ENVIRONMENTAL & SUSTAINABILITY STUDIES

New Bachelor of Arts Degree

College of Arts & Sciences

Spring 2012

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REQUEST TO CLASSIFY PROPOSED PROGRAM

Section I (REQUIRED)

1.	The proposed new degree program will be (please check one): ☒ Undergraduate* ☐ Masters* ☐ Doctoral* ☐ Professional*		
2.	Have you contacted the Associate Provost for Academic Administration (APAA)?		
	YES ☒ Date of contact: Sept. 20, 2010		
	NO ☐ (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, 2) Environment, 3) Society	
6.	Primary College:	Arts & Sciences	
7.	Primary Department:	Chemistry	
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?		
	☐ YES (Continue with the Section II* on a separate sheet.)		
	☒ 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.

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

* 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.

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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.

      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.

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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 KVU 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

Environmental & Sustainability Studies Bachelor of Arts

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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 subjects 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 credits of core courses and 24 credits of electives from courses organized in the Areas of Economics, Environment, and Society. In order to ensure depth of knowledge and expertise 15 credits of courses will be taken within one Area. To provide breadth of knowledge, six credits of courses will be taken in a second Area and three credits of courses in the third Area. This requirement is called the "5:2:1 Rule" to indicate how many three-credit electives the students would take in the three Areas. The Areas were selected in recognition that any type of sustainable activity, resource, or product must balance economic, environmental, and social considerations. In the ENS Program the students will combine the fundamental knowledge they obtain in the three Areas to develop an understanding of sustainability and how sustainable practices can be implemented in their eventual careers.

The grouping of courses in each Area provides the students the possibility of selecting thematic clusters of courses according to their own interests, educational, and career aspirations. These could also originate from the expertise and interests of faculty participating in the ENS Program. Examples of ENS Themes include, Environmental Justice, The Built Environment, and Environmental Journalism. The flexibility to organize thematic clusters of courses either inspired by students or based on faculty expertise is a unique feature of the new ENS B.A. program.

ENS students will obtain the fundamental knowledge required to understand the relationships that exist between the global economy, societal problems and needs, and the natural world. The program will develop the critical thinking, communication, and independent study skills necessary for students to pursue lifestyles and careers that are ecologically viable, socially desirable, and economically feasible. ENS students will be uniquely prepared to participate in the rapidly expanding "Green Economy". The ENS Program will be an important component of the College of Arts & Sciences goal of being defined the 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 optional Independent Study course, ENS 395, and the required 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 sustainability as the means to a healthy, productive, equitable quality of life for future generations.

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. ENS students will obtain the fundamental knowledge required to understand the relationships that exist between the global economy, societal problems and needs, and the natural world. The program will develop the critical thinking, communication, and independent study skills necessary for students to pursue lifestyles and careers that are ecologically viable, socially desirable, and economically feasible. The ENS B.A. will readily serve as a double-major with discipline-specific B.S. or B.A. degrees to prepare students for a wide range of careers in the rapidly expanding "Green Economy".

The degree will prepare students for 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. 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. The ENS website will also describe the advantages of pairing the ENS degree with a wide variety of disciplinary B.A. and B.S. degrees.

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 agencies such U.S. National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA). ENS graduates could also find employment with newspapers, magazines, and other media-based companies.

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. 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 integration of different fields, such as science, engineering, politics, law, information technology, project management, business administration, marketing, communications, and economics, will be critical to the emerging environmental professions. Demand will be high for people who combine the ENS B.A. with a traditional disciplinary degree. The ENS Degree provides a great deal of flexibility in the electives the students may choose to best fit their career aspirations. The students will be able to tailor their courses to have the ENS B.A. serve as their primary major, or to have it complement a second major.

C. Collaborations with other Institutions

Many of the potential career opportunities, and particularly the KDEP, will provide work-study and internship possibilities for the students. 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 engagement opportunities 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, 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 will be 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.

ENS students will also have many opportunities in to Study Abroad and will have an ideal background for these programs. The Council on International Educational Exchange (CIEE; http://www.ciee.org/) is an exchange organization with the mission "to help people gain understanding, acquire knowledge, and develop skills for living in a globally interdependent and culturally diverse world". An ENS Topical Major student with an interest in Environmental Justice is spending spring 2012 in the Center for Ecological Living and Learning Program (CELL; http://www.cellonline.org/) in Honduras.

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 summers of 2010 and 2011.

Advisory Board Members

1. David Atwood (Chemistry; ENS Director)
2. Arne Bathke (Statistics)
3. Shannon Bell (Sociology)
4. Kari Burchfield (Interdisciplinary Prog.)
5. Lisa Cliggett (Anthropology)
6. Alan Fryar (Earth 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)

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 and spring 2011 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.

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. 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). The next generation of graduating students will need to

have a fundamental understanding of the following issues related to environmental and sustainability studies:

i. The ecological, social and political impacts of energy consumption
ii. Natural resource consumption and commodity products
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

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 offer variable types of environmental degrees. However, the majority are B.S. degrees in some type of "environmental science". There are six environmental 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 means for UK 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. Student Enrollment in Benchmark Environmental Programs

The benchmark enrollments for the institutions that made this information accessible are shown in the table on the next page for 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 should have an enrollment of ~ 100 students in the coming years with the majority taking disciplinary minor and major degrees.

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

J. ENS Student Recruitment

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. The ENS Program will discuss potential minority and Appalachian student recruiting with the Louis Stokes Alliance for Minority Participation (LSAMP) and the Appalachian and Minority Science, Technology, Engineering, and Mathematics Majors (AMSTEMM) Programs. 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 is possible that a good number of potential BIO Majors will elect to pursue a different major. The "Guide to UK Environmental Programs" described on page 11 will facilitate the transfer of students into the ENS B.A. and the other environmental programs on campus. For example, the "Guide" would show that that 2nd and 3rd year BIO students would have already completed some or all of the prerequisites necessary for the NRES and GEO B.S. degrees, among other possibilities. The ENS B.A. degree would provide the opportunity to pursue a B.A. in the ENS Environment Area of Expertise. With ≈ 1,500 current majors and associated pressure on teaching and resources the Biology Department will benefit from having a variety of environmental programs available to the students. The students would receive the proper advising to most effectively match their interests and career aspirations with the most suitable degree program. 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. The other UK environmental programs should also see an increase in enrollment if the anticipated transfer of BIO students takes place.

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. The

ENS Program will also serve as a "gateway" for majors in other degree programs. For example, by design, enough courses exist in the Economics Area for students to readily obtain a minor in Economics. Some of these students will undoubtedly recognize the benefits of an Economics major and elect to double-major in ENS and ECO. Once established, the ENS Program will explore the possibility of "imbedding" other departmental minors in the Area course listings as a means of increasing the number of majors in the participating departments. This appears ideally suited to encourage majors in GEO, SOC, EES, and many other departments.

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

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.

K. 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 below.

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.

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, currently required for the ENS Minor, 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 and ENS 395 will be common, elective, courses in the Minor and Major degrees.

iv. The 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. Another benefit is that this will create a cohort of students, from both degrees, with similar interests and experience working together.

v. ENS 400 Senior Seminar will become a common course for the Minor and Major.

vi. The ENS minor and major students 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 the career choices that are most suitable for each.

vii. Student tracking will be used to determine the advantages of pairing the ENS minor and major with disciplinary minors and majors.

L. Relationship to Existing UK Environmental Programs

There are six 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 and Earth Environmental Systems 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 B.S. degrees 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, GLY 385). Likewise, the Human Geography and Earth Environmental Systems B.A. Tracks within Geography are comprised of GEO courses. The "UK Environmental Program Guide" described below will be used to provide students, advisors, and faculty, with the information needed to match students' interests and career goals with the appropriate environmental program.

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 selecting electives to obtain an ENS B.A. that coincides directly with a departmental B.A. degree.

The ENS Program will advertise the possibilities of combining the ENS B.A. with departmental B.A. and B.S. degrees and will work with interested departments to provide specific details about this possibility. The ability to serve as a "gateway" to departmental majors is a unique feature of the ENS Program. Additionally, the ENS Program will explore the possibility of having departmental minors embedded within the ENS curriculum. Some students who start on a departmental minor may continue through to the major. This would be an important way the ENS Program could benefit other UK environmental programs and disciplinary departmental degrees.

M. The UK Environmental Program Guide: Advertising and Advising

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 in a "UK Environmental Program Guide". This would allow the students to select the programs, or combination of programs, that best fit their interests and aspirations. The Guide could be used to recruit prospective students, better advise incoming students, and advertise UK's environmental program. The table shown on the following page provides examples of how the ENS B.A. and NRES B.S. programs would be described in the Program Guide. The document currently lists the attributes and requirements for the ENS B.A. and NRES B.S. degrees (with information provided by the NRES program). The Guide would ideally include basic information about all of the UK environmental programs and degrees. Atwood is currently circulating the Guide among other programs for comment and input. The ENS website will contain the Program Guide with links to the various UK programs.

Environmental & Sustainability Studies	Natural Resources and Environmental Sciences
Bachelor of Arts (B.A.)	Bachelor of Sciences (B.S.)
Courses predominantly in College of Arts & Sciences	Pre-major courses in A&S; Major requirements in CoA
Goals: Interdisciplinary education in environmental studies within the context of sustainability. Preparation for participation in the "Green Economy". Citizenry with understanding of environmental issues.	The goal of the NRES curriculum is for students to attain the skills for entry-level positions in the natural resources or environmental field or enter graduate school.
No Math or Physical Science Prerequisites	BIO 150,152; CHE 105, 107, 111, 113; MA 123
Major Hours = 42	Major Hours = 43-44
Double-Majors: Readily paired with other A&S B.A. or B.S. degrees since same UK Core and A&S Requirements; could be paired with B.A. or B.S. degree from other College since UK Core requirements will be the same for both Colleges.	Double-Majors: Ideally suited for a double-major in humanities, social science, or natural science fields. NRES students have double-majored in English and Biology and often complete minors in other fields as well.
Areas of Study Coincide with the Three Components of Sustainability: 1) Economy 2) Environment 3) Society	Environmental Systems Emphasis Areas are combined with Analytical Skill Areas in Geospatial Analysis, Economic and Policy Analysis, or Field and Lab Analysis: 1) Conservation Biology 2) Forestry 3) Human Dimensions and Natural Res. Planning 4) Soil Science 5) Water Resources 6) Wildlife Management
Optional Themes within Area	Individualized System Analytical Skill or Environmental Systems Emphasis Areas by Proposal
Research and Engagement Encouraged	Required pre-professional experiential learning
Non-Coursework Requirements: None	Summer Camp Required: NRE 320
Careers where it is important to understand, evaluate, and communicate the impact of economic and social activities on the environment. General examples: City, State, and Federal Environmental Agencies, Non-Profit Organizations, Education, Law, Business, Economics, and Journalism.	Careers that require an understanding of the social and natural science underpinnings to natural resource and environmental problems. Will provide the skills needed to obtain entry- level positions in the natural resources or environmental fields or enter graduate school. Graduates of the program are employed in state and federal government, university sustainability programs, non-profit organizations, law, business, fisheries, and environmental consulting.
Specific Career Examples: 1) Urban and Regional Planning ("Smart Growth") 2) Green Businesses (Entrepreneurs and Managers) 3) Environmental Justice 4) Communication Specialist 5) Sustainability Management 6) Environmental Economist 7) Parks/Recreation Management 8) Environmental Historian 9) Community Organizer, Fundraising	Specific Career Examples: 1) Pollution Monitoring, Control and Prevention 2) Waste Management Specialist 3) Field Scientist/Technician 4) Conservation/Restoration Biology 5) Natural Resource Management 6) Soil Scientist 7) Wildlife Biologist/Management 8) Environmental Risk Assessment 9) Environmental Law and Policy
Suitable for Law and Business degrees: Not as preparation for Physical Science Graduate School.	Possible Graduate School in natural science, policy, law and business fields, depending on the combination of Analytical Skill and Environmental Emphasis selections.
Website: TBD	Website: http://www2.ca.uky.edu/nres/
Note that the suitability of a specific job, with a B.A. or B.S. degree will ultimately depend on the student's qualifications and career opportunities. B.A. graduates could secure "science" jobs and BS graduates could secure "humanities" jobs.	

II. Comprehensive Program Description and Complete Curriculum

A. General Education Requirements

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.

There will be opportunities for developing new UK Core courses within the ENS Program and having these cross-listed with various departments. This could take place through the ENS 300 Special Topics course. ENS 300 would also be useful for meeting the A&S B.A. requirement for courses at or above the 300-level.

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

1. Natural and Physical Sciences

GEO 130: Earth's Physical Environment
GEO 135: Global Climate Change
GLY 110: Endangered Planet: An Intro. to Environ. Geology
GLY 120: Sustainable Planet: The Geology of Natural Resources

2. Social Sciences

ECO 101: Contemporary Economic Issues*
SOC 360: Environmental Sociology
SOC 363: Environmental Justice
*ENS students will be encouraged to take this course to understand the importance of economics to sustainability.

3. Citizenship: Global Dynamics

GEO 131: Introduction to Global Environmental Issues
SAG 201: Cultural Perspectives on Sustainability
ANT 225: Culture, Environmental and Global Issues
ANT 311: Global Dreams and Realities in a "Flat World"

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

As the Program operates it will become possible to suggest specific General Education courses (beyond the list shown above) that are ideally suited for the ENS Themes that will begin emerging. Thus, the ENS Program will eventually list the General Education courses that are most suitable for the ENS Areas and the eventual ENS Themes.

B. College of Arts & Sciences Requirements

ENS 200 and ENS 400 would satisfy the A&S natural sciences requirement (see table on previous page). When approved, ENS 202 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 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.

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**	

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.

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. 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 Environment Area of expertise.

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 environmental issues as they arise in public policy individual lifestyles.
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 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 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. Potential Independent Study and/or Capstone Projects include:

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 investigate many issues including: labor conditions, economic impacts on the state, environmental impact of production transportation and marketing, and consumer awareness of implications.

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. 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. Conduct research to determine barriers to behavior change that is sustainability-oriented (though not necessarily sustainability motivated) among different sectors of UK's population.

viii. Begin an evaluation of Organic Farming with a visit to the local Farmer's Market. Determine the impact to UK and the local economy if all of UK's food came from organic farms. How could this be achieved?

E. Major Requirements

Courses will be offered in the three Areas of Expertise: Economics, Environment, and Society. These are listed below and on the following pages. The requirement is that 24 credits must be taken, with15 credits in one Area, 6 credits in a second Area and 3 credits in a third Area. This could correspond to the "5:2:1 Rule" of five courses, two courses, and one course in each of the three Areas. The College of Arts & Sciences B.A. requires a minimum of 42 major credits with 24 credits at the 300-level or above. Overall, 39 credits must be completed at the 300-level and above.

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. In time, Thematic Concentrations will be identified and developed based on the clusters of courses selected by the students. 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 Area of Expertise

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. 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 courses related to economics and those planning to go to Law School may focus on policy courses.

Course	Cr	Title	Prereqs	Offered
ECO 201	3	Principles of Economics I *Required for this Area*	none	S,F 10,11
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
NRE 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
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
NRE 381	3	Natural Resource Policy Analysis	NRE 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
ECO 410	3	Environmental Economics	ECO 202	sporadic
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 NRE 545)	ECO 201	F08, F09, F10
GEO 550	3	Sustainable Resource Development and Environmental Management	GEO 130 or 210	

2. Environment Area of Expertise

This area will build upon the fundamental natural science knowledge obtained in ENS 202 and the subjects taken to fulfill the A&S requirements. Students will be able to select from courses spanning a wide range of environmental subjects in order to focus on a subject of their specific interest. For example, this Area could be used to observe how societies have influenced the natural world from historic to modern times, the impact of development on ecology, and how climate change today compares to changes that occurred in the past.

Course	Cr	Title	Prerequisites	Offered
FOR 219	4	Dendrology	None	F09, F10, F11
GLY 220	4	Principles of Physical Geology	None	S,F 10, 11
FOR 230	3	Conservation Biology	None	F10, F11
GEO 231 *OR*	3*	Environment and Development	None	F11
ENG 232	3	Literature and Place	None	S10, F10, S11
GEO 235	3	Environmental Management and Policy	None	F08, 09, 10
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
ANT 241	3	Origins of Old World Civilization	None	S10, S11
ANT 242	3	Origins of New World Civilization	None	F10, S11, F11
BIO 303	4	Introduction to Evolution	BIO 148, 152, 155	F11, S12
BIO 325	4	Introduction to Ecology	BIO 303	S,F 10, 11
GEO 322	3*	Geography of Kentucky	GEO 152, 160, or 172	infrequent
GEO 331	3	Global Environmental Change	GEO 130	
GLY 341 *OR*	3*	Landforms	GLY 220	S01, S02, S03
ANT 342	3	North American Archaeology	ANT 240 or CI	not 10, 11
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
GLY 385	3	Hydrology and Water Resources	GLY 220	F09, F10, F11
BIO 375	3	Behavioral Ecology and Sociobiology	1yr BIO	F09, F10, F11
ENS 395	3	Independent Study: Ecosystems	none	Not Yet
ENG 401	3	Nature Writing	2yrENG	S10
BIO 452G	2	Laboratory in Ecology	BIO 325	S09, S10, S11
GEO 431	3	Political Ecology	None	S11, F11
GEO 530	3	Biogeography and Conservation-clBIO 530	6h BIO,Phys,Geo,or CI	F09, S11
GEO 531	3	Landscape Ecology	6h BIO, Phys Geo or CI	Not Yet
GEO 550	3	Sustainable Resource Development and Environmental Management	GEO 130 or 210	
CE 555	3	Microbial Aspects of Env. Engineering	CHE 105, 107, ENGR, C	F10, F11
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.

3. Society Area of Expertise

This Area explores the way that human society interacts with the environment. "Coupled human- natural systems" (as labeled by the NSF) are a primary driver of environmental change, and also a key source of solutions to environmental problems. This Area will build students' knowledge of the mutually influencing human-environment dynamic.

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
ENG 232	3	Literature and Place	None	S10, F10, S11
HIS 240	3	History of Kentucky	None	S,F 10, 11
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: 20th 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
ENG 336	3	Appalachian Literature	None	F10, S11
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 363	3	Environmental Justice	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

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

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 363	3	Environmental Justice)	SOC101/ CLD102 or ENS201	S,F 10, 11
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

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: 20th Century and Contempora 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 CI 405 or CI	S10, F10, S11
GEO 422	3	Urban Geography	GEO 152, 160, 172 or 222, or CI	F08, F09, S11, F
GEO 485G	3	Urban Planning and Sustainability	GEO 285 or CI	S09, F09, S11
PS 491	3	Sustainable Urban Design	None	F06
GEO 531	3	Landscape Ecology		
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 research advisors for the ENS 395 option (and possibly coincident with departmental independent study courses). 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). Some examples of these future Themes include:

i. Environmental Journalism (discussions with Buck Ryan and Al Cross, in the School of Journalism and Communications).
ii. Resources and Products, Commodity Chains, Life Cycle Assessment
iii. Biodiversity, Conservation, Invasive Species
iv. Global Climate Change, Renewable Energy, Robinson Forest, Mining
v. Environmental Health, History of Environmental Issues, World Citizenship
vi. 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**		
I = Outcome is Introduced **R = Outcome is Reinforced** **E = Outcome is Emphasized** **L = Reinforcement Likely**	**ENS 201: Hum. & Soc. Sci.**	**ENS 202: Nat. Sci. & Policy**	**ENG 205: Intermed. Writing**	**ENS 300: Special Topics**	**PHI 336: Environ. Ethics**	**ENS 400: Capstone Course**	**Economics**	**Environment**	**Society**
Outcomes									
A. Skills and Training									
1. Critical Thinking	I	R	R	R	E	E			
2. Written Communication	I		E	L	E	E			
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				EE				R
3. Impacts of Population on Natural Resources		I						R	L
4. Link Between Local and Global Impacts	I		R		E		R	L	R
5. Ecological Theories		I						R	
6. Biological Diversity		I	R					L	
7. Pollution: Local and Global	I	R					R	R	R
8. Basis of Environmental Problems		I	R		R		R	R	R
9. Solutions to Environmental Problems		I	R		E		R	R	R
10. Connection Between Policy and Science		I	R				E	R	L
11. Traditional Energy Sources		I					R	R	L
12. Renewable Energy		I					R	R	
13. Natural Resources		I					R	R	
14. Climate Change and Impacts		I					R	R	R

All of Section A. Utilized

Curriculum Map (continued)	Core Courses						Areas		
I = Outcome is Introduced R = Outcome is Reinforced E = Outcome is Emphasized L = Reinforcement Likely	ENS 201: Hum. & Soc. Sci.	ENS 202: Nat. Sci. & Policy	ENG 205: Intermed. Writing	ENS 300: Special Topics	PHI 336: Environ. Ethics	ENS 400: Capstone Course	Economics and Policy	Environment	Society
Outcomes									
C. Sustainability Knowledge									
1. Natural Resource Consumption	I	R	R	L	L	R	R	R	L
2. Conservation Needs		I				L		R	
3. Energy Sources and Use		I				R	R	R	L
4. Local Management Program	I			L		L	R		
5. Recycling		I				L	R	L	L
6. Land Use	I	R	L	L		L	R	R	L
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
11. Applied to National and State	I	R		L		L	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
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	
3. Study/Conservation of Local Natural Resources		I	R	L	R	R		L	
4. On-Campus Events	I	R		R		R	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.

H. Program Assessment

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.

It will be important to foster, monitor, and assess student development as they progress through the Program. This will be achieved by conducting a periodic assessment. The assessment 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, 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" It will provide the starting point for the ENS Advisory Board to work from.

Periodic Student Assessments						
Evaluation Metrics	**Assessment Schedule**					
	ENS 201-Wk 1		**3rd Area Crs**		**ENS 400**	
	Score	**Mean**	**Score**	**Mean**	**Score**	**Mean**
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 listing of courses in the Environment Area 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". Now that this course has been approved it 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:	Arts & Sciences	Department:	Chemistry
Major Name:	Environmental & Sustainability Studies	Degree Title:	Bachelor of Arts
Formal Option(s), if any:	Areas of Expertise: 1) Economics 2) Environment 3) Society	Specialty Field w/in Formal Options, if any:	Thematic Concentrations can be created by students in any Area of Expertise. Examples are: 1) Environmental Justice 2) The Built Environment

Date of Contact with Assoc. Provost for Academic Administration[1]:	Sept. 20, 2010	Today's Date:	Sept. 21, 2012
Accrediting Agency (if applicable):	CPE		
Requested Effective Date:	☐ Semester following approval. OR	☒ Specific Date[2]:	Jan. 1, 2013

Contact Person in the Dept:	Prof. David Atwood Mrs. Kari Burchfield	Phone:	257-7304 257-1994	Email:	datwood@uky.edu klburc2@uky.edu

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		Any	3
Humanities		Any	3
Social Sciences		ECO 101 recommended	3
Natural/Physical/Mathematical		Any	3
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]		Any	3
Statistical Inferential Reasoning		Any	3
IV. Citizenship (one course in each area)			
Community, Culture and Citizenship in the USA		Any	3

[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.

	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?

☒ Standard University course offering	Please list: _____
☐ Specific course	Please list: _____

5. How will college-level requirements be satisfied?

☒ Standard college requirement	Please list: I. Foreign Language requirement (9 cr). II. Disciplinary requirement (18 cr) will be satisfied by ENS B.A. requirement of 15 cr in one Area, 6 cr in a 2nd Area and 3 cr in a 3rd Area. The Areas: Economics, Environment, and Society, provide the breadth of interdisciplinary knowledge that is the goal of the A&S Disciplinary Requirements. 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. IV. The Cross-Cultural requirement (6 cr) will be fulfilled by courses other than those listed in the three Areas. There are no preferred courses for IV. based on the ENS degree.
☐ 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

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 15 cr in one Area, 6 cr in a 2nd Area, and 3 cr in a 3rd Area of Expertise. 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 ☒
b. Credit Hours for Major Requirements:	42	
c. Credit Hours for Required Minor:	_____	Not Applicable ☒
d. Credit Hours Needed for Specific Option:	24	Not Applicable ☐
e. Credit Hours Outside of Major Subject in Related Field:	_____	Not Applicable ☒
f. Credit Hours in Technical or Prof. Support Electives:	_____	Not Applicable ☒
g. Minimum Credit Hours of Free/Supportive Electives:	_____	Not Applicable ☒

h. Total Credit Hours Required by Level:

100:	200:	300:	400-500:
none	9-16	min = 24	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")	*Four-Year Graduation Plans for each Area provided in a separate file	**YEAR 1 – SPRING:**	_____
YEAR 2 - FALL :	_____	**YEAR 2 – SPRING:**	_____
YEAR 3 - FALL:	_____	**YEAR 3 - SPRING:**	_____
YEAR 4 - FALL:	_____	**YEAR 4 - SPRING:**	_____

SIGNATURE ROUTING LOG

General Information:

Proposal Type: Course ☐ Program ☒ Other ☐

Proposal Name[1] (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	Jan. 11, 2011	David Atwood / 257-7304 / datwood@uky.edu	David Atwood
Writing Rhetoric and Digital Media, Director	12-14-10	Roxanne Mountford / 257-6985 / mountford@uky.edu	
Philosophy Dept., Chair	1/15/11	David Bradshaw / 257-7107 / dbradsh@uky.edu	
Education Policy Committee	2/1/11 2/1/11	Randall Roorda, Humanities / 257-1033 / rroorda@uky.edu Joanna Badagliacco, Soc. Sci. / 257-4335 / jmb@uky.edu	
A&S, Associate Dean	2/1/11	Anna Bosch / 257-6689 / bosch@uky.edu	

External-to-College Approvals:

UGC 2/24/11 returned for GED approval & revision 4/11/11 2/2/11 revised submitted

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.

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

UNIVERSITY OF KENTUCKY
College of Arts and Sciences

	Year 1				
	Fall	**Credits**		**Spring**	**Credits**
	UK Core Global Dyamics	3		Foreign Language 102	4
	Foreign Language 101	4		UK Core Statistical Reason	3
	UK Core Quantitative Foun	3		UK Core N/P/M	3
	UK Core Comp/Com	3		UK Core Comp/Com	3
		13		A&S Lab	1
					14
	Year 2				
	Fall	**Credits**		**Spring**	**Credits**
	Foreign Language 201	3		Foreign Language 202	3
	UK Core Humanities	3		UK Core Soc.Sci. (ECO 101)	3
	UK Core Arts/Creativity	3		A&S NS	3
Core	ENS 201	3	Core	ENS 202	3
	+Elective*	3		+Elective*	3
		15			15
	Year 3				
	Fall	**Credits**		**Spring**	**Credits**
Core	ENG 205 / 2nd Tier Writing	3	A2	300+ Area (2)	3
Core	ENS 300	3		A&S NS	3
A1	300+ A&S HU	3	Core	PHI 336 / A&S HU	3
A1	300+ Area (1) / A&S SS	3	A1	300+ Area (1) / A&S SS	3
	UK Core Citizenship US	3		300+ Elective(s)*	4
		15			16
	Year 4				
	Fall	**Credits**		**Spring**	**Credits**
A1	300+ Area (1)	3	A2	300+ Area (2)	3
A1	300+ Area (1)	3	A3	300+ Area (3)	3
	300+ Elective*	3	Core	ENS 400	3
	300+ Elective*	3		+Elective*	3
	+Elective*	4		+Elective*	4
		16			16

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.

UNIVERSITY OF KENTUCKY
College of Arts and Sciences

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

Year 1

	Fall	Credits		Spring	Credits
	Gen Ed Soc. Soc. (ECO 101)	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		GEO 160 / Gen Ed Global Cit	3
		13		A&S Lab	1
					14

Year 2

	Fall	Credits		Spring	Credits
	Foreign Language 201	3		Foreign Language 202	3
	Gen Ed Humanities	3	A1	GEO 235	3
	Gen Ed Arts/Creativity	3		Gen Ed Citizenship US	3
Core	ENS 201	3	Core	ENS 202	3
P	ECO 201 (Req)	3		ECO 202	3
		15			15

Year 3

	Fall	Credits		Spring	Credits
Core	ENG 205 / 2nd Tier Writing	3	A2	300+ Area (2)	3
Core	ENS 300	3		A&S NS	3
A1	NRE 301	3	Core	PHI 336 / A&S HU	3
A1	ANT 311/ A&S SS	3		300+ Elective / A&S SS	3
	A&S NS	3		300+ A&S HU	3
		15			15

Year 4

	Fall	Credits		Spring	Credits
A2	300+ Elective	3	A1	AEC 445G	3
A1	GEO 455	3	A3	300+ Elective	3
	Gen Ed N/P/M	3	Core	ENS 400 / A&S NS	3
	ENS 395 (Elective)	3		300+ Elective	3
	+ Elective*	4		+ Elective*	4
		16			16

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

UNIVERSITY OF KENTUCKY
College of Arts and Sciences

Bachelor of Arts in Environmental & Sustainability Studies

Area of Expertise: Environment

Year 1

	Fall	Credits		Spring	Credits
	UK Core Comp/Com	4		Foreign Language 102	4
	Foreign Language 101	4		UK Core Statistical Reason	3
	MA 111 / UK Core QF	3		UK Core Comp/Com	3
	UK Core Citizen US	3	P	GEO 130	3
		14			13

Year 2

	Fall	Credits		Spring	Credits
	Foreign Language 201	3		Foreign Language 202	3
	UK Core Humanities	3		UK Core Soc.Sci. (ECO 101)	3
	UK Core N/P/M	3		A&S HU	3
Core	ENS 201	3	Core	ENS 202	3
	ECO 201	3	P	GLY 220 / A&S NS	3
		15		A&S Lab	1
					16

Year 3

	Fall	Credits		Spring	Credits
Core	ENG 205 / 2nd Tier Writing	3	A2	300+ Area (2)	3
Core	ENS 300	3	A1	GEO 331	3
	UK Core Citizen Global	3	Core	PHI 336 / A&S HU	3
A1	ANT 342/ A&S SS	3	A1	GLY 385	3
	300+ Elective*	3		ENS 395 (Elective)	3
		15			15

Year 4

	Fall	Credits		Spring	Credits
A1	ENG 401	3		A&S SS	3
A1	GEO 351	3	A3	300+ Elective	3
A2	300+ Elective	3	Core	ENS 400 / A&S NS	3
	300+ A&S HU	3		UK Core A/C	3
	+Elective*	4		+300+Elective*	4
		16			16

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.

»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.

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

UNIVERSITY OF KENTUCKY
College of Arts and Sciences

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

	Year 1				
	Fall	**Credits**		**Spring**	**Credits**
	UK Core Comp/Com	3		Foreign Language 102	4
	Foreign Language 101	4		UK Core Comp/Com	3
	MA 111 / UK Core QF	3		UK Core N/P/M	3
	UK Core Citizen US	3		UK Core Citizen Global	3
		13		A&S Lab	1
					14
	Year 2				
	Fall	**Credits**		**Spring**	**Credits**
	Foreign Language 201	3		Foreign Language 202	3
	UK Core Humanities	3		UK Core SS (ECO 101)	3
	UK Core A/C	3		GEO 130 / A&S NS	3
Core	ENS 201	3	Core	ENS 202	3
	+Elective*	3		UK Core Statistical Reason	3
		15			15
	Year 3				
	Fall	**Credits**		**Spring**	**Credits**
Core	ENG 205 / 2nd Tier Writing	3	A2	ENS 395	3
Core	ENS 300	3		SOC 304	3
	+Elective*	4	Core	PHI 336 / A&S HU	3
A1	GEO 321 / A&S SS	3	A1	SOC 380 / A&S SS	3
	A&S NS	3	A1	PS 491	3
		16			15
	Year 4				
	Fall	**Credits**		**Spring**	**Credits**
	300+ Elective	3	A1	SOC 360	3
A1	GEO 321	3	A3	300+ Elective	3
	300+ Elective*	3	Core	ENS 400 / A&S NS	3
A2	300+ A&S HU	3		300+ Elective*	3
	+Elective*	4		+Elective*	4
		16			16

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.

Appendix I.

UNIVERSITY OF KENTUCKY

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

From: "M. Smith" <mssmith@email.uky.edu>
Date: Fri, 30 Mar 2012 10:34:35 -0400
To: Mike Mullen <mmullen@uky.edu>, "Grabau, Larry" <larry.grabau@uky.edu>, Mark Kornbluh <kornbluh@uky.edu>, "Arthur, Mary" <marthur@uky.edu>
Subject: FW: ENS proposal

Mike,

This is in response to the request from Undergraduate Council that I comment on the proposed ENS degree proposal. As you are well aware, this proposal has generated much attention and a variety of concerns from our faculty. Ultimately the Sustainable Ag program leadership chose to endorse the proposal. Our NRES leadership requested changes. However, I am certain we all share a common goal of collaborating with A&S and other colleges to develop a complimentary and synergistic portfolio of student options in environment and sustainability. As long and winding as it was, I feel this process sets a truly important precedent for collaboration of university and college administration and faculty across college lines.

On behalf of the College of Agriculture, I want to express my appreciation to David Atwood and other faculty leaders of the ENS proposal for their responsiveness to those valid questions raised by our NRES leadership. My own opinion is that much progress has been made in both defining and differentiating ENS and NRES.

I believe that any remaining issues are manageable. Going forward they can and should be addressed collaboratively as ENS is implemented and NRES develops. It appears that a significant remaining source of concern from NRES relates to the comparison of the two majors with regard to career options and opportunities. I have invited Mary Arthur to recommend possible edits of the pertinent table in the proposal. This is attached. My request is that you and David and, presumably the UC, consider these proposed edits before the approved ENS proposal moves on. Of course, we would like to know the final wording, and we are available for any necessary discussion.

Earlier in the development of the ENS proposal, I stated that the College administration was not taking a position for or against its approval, but at the same time I did endorse the continuation of the discussion/review process. All along my hope has been that working through the UC process, with full and open debate among the faculty leaders, we would build a mutually beneficial partnership between A&S and Ag that will greatly advance our undergraduate environmental studies opportunities. While there is much work remaining, in my judgment we are on that path. I accept that you and the UC will move the ENS proposal forward, and I commit to supporting the synergy between ENS and NRES.