midterm exam worth 20% and final exam worth 30% for a total of 50%): In their midterm and comprehensive final exam students will demonstrate their mastery of both content knowledge (gained through class lectures, discussion, and activities and course readings), and critical thinking. Each exam will be graded on a 100 point scale. The final exam will be comprehensive in scope.

Assignments (20% each for total of 40%): Students will complete two *group/paired* (ie: groups of 2 or 3 students work together) projects / assignments during the semester. These assignments will develop students' skills in 1) understanding the inter-linkages of the human experience and the natural world in which we live 2) the ways distant places are linked through extraction, production and consumption of environmental products, and the role of inequality, power and justice in these linkages.

NOTE: These assignments are group projects. As such, the whole group will receive the same grade. However, each student will grade the contribution of all group members, so that in the event that one group member does not contribute meaningfully, that student's grade will be dropped to a significantly lower grade than the group grade. Group collaboration can take place via email, a facebook page, a wiki, a blog, in person, phone calls and any other way that works. Some class time during discussion sections will be given for group work. But substantial time outside of class will be required for these projects.

- Assignment 1 – The first project will be a research paper of approximately 10 pages. In this paper, the group will detail the efforts at the local level, i.e., either by (i) a university, (ii) a city, and/or (ii) a state (such as the Commonwealth of Kentucky) to implement sustainable management practices. In this paper, students will explain what sustainable practices are, detail the sustainable practices implemented by the institutional body studied, explain the various pragmatic and ethical rationales for the implementation of these practices implemented or planned by the institution studied, provide the set of evaluative criteria offered to judge the efficacy of these practices (if any are given), and offer their own evaluation both of these criteria and the efficacy of the practices implemented.
- Assignment 2 – The second project will be a “commodity chain analysis” in which a pair or group of 3 students identifies a “raw” product (ie: coal, copper, diamonds, coltan, coffee, Brazil nuts, acai berries, toxic waste, pollution, etc) that is extracted from a particular global location (ie: Eastern Kentucky, Zambia, South Africa, Democratic Rep. of Congo, Guatemala, Amazon, US Industries, etc). Then, conducting substantial library research, students will trace that product from the point of extraction, through processing, to consumers in a different global location. While the “commodity” gives coherence to the research, students must focus their research on the SOCIAL dimensions of the extraction, production and consumption of the commodity. The final section of this assignment will consist of a “social justice” analysis of this commodity chain, including recommendations for increased equity between producers and consumers in a global context. This assignment will be some form of multi media, according the students' choice, skills and interests. Possible formats include: an Electronic poster (with memo), a blog (with text and images), a video or other media (with instructor approval).

Participation (10% total): Participation during class discussions is one of the best ways to facilitate learning of the class material. Participation includes engaging in all class activities (debates, roll playing, group exercises) as well as offering insightful and useful comments during discussion. Simply speaking does not count towards participation (beware the class clown); comments should further the conversation and indicate reflective thinking. Additionally, participation will frequently include participating in “discussions” via blackboard, and posting comments to the various group projects produced during the semester. The participation grade will be given in two “installments” with half given at the mid-term and the other half at the end of the semester.

CLASS POLICIES

1. Absences: After 1 unexcused absence from class a student's grade will drop by 2% points per absence. Excused absences are given only: a) with presentation of a **VALID MEDICAL** or **EMERGENCY** excuse, **IN WRITING** (written by a medical doctor), b) with a death in the family (copy of the obituary required), or c) by pre-arrangement with the professor.
 - a. Arrival 10 minutes or more after the start of discussion section constitutes an absence. Departure 10 minutes before the end of discussion section constitutes an absence.
 - b. If you will be absent from class due to a religious holiday that is not already recognized by the university, you must inform and discuss this (these) absence(s) with your Professor.
 - c. If you are a university athlete, you must have your travel/absence schedule approved by the professor. You must present a written schedule of anticipated absences. This schedule must identify the specific dates you will be absent (not the whole schedule of athletic events), and must also give a phone number for the athletic coordinator who knows your schedule. If you anticipate missing more than 3 discussion section meetings during the semester, you should withdraw from the course this semester, and take the course at a time when it does not conflict with your extracurricular activities. (If you anticipate missing only 2 discussion section meetings due to athletic commitments, those absences will stand as "free" absences, and you will suffer the 30 point drop per absence after the two).
 - d. After eight (8) total absences (excused and unexcused), you will receive a failing grade in the course.
2. Make-up exams: A student may not take a make-up quiz unless s/he has an excused absence. Excused absences are given only: a) with presentation of a **VALID MEDICAL** or **EMERGENCY** excuse, **IN WRITING** (written by a medical doctor), b) with a death in the family (copy of the obituary required), or c) by pre-arrangement with the professor. Any other failure to take a quiz when it is scheduled will result in no credit for the quiz (0%). If you do have an excused absence and need to make up a quiz, you must make arrangements with your TA to take the makeup within a week of the quiz date.
3. Late assignments: Due dates and **TIMES** are listed in the schedule. Unless a student has an excused absence (see above), the instructor will not accept late assignments. If you have a problem completing your assignment on time, you need to communicate with your instructor immediately. If your assignment is not accepted because it is late, you will receive 0 (zero) points for the assignment. If you do not turn in an assignment you will receive 0 (zero) points.
4. Cheating / Plagiarizing: A few simple words: don't do it. For purposes of clarity, cheating includes copying or "borrowing" answers from others on quizzes, citing others' work as your own in essays, and plagiarizing or taking material verbatim from texts, lectures, and articles (including anything from web-sites) without proper citation of the author(s). All such incidents will be handled according to University policy as outlined in the *University Senate Rules and Student Rights and Responsibilities*. The minimum punishment for cheating or plagiarism is an "E" in the course. This is University Policy.
 - a. *Points concerning plagiarism and cheating in the Student Code of Conduct are not meant to discourage students from sharing ideas and collaborating. On the contrary, unless instructed otherwise, students in this class should collaborate as much as possible, but must acknowledge such collaboration in any work submitted for a grade*
5. Classroom civility and decorum: The university, college and program has a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.
6. Academic Accommodations due to disability: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@eamil.uky.edu) for coordination of campus disability services available to students with disabilities.
7. Religious Accommodations: Students anticipating absence for a major religious holiday during the fall semester must notify me in writing or email prior to the last day for adding classes. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (jkarnes@email.uky.edu, 257-2754).

READINGS AND ASSIGNMENT SCHEDULE

This schedule, and assigned readings, are subject to adjustment throughout the semester.

Introduction

Week 1 Class Introduction -

READ Chiras Chapter 1: Environmental Science

SECTION I – HUMANS IN THE ENVIRONMENT: UNDERSTANDING THE ENVIRONMENT AND OUR RELATION TO IT

Week 2 The Roots of Our Understanding: Western and Non-Western Conception of Nature

READ: Selections available on Bb: "Genesis," John Locke *Two Treatise*, E. White "Black Women in the Wilderness," Luther Standing Bear "Nature," additional selections representative of Buddhist, Shinto, Indian, Animist conceptions of nature.

Details of Assignment 1 presented to students: Sustainability project

Week 3 Environmentalism in American

READ: Essays: " H.D. Thoreau "Walking," A. Leopold "A Land Ethic," W. Berry "An Entrance into the Woods," W. Stegner "Wilderness Letter, T.T. Williams "The Clan of One Breasted Women."

Week 4 The Social Construction of Nature

READ: (1) "Wild Horses and the Political Ecology of Nature Restoration in the Missouri Ozark" in *Environmental Sociology*, ch. 7
(2) "The Pristine Myth" William Denevan (available through JSTOR)

Week 5 Environmental Sustainability

READ: (1) Chiras chapter 2: Environmental Protection and Sustainability
(2) Chiras chapter 3: Understanding the Root Causes of the Environmental Crisis

Week 6 The Ethical Justification for Creating a Sustainable Society

READ: (1) Chiras, chapter 24
(2) Brian Berry, "Sustainability and Intergenerational Justice"

Week 7 Law, Government, and Society

READ: Chiras chapter 27

MIDTERM EXAM (on all previous readings, discussion, lectures, films, etc).

SECTION II – HUMANS IN THE ENVIRONMENT: SOCIETY, CULTURE, BEHAVIOR AND JUSTICE

Week 8 Human Populations and diversity

READ: Chiras chapter 8: Population: measuring growth and its impact

DUE: Assignment 1

Week 9 Population and diversity continued

READ: Chiras Chapter 9: Stabilizing the Human Population: Strategies for Sustainability.

Details of Assignment 2 presented to students: Commodity Chain Analysis

Week 10 Economies and Consumption

READ: Chiras Chapter 25: Sustainable Economics: Understanding the Economy and Challenges Facing the Industrial Nations

Week 11 Economies and Consumption continued

READ: Chiras Chapter 26: Sustainable Economic Development: Challenges Facing the Developing Nations

Week 12: Social Inequalities and Environmental Injustices

READ: (1) “The Unfair Trade-Off: Globalization and the Export of Ecological Hazards” by Daniel Faber. (Chapter 11 in *Environmental Sociology: From Analysis to Action*, edited by Leslie King and Deborah McCarthy)
(2) “The Next Revolutionary Stage: Recycling Waste or Recycling History?” by David Pellow. (Chapter 6 in *Environmental Sociology: From Analysis to Action*, edited by Leslie King and Deborah McCarthy)

Week 13: Environmental Racism and Industrial Pollution

READ: (1) “Environmental Racism Revisited” (Ch. 5 in Robert Bullard’s *Dumping in Dixie*)
(2) “Corporate Responsibility for Toxins” by Gerald Markowitz and David Rosner. (Chapter 10 in *Environmental Sociology: From Analysis to Action*, edited by Leslie King and Deborah McCarthy)

SECTION III: FROM KNOWLEDGE TO ACTION -- OUR ROLE IN THE GLOBAL ENVIRONMENT

Week 14: Struggles for Environmental Justice

READ: “Environmental Justice: Grassroots Activism and its Impact on Public Policy Decision Making” by Robert D. Bullard and Glenn S. Johnson (Chapter 4 in *Environmental Sociology: From Analysis to Action*, edited by Leslie King and Deborah McCarthy)

Week 15: Struggles for Environmental Justice, continued

READ: Case studies of successful environmental justice activism (TBA). Examples: “Operation Return to Sender” and “Ban the Burn: The Anti-Incinerator Movement in the Philippines” in Chapter 4 of David N. Pellow’s *Resisting Global Toxics: Transnational Movements for Environmental Justice*, or the article “Environmental Justice Comes Full Circle: Warren County Before and After” (2007) by Dollie Burwell and Luke Cole (in *Golden Gate University Environmental Law Journal*).

DUE: Assignment 2 Multi-media “commodity chain analysis”

Week 16: Course Synthesis – what steps to take?

READ: tba

Week 17 Finals week

FINAL COMPREHENSIVE EXAM (synthetic- comprehensive)

NEW COURSE FORM

1. General Information.				
a.	Submitted by the College of: Arts & Sciences	Today's Date:	Nov. 17, 2011	
b.	Department/Division: Interdisciplinary Programs			
c.	Contact person name: David Atwood	Email: datwood@uky.edu	Phone:	257-7304
d.	Requested Effective Date: <input type="checkbox"/> Semester following approval OR <input checked="" type="checkbox"/> Specific Term/Year ¹ : Spring 2013			
2. Designation and Description of Proposed Course.				
a.	Prefix and Number: ENS 202			
b.	Full Title: Environmental & Sustainability Studies II: Natural Science and Policy			
c.	Transcript Title (if full title is more than 40 characters): Env. & Sust. Stud. I: Nat. Sci. & Policy			
d.	To be Cross-Listed ² with (Prefix and Number): N/A			
e.	Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours ³ for each meeting pattern type.			
	3 Lecture	_____ Laboratory ¹	_____ Recitation	_____ Discussion
	_____ Clinical	_____ Colloquium	_____ Practicum	_____ Research
	_____ Seminar	_____ Studio	_____ Other – Please explain: _____	
f.	Identify a grading system: <input checked="" type="checkbox"/> Letter (A, B, C, etc.) <input type="checkbox"/> Pass/Fail			
g.	Number of credits: 3			
h.	Is this course repeatable for additional credit?			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES:	Maximum number of credit hours:	N/A	
	If YES:	Will this course allow multiple registrations during the same semester?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
i.	Course Description for Bulletin:	This is an introduction to Natural Science and Policy as they pertain to understanding environmental studies. The core ideas include understanding how the ecological theories of population dynamics, community structure, and ecosystems dynamics lay a scientific foundation to understanding the nature of current environmental issues and how they might be addressed individually and through governmental legislation.		
j.	Prerequisites, if any: None			
k.	Will this course also be offered through Distance Learning?			YES ⁴ <input type="checkbox"/> NO <input checked="" type="checkbox"/>
l.	Supplementary teaching component, if any: <input type="checkbox"/> Community-Based Experience <input type="checkbox"/> Service Learning <input type="checkbox"/> Both			
3.	Will this course be taught off campus?			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

¹ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

² The chair of the cross-listing department must sign off on the Signature Routing Log.

³ In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

⁴ You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

NEW COURSE FORM

4.	Frequency of Course Offering.		
a.	Course will be offered (check all that apply):	<input checked="" type="checkbox"/> Fall	<input type="checkbox"/> Spring <input type="checkbox"/> Summer
b.	Will the course be offered every year?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If NO, explain: _____		
5.	Are facilities and personnel necessary for the proposed new course available?		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	If NO, explain: _____		
6.	What enrollment (per section per semester) may reasonably be expected?	30	
7.	Anticipated Student Demand.		
a.	Will this course serve students primarily within the degree program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
b.	Will it be of interest to a significant number of students outside the degree pgm?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES, explain: This course would be appropriate for General Education Credit under categories I.a and I.c		
8.	Check the category most applicable to this course:		
	<input checked="" type="checkbox"/> Traditional – Offered in Corresponding Departments at Universities Elsewhere		
	<input type="checkbox"/> Relatively New – Now Being Widely Established		
	<input type="checkbox"/> Not Yet Found in Many (or Any) Other Universities		
9.	Course Relationship to Program(s).		
a.	Is this course part of a proposed new program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES, name the proposed new program: B.A. in Environmental & Sustainability Studies		
b.	Will this course be a new requirement ⁵ for ANY program?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
	If YES ⁵ , list affected programs: B.A. in Environmental & Sustainability Studies		
10.	Information to be Placed on Syllabus.		
a.	Is the course 400G or 500?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
	If YES, the <i>differentiation for undergraduate and graduate students must be included</i> in the information required in 10.b. You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See <i>SR 3.1.4.</i>)		
b.	<input checked="" type="checkbox"/> The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached.		

⁵ In order to change a program, a program change form must also be submitted.

NEW COURSE FORM

Signature Routing Log

General Information:

Course Prefix and Number: ENS 202

Proposal Contact Person Name: David Atwood Phone: 257-7304 Email: datwood@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
		/ /	
		/ /	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ⁶
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

⁶ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

ENS 202-001: Environmental and Sustainability Studies II: Natural Science and Policy

Day/Time/Place: TBD

Instructor: TBD

Email: TBD

Office phone: TBD

Office address: TBD

Preferred method on contact: TBD

Office Hours: days and times TBD

Teaching/Grad. Assist: TBD

email: TBD

Overview of course

This is an introduction to Natural Science and Policy as they pertain to understanding environmental studies. The core ideas include understanding how the ecological theories of population dynamics, community structure, and ecosystems dynamics lay a scientific foundation to understanding the nature of current environmental issues and how they might be addressed individually and through governmental legislation.

Student Learning Outcomes:

Upon completion of this course students will be able to:

- Understand basic ecological theory from a scientific perspective.
- Explain the reasons for existing environmental problems.
- Understand different approaches and strategies to solve existing environmental problems.
- Impact of urban and rural development on ecosystems and habitats
- Sustainable land management (and ecosystem protection)
- Show how environmental policies require fundamental science

Course Goals/Objective:

The goal of this course is to show students that ecological theory can explain existing environmental problems, and that understanding ecological theory will provide a foundation for solving them.

Required textbooks:

This course has one textbook:

- Chiras, Daniel 2010. Environmental Science (8th edition). Sudbury, MA: Jones and Bartlett Publishing.

Grading:

The course consists of three components for the grade:

Exams: Two over the course of the semester, each 15%	30 %
Assignment:	40 %
Final Exam (comprehensive)	20%
Participation	10 %

Final grades are calculated based on the following breakdown:

- A = 90% and above
- B = 80-89%
- C = 70-79%
- D = 60-69%
- E = 59% and below

Course Requirements: Students must complete all assignments and exams in order to pass the class.

Exams (two semester exams 15% each for total of 30%, final exam 20%): Approximately every six weeks there will be a exam through which students demonstrate their mastery of both content knowledge (gained through class lectures, discussion, and activities and course readings), and critical thinking. Each exam will be graded on a 100 point scale, and worth 15% of the final grade. The final exam (worth 20% of the final grade), will cover the new material introduced during the last third of the class AND key ideas, concepts and knowledge gained from the entirety of the course.

Assignment (40%): At the beginning of the semester, each student will select an environmental topic of interest that needs to be approved by the instructor. During the course of the semester, each student will then collect a minimum of ten published news articles on the subject. These articles will be organized in a notebook. Each article will include a brief review of the significant points in the article. Each student will then generate a typed five page synopsis of these articles describing problems faced, prevailing controversies, and potential solutions.

Participation: Participation during class discussions is one of the best ways to facilitate learning of the class material. Participation includes engaging in all class activities (debates, roll playing, group exercises) as well as offering insightful and useful comments during discussion. Simply speaking does not count towards participation (beware the class clown); comments should further the conversation and indicate reflective thinking. Additionally, participation will frequently include participating in “discussions” via blackboard, and posting comments to the various group projects produced during the semester. The participation grade will be given in two “installments”: half will be given at the mid-term and the other half at the end of the semester (for a maximum of 10% of the total grade)

Chapter Coverage and Examination Dates:

Week	Topic	Chapter
1	Principles of Ecology: How Ecosystems Work	4
2	Principles of Ecology: Biomes and Aquatic Life Zones	5
3	Principles of Ecology: Self-Sustaining Mechanisms in Ecosystems	6
4	Human Ecology: Our Changing Relationship with the Environment	7

Exam 1

5	Population: Measuring Growth and Its Impact (review of ENS 201 material)	8
6	Stabilizing the Human Population: Strategies for Sustainability (review of ENS 201 material)	9
7	Creating a Sustainable System of Agriculture to Feed the World's People	10
8	Preserving Biological Diversity	11

Exam 2

9	Grasslands, Forests, and Wilderness: Sustainable Management Strategies	12
10	Water Resources: Preserving Our Liquid Assets and Protecting Aquatic Ecosystems	13
11	Nonrenewable Energy Sources	14
12	Foundations of a Sustainable Energy System: Conservation and Renewable Energy	15
13	The Earth and Its Mineral Resources	16
14	Creating Sustainable Cities, Suburbs, and Towns:	17
15	Air Pollution and Noise: Living and Working in a Healthy Environment	19
16	Global Air Pollution: Ozone Depletion, Acid Deposition, and Global Climate Change	20

Finals week, **Final Exam**

Class policies:

1. Absences: After one unexcused absence from class a student's grade will drop by 2% points per absence. Excused absences are given only: a) with presentation of a VALID MEDICAL or EMERGENCY excuse, IN WRITING (written by a medical doctor), b) with a death in the family (copy of the obituary required), or c) by pre-arrangement with the professor.
 - a. Arrival 10 minutes or more after the start of discussion section constitutes an absence. Departure 10 minutes before the end of discussion section constitutes an absence.
 - b. If you will be absent from class due to a religious holiday that is not already recognized by the university, you must inform and discuss this (these) absence(s) with your Professor.
 - c. If you are a university athlete, you must have your travel/absence schedule approved by the professor. You must present a written schedule of anticipated absences. This schedule must identify the specific dates you will be absent (not the whole schedule of athletic events), and must also give a phone number for the athletic coordinator who knows your schedule. If you anticipate missing more than 3 discussion section meetings during the semester, you should withdraw from the course this semester, and take the course at a time when it does not conflict with your extracurricular activities. (If you anticipate missing only 2 discussion section meetings due to athletic commitments, those absences will stand as "free" absences, and you will suffer the 30 point drop per absence after the two).
 - d. After eight (8) total absences (excused and unexcused), you will receive a failing grade in the course.
2. Make-up exams: A student may not take a make-up quiz unless s/he has an excused absence. Excused absences are given only: a) with presentation of a VALID MEDICAL or EMERGENCY excuse, IN WRITING (written by a medical doctor), b) with a death in the family (copy of the obituary required), or c) by pre-arrangement with the professor. Any other failure to take a quiz when it is scheduled will result in no credit for the quiz (0%). If you do have an excused absence and need to make up a quiz, you must make arrangements with your TA to take the makeup within a week of the quiz date.
3. Late assignments: Due dates and TIMES are listed in the schedule. Unless a student has an excused absence (see above), the instructor will not accept late assignments. If you have a problem completing your assignment on time, you need to communicate with your instructor immediately. If your assignment is not accepted because it is late, you will receive 0 (zero) points for the assignment. If you do not turn in an assignment you will receive 0 (zero) points.
4. Cheating / Plagiarizing: A few simple words: don't do it. For purposes of clarity, cheating includes copying or "borrowing" answers from others on quizzes, citing others' work as your own in essays, and plagiarizing or taking material verbatim from texts, lectures, and articles (including anything from web-

sites) without proper citation of the author(s). All such incidents will be handled according to University policy as outlined in the *University Senate Rules* and *Student Rights and Responsibilities*. The minimum punishment for cheating or plagiarism is an “E” in the course. This is University Policy.

5. Classroom civility and decorum: The university, college and program have a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.
6. Academic Accommodations due to disability: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.



College of Arts and Sciences
Office of the Dean
213 Patterson Office Tower
Lexington, KY 40506-0027
859 257-5821
fax 859 323-1073
www.as.uky.edu

January 5, 2011

Professor David Atwood
Director, Environmental Studies Program
125 Chemistry/Physics Building
CAMPUS 0055

Dear David,

I am writing to express my enthusiastic support for the new Environmental & Sustainability Studies (ENS) B.A. Degree that you and the ENS Advisory Board devised last semester. The College fully intends to provide the resources needed to make this degree program a successful one. Indeed, when I initiated this process of designing a BA program last spring, I recognized that it would be necessary to commit College of Arts & Sciences resources to support it. Below is outlined the specific items of support that the College will provide.

I. Staff and Budget

Ms. Kari Burchfield, the College's Interdisciplinary Program Coordinator, has worked closely with you and the Board during the planning process. Ms. Burchfield or another staff member designated by the College will provide administrative support for the ENS Degree Program in the future. In the past, the College has allocated \$8,000 in operating expenses to the ENS Minor Degree. It pledges to provide at least this amount in future years to support the ENS B.A. and ENS Minor degrees. Additional operating expenses will be allocated to the program as the number of majors' increases.

II. Core Courses

The ENS B.A. degree has seven core courses: ENS 201, ENS 202, ENG 205 (which will become WRD 205), PHI 336, ENS 395, and ENS 400. These courses will be taught by professors and lecturers from College departments and count as part of the normal teaching loads of these faculty. The College will provide any extra teaching resources to their home departments that are needed to maintain the integrity of these departments' curricula.

The two presently existing courses on this list, PHI 336 and ENG 205 (WRD 205), are annually offered in the fall and spring respectively. Should demand for these two courses rise as a result of the B.A. degree, the College will provide the Philosophy and Writing, Rhetoric, and Digital Media units with the resources needed to add course sections.

III. ENS Minor

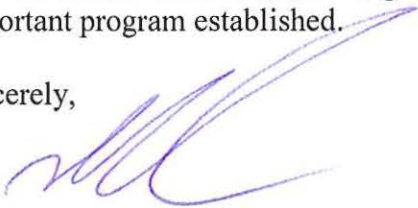
The College wants regular faculty, as opposed to part-time instructors, to teach its courses. I recognize, however, that there is a need for Dr. Rebecca Glasscock (of BCTC) to continue as the instructor for ENS 200, the initial course in the ENS Minor, until the new ENS B.A. program is established. When ENS 200 is replaced by ENS 201, ENS 201 will be taught by regular UK faculty alone.

IV. Faculty Hiring

The College is committed to adding a faculty line in the area of ENS, to be hired in the 2011-12 academic year. The tenure home of the hire is open, and the College is particularly interested in hiring someone with a joint appointment in a second department. The person should be hired in a field identified by the Advisory Board as one of acute need in the College in the general area of ENS. The College is open to the possibility of additional hires in this general area, for instance, in the areas of environmental ethics or writing. I expect that in any hiring process you and the Advisory Board will work with relevant departments to identify and recruit appropriate candidates.

I appreciate the diligence and effort that you and the Advisory Board expended to achieve the goal of a new environmental degree for the College. I greatly look forward to seeing this important program established.

Sincerely,



Mark Lawrence Kornbluh
Dean

MLK:akh

cc: Ted Schatzki, Associate Dean of Faculty
Betty Lorch, Associate Dean of Research and Graduate Studies
Anna Bosch, Associate Dean of Undergraduate Programs
Kirsten Turner, Chief Financial Officer/Chief of Staff
Kathleen Harman, Director of Finance

Atwood, David A

To: Mountford, Roxanne D
Subject: RE: Quick email confirming inclusion of ENG 205 into ENS B.A. Degree Program?

-----Original Message-----

From: Mountford, Roxanne D
Sent: Thursday, December 09, 2010 9:32 PM
To: Atwood, David A
Subject: RE: Quick email confirming inclusion of ENG 205 into ENS B.A. Degree Program?

This is incredibly impressive! We're working on a BA in writing, rhetoric, and digital media, with an established course in Environmental Writing. We won't be done in time for you to include the course in your BA, but our intention is for you to replace 205 with this course in the near future. I just want you to know, though, that we're working on it! In the meantime, you have our permission to include 205 in your list.

Roxanne

Roxanne Mountford, PhD
Director, Division of Writing, Rhetoric, and Digital Media Co-Director, Composition and Communication Program Associate Professor of Rhetoric University of Kentucky
mountford@uky.edu

From: Atwood, David A
Sent: Thursday, December 09, 2010 8:29 PM
To: Mountford, Roxanne D
Subject: Quick email confirming inclusion of ENG 205 into ENS B.A. Degree Program?

Hi Roxanne,

I know you've already indicated that we can include ENG 205 as a Core course in the new ENS Degree, but I've been advised to give you a description of the program to make sure you had the information. Nothing has changed in the attached document compared to what Erik might have described to you, but it would let you see the degree plans in more detail. If you can let me know we are still okay to include ENG 205 that would be great.

Once I have your okay (and similar responses from a couple of other Chairs) I will be able to submit the full documentation package to the College. I'll send you a copy of the full submission, as well. Looks like we might actually be able to make this happen for fall 2011, but it will be a long journey through the committees...

Thanks much,
David

Atwood, David A

To: Bradshaw, David H
Subject: RE: PHI 336 in ENS Degree

From: Bradshaw, David H
Sent: Tuesday, December 14, 2010 12:04 PM
To: Atwood, David A
Cc: Sandmeyer, Robert
Subject: RE: PHI 336 in ENS Degree

Dear Prof. Atwood - Sorry for the delay getting back to you about this. I've read the ENS proposal and am certainly glad to support the plan to include PHI 336 as a core course. One minor caution is that we currently offer only two sections of this course per year, so if demand grows beyond that we may need to discuss with the College ways to expand our offerings. That's a bridge to be crossed later, and in no way tempers our enthusiasm about the proposal.

Best wishes,
David Bradshaw

Professor and Chair
Philosophy Department
University of Kentucky
Lexington, KY 40506-0027

office (859) 257-7107
fax (859) 257-3286

From: Sandmeyer, Robert
Sent: Friday, December 10, 2010 12:57 PM
To: Bradshaw, David H
Cc: Atwood, David A
Subject: PHI 336 in ENS Degree

Hi David,

David Atwood is putting together the final draft documents for the B.A. Degree in Environmental and Sustainability Studies proposal. See the attached PDF which contains the information regarding the structure and content of the degree. (I direct your attention to page 4 and 6, especially.)

He needs an email from you saying that including PHI 336 in the new ENS B.A. is okay.

Let me know if you have any questions. You can also contact David directly with questions.

Bob

Bob Sandmeyer, Ph.D.
Lecturer, University of Kentucky
Department of Philosophy
1429 Patterson Office Tower
Lexington, KY 40506-0027
USA

SIGNATURE ROUTING LOG

General Information:

Proposal Type: Course ☐

Program ☒

Other ☐

Proposal Name¹ (course prefix & number, pgm major & degree, etc.):

Bachelor of Arts in
Environmental &
Sustainability Studies

Proposal Contact Person Name: David Atwood
Kari Burchfield

Phone:
257-7304
257-1994

Email: datwood@uky.edu
klburc2@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
ENS, Director		David Atwood / 257-7304 / datwood@uky.edu	
Writing Rhetoric and Digital Media, Director		Roxanne Mountford / 257-6985 / mountford@uky.edu	
Philosophy Dept., Chair		David Bradshaw / 257-7107 / dbradsh@uky.edu	
Education Policy Committee		Randall Roorda, Humanities / 257-1033 / rroorda@uky.edu Joanna Badagliacco, Soc. Sci. / 257-4335 / jmb@uky.edu	
A&S, Associate Dean		Anna Bosch / 257-6689 / bosch@uky.edu	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ²
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

¹ Proposal name used here must match name entered on corresponding course or program form.

² Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

SIGNATURE ROUTING LOG

SIGNATURE ROUTING LOG

General Information:

Proposal Type: Course ☒

Program ☐Other ☐

Proposal Name¹ (course prefix & number, pgm major & degree, etc.):

ENS 201: Environmental &
Sustainability Studies I:
Humanities and Social
Sciences

Proposal Contact Person Name: David Atwood
Kari Burchfield

Phone:
257-7304
257-1994

Email: datwood@uky.edu
klburc2@uky.edu

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Senate Council Approval		University Senate Approval	

Comments:

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SIGNATURE ROUTING LOG

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SIGNATURE ROUTING LOG

General Information:

Proposal Type: Course ☒

Program ☐

Other ☐

Proposal Name¹ (course prefix & number, pgm major & degree, etc.):

ENS 202: Environmental &
Sustainability Studies I:
Natural Sciences and Policy

Proposal Contact Person Name: David Atwood
Kari Burchfield

Phone:
257-7304
257-1994

Email: datwood@uky.edu
klburc2@uky.edu

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A&S, Associate Dean		Anna Bosch / 257-6689 / bosch@uky.edu	

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Senate Council Approval		University Senate Approval	

Comments:

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