

UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: _____ Delphis Levia _____ phone number __X3218_____

Department: _____ Geography _____ email address __dlevia@udel.edu__

Action: _____ **Revise Major in Environmental Studies (and concentrations)** _____
(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

Effective term _____ **14F** _____
(use format 04F, 05W)

Current degree _____ **BA** _____
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degree of: _____ **BA** _____
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed name: _____ **Environmental Studies** _____
Proposed new name for revised or new major / minor / concentration / academic unit
(if applicable)

Revising or Deleting:

Undergraduate major / Concentration: _____ **Environmental Studies BA** _____
(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor: _____
(Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change: _____
(**Must attach** your Graduate Program Policy Statement)

Graduate Program of Study: _____
(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration: _____

Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.

List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)?

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the Course Challenge list. If there are no new courses enter “None”)

ENVR 300 Earth Systems: Science and Policy - This course provides students with an integrative framework necessary to understand the systems approach to environmental science and its intersection with environmental policy and management. Students will be introduced to systems theory within environmental science and its relevance to environmental policy to provide grounding to the interdisciplinarity to environmental science and environmental studies.

Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education: <http://www.ugs.udel.edu/gened/>

The Environmental Studies Curriculum supports the 10 goals of undergraduate education in the following ways:

1. Courses in the major require that students communicate effectively in verbal and written ways.
2. Students will need to use information technologies, use quantitative reasoning and critical thinking skills.
3. Students will be asked to integrate in-class learning in solving real life problems.
4. Students will understand the impact of humans on the environment and *vice versa* locally and globally.
5. Students will work and learn independently and collaboratively, integrating various concentrations, perspectives and diverse ways of thinking that underlie the search for knowledge in the arts, humanities, sciences and social sciences.
6. Students will explore environmentally related ethical questions and implications of individual and societal choices on individuals, communities, and the planet.
7. Students will develop intellectual curiosity, confidence, and understand the need for lifelong engagement in learning.
8. Students will develop an integrated, international perspective regarding countries, populations and the environment.
9. Students will integrate and demonstrate classroom skills and knowledge in at least one field related experience.

Identify other units affected by the proposed changes:

(Attach permission from the affected units. If no other unit is affected, enter “None”)

Department of History
Energy and Environmental Policy Program
Environmental Humanities Program
Department of Applied Economics and Statistics
Department of Geological Sciences
Department of Geography
Department of Economics
Department of Mathematical Sciences
Department of Entomology and Wildlife Ecology

Department of Chemistry
Department of Plant and Soil Sciences
Department of Civil & Environmental Engineering
Department of Political Science & International Relations
School of Urban Affairs and Public Policy
Department of Biological Sciences
School of Marine Science and Policy
Department of Business Administration

Describe the rationale for the proposed program change(s):

(Explain your reasons for creating, revising, or deleting the curriculum or program.)

As a part of its Path to Prominence™, the University of Delaware is focused on becoming a greener, more environmentally aware campus and on highlighting and enhancing opportunities for undergraduates to engage in environmental degree programs. Specifically, the goals outlined in the P2P state that UD will:

- Strive to make environmental awareness and stewardship an integral part of every student's educational experience.

- Develop environmental degree programs that promote cross-fertilization of science and policy.
- Define additional degree tracks and concentrations as well as opportunities for self-designed programs.
- Develop environmentally focused study abroad programs.
- Enhance UD's emphasis on interdisciplinary graduate programs
- Cultivate opportunities for science and engineering to interact with emerging business, social, and cultural issues of an environmentally aware world.

The above text provides the framework and context under which the environmental science and environmental studies programs at UD were revised and created, respectively, in 2009. Building upon the success of the major programmatic revisions of 2009, and seeking to improve the programs based on the past four years of experience, the Environmental Council (formed by Provost Rich in 2008 to reflect the multiple units engaged in delivering degree content) sought to revise the Environmental Studies Program. Armed with a strategic assessment of UD's Environmental Science and Studies Programs conducted by Dr. Shirley Vincent (Appendix A), an international authority on interdisciplinary environmental education from the National Council of Science and the Environment, the Environmental Council sought to revise the program. A primary goal of the Council was to utilize the constructive feedback contained within Dr. Vincent's strategic assessment, while optimizing the uniquely Delawarean aspects of the program. The other primary goal of the programmatic revision is to streamline the administration and structure of the program in order to make it more functional and less confusing for UD students. The Council met regularly over the 2012-2013 academic year to discuss programmatic revisions that would be best for UD students. It is a faculty based Council with the following members:

Council members include:

- Tracy Deliberty (Geography)
- Paul Imhoff (Civil and Environmental Engineering)
- Jan Johnson (Political Science and International Relations)
- Murray Johnston (Chemistry and Biochemistry)
- Gerald Kaufmann (Urban Affairs and Public Policy)
- John Madsen (Geological Sciences)
- Tom Sims (Plant and Soil Science)
- Steven Hastings (Applied Economics and Statistics)
- Franklin Newton (CEOE)
- Del Levia (Director, Environmental Science and Environmental Studies Programs)
- Nancy Targett (*Ex-officio*, CEOE)

Nationally there are 652 institutions that award 804 undergraduate interdisciplinary environmental degrees (Vincent, personal communication). Of these, 373 (46%) are Environmental Science(s) programs, 255 (32%) are Environmental Studies, and 176 (22%) had other names such as environmental policy and management and water resources. Environmental Science programs on average graduate 26 students. Environmental Studies programs graduate, on average, more than twice that number (54).

In an effort to improve the Environmental Studies degree at UD and to make the program more accessible and less structurally confusing to students, this proposal builds upon the strengths of the existing program and restructures the program's administration. It aligns with the goals of the UD strategic plan in 3 ways:

1. It is more broadly interdisciplinary, integrated across academic units and includes cross-cutting themes which mirror the interdisciplinary core (explained in more detail in next section).
2. It includes courses in natural sciences as well as social science and policy that will help the environmental studies major understand the societal context of his/her work. This foundation helps students appreciate the interconnectedness between understanding natural science processes and their applications and the social, political, and institutional frameworks in which environmental issues are considered. The new ENSC 300 course is a significant step in that direction.
3. It connects students majoring in Environmental Science and Environmental Studies (see separate proposal for a BS in Environmental Science).

The goal is to give students in the program a deeper understanding of and appreciation for the environment and environmental systems, the impact of humans on the environment and environmental impacts on humans, the importance of environmental understanding when making economic, political and other policy choices. Our goal is to give students in the program a broad-based, interdisciplinary introduction to environmental policies and issues; the common analytical tools needed to explore them in depth through their specific concentration areas; and the ability to integrate and synthesize information from a multidisciplinary perspective in oral and written format through a capstone course.

In this proposal, the required introductory course (ENSC101 Introduction to the Environment) and a capstone course (ENSC 450 Proseminar: The Environment) would be complemented by the ENSC/ENVR 300 course required for both the BS in Environmental Science and the BA in Environmental Studies programs. One of the outcomes from such a requirement would be the exposure of students to a more integrated perspective toward the development of strategies, policies and approaches aimed at addressing complex environmental issues.

The prior version of the program consisted of a core heavy major and concentrations. While the core heavy major is justified given the breadth and scope of environmental studies, the concentrations experienced some problems. In some cases they lacked focus and did not reinforce the true cross-cutting nature of environmental studies. In other cases, students sometimes had trouble meeting concentration requirements since some courses were not offered on a regular basis (or at all), despite an initial nod of approval from those units. More fundamentally, concentrations did not reflect the intrinsic interdisciplinarity of environmental studies and served more as academic “silos” than areas of concentration.

This revision enhances to the interdisciplinarity of the core. Dr. Vincent’s report (Appendix A) argued that the present program could benefit from a more adaptive management approach. As such, the Council has developed themes within the major that mirror the interdisciplinary core and capitalize on some aspects of adaptive management. The themes embrace the complex and varied nature of environmental studies and equip students with skills to excel in the job market. They celebrate the cross-cutting activity which is the hallmark of environmental studies. Arguably, such themes will better prepare students for careers and graduate school. Themes provide students more latitude to tailor their academic career and explore the cross-cutting issues of environmental studies. The programmatic revisions allow UD to capitalize on existing strengths in the environmental arena and offers more flexibility and student opportunities with the thematic approach. The revised symmetry between the core and themes puts UD at the forefront of environmental education. The idea was well received at an international meeting in Vienna, Austria from scientists and educators around the globe.

In this “thematic” degree program model, students can either:

1. Enter the program as an Environmental Studies major with a theme already declared, OR
2. Enter the program as a general Environmental Studies major and select a specific theme after taking some of the initial courses required for the major. Students **MUST** ultimately select a theme.

Students’ “home” college will be located within the College of Earth, Ocean and Environment. Dr. Vincent found that current UD students with varying concentrations identify CEOE as their “home College” and interdisciplinary programs benefit when students can form a cohort and benefit from social interactions. Many interdisciplinary programs face the challenge of creating a sense of identity among students since they take courses over multiple units; this sometimes prevents the growth of such programs. While students should and

will take courses across UD, we can streamline processes, decrease their level of anxiety, and build a sense of community by housing them all in CEOE. This is consistent with Dr. Vincent's recommendations (Appendix A). Students will be assigned an advisor on the basis of their chosen theme. In those cases where the student has not yet selected a concentration, students will be assigned an academic advisor from one of the themes.

Recognizing that this is a degree program that leverages the expertise of many UD faculty members, the Environmental Council will continue to oversee the Program. The Council will continue to be composed of faculty from participating programs, provide oversight for curricular matters and student advisement within the program. The chair of the Council will be designated by the Dean of CEOE. Day-to-day operations will be administered by the faculty director of the Environmental Science/Studies Program who resides in the Department of Geography.

Upon completion of degree requirements, students will receive a Bachelor of Arts in Environmental Studies with a specific theme.

Program Requirements:

(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.)

Bachelor of Arts in Environmental Studies (BA ENVR): The BA in Environmental Studies assists students in gaining a deeper understanding of and appreciation for the environment and environmental systems, the impact of humans on the environment and environmental impacts on humans, the importance of environmental understanding when making economic, political and other policy choices.

The BA in Environmental Studies program's foundation courses are in the social sciences, humanities, and natural sciences with a focus in understanding the environmental field. This, along with their specific concentration area, allows students in connecting science and society and balancing the needs of humans and other inhabitants with the needs to conserve the earth's precious resources while developing strategies, policies and approaches to solve environmental issues and reduce environmental impact.

<u>CURRENT</u>	<u>PROPOSED</u>
<u>General and University Requirements:</u>	
ENGL 110 Critical Reading & Writing (min grade C-) 3	ENGL 110 Critical Reading & Writing (min grade C-) 3
First Year Experience (fulfilled by ENSC 101+ FYE seminar) 4	First Year Experience (fulfilled by ENSC 101+ FYE seminar) 4
Discovery Learning Experience (fulfilled by field course) 3	University breadth requirements 12
Multicultural requirement 3	Discovery Learning Experience (fulfilled by field course) 3
Second Writing Course (fulfilled by ENSC 450) 3	Multicultural requirement 3
Foreign Language 0-8	Second Writing Course (fulfilled by ENSC 450) 3
Math requirement 0-4	Foreign Language 0-12
	Math requirement 0-4
<u>Program Breadth Requirements:</u>	
<i>At least 2 different areas must be represented in each group.</i>	
Group A Understanding and appreciation of the creative arts and humanities 9	Creative arts and humanities 6
Group B The study of culture and institutions over time 9	History and cultural change 6
Group C Empirically based study of human beings and their environment. 9	Social and behavioral sciences 6
	Mathematics, Natural Sciences, and Technology 7
Group D The study of natural phenomena through experiment or analysis 10	
	<u>Core Requirements:</u>
	ENSC 101 Introduction to the Environment 3
	BISC 104 Principles of Biology with Laboratory 4
	CHEM 100 Chemistry and Human Environment 3
	GEOL 105 Geological Hazards 3
	GEOL 115 Geological Hazards Laboratory 1
	APEC 100 Sustainable Development 3

Core Requirements:

ENSC 101 Introduction to the Environment	4
BISC 107 Elementary Evolutionary Ecology	3
CHEM 100 Chemistry and Human Environment	3
GEOL 105 Geological Hazards	3
GEOL 115 Geological Hazards Laboratory	1
FREC 100 Sustainable Development	3
ECON151 Introduction to Microeconomics OR FREC 150 Economics of Agriculture & Natural Resources	3
ECON/FREC 343 Environmental Economics	3
GEOG 235 Conservation of Natural Resources	3
GEOG 236 Conservation: Global Issues	3
MAST 200 The Oceans	3
POSC 240 Introduction to International Relations	3
POSC 350 Politics and the Environment	3
PHIL 448 Environmental Ethics	3
STAT 200 Basic Statistical Practice	3

Field Experience: (3-6 cr)

An approved studies experience in which the student integrates the components of his or her concentration in an experiential learning environment. This requirement could be fulfilled by an internship, study abroad experience and/or a research experience.

Studies Concentrations: (15-18 cr)

5-6 courses clustered in concentrations that are distributed throughout the colleges and across disciplines (see listings below).

Capstone Course:

ENSC 450: Proseminar: The Environment 3
This capstone course serves to be a culminating experience and is to be completed during the last semester of the senior year. This course will engage students in an exploration and discussion of the history and state of environmental studies and its connection to local, regional, national and global scale environmental issues. Students will develop and refine critical thinking skills and interdisciplinary problem-solving strategies. It serves to be a culminating experience for students on the "science-side" and the "studies-side" to collaboratively solve problems and discuss issues in the current environmental literature.

Electives: After required courses are completed, sufficient credits must be taken to meet the total minimum credits required for the degree.

Total Credits for Degree: 124

Concentration in International Environmental Politics and Policy studies theories of international relations, international environmental treaties and agreements, and the international dimension of environmental policy issues.

- GEOG 422/622 Resources, Development, And The Environment
OR
- POSC 408 International Organization

ECON151 Introduction to Microeconomics OR APEC 150 Economics of Agriculture & Natural Resources	3
ECON/APEC 343 Environmental Economics	3
GEOG 235 Conservation of Natural Resources	3
GEOG 372 Introduction to GIS OR APEC 480 Geographic Information Systems in Natural Resource Management	3/4
MAST 200 The Oceans	3
POSC 240 Introduction to Global Politics OR GEOG 236 Conservation: Global Issues	3
POSC 350 Politics and the Environment	3
ENVR 300: Earth Systems: Science and Policy	3
PHIL 448 Environmental Ethics	3
STAT 200 Basic Statistical Practice	3

Field Experience: (3-6 cr)

An approved studies experience in which the student integrates the components of his or her concentration in an experiential learning environment. This requirement could be fulfilled by an internship, study abroad experience and/or a research experience.

Studies Themes: (12-15 cr)

4-5 courses clustered in themes across disciplines (see listings below).

Capstone Course:

ENSC 450: Proseminar: The Environment 3
This capstone course serves to be a culminating experience and is to be completed during the last semester of the senior year. This course will engage students in an exploration and discussion of the history and state of environmental studies and its connection to local, regional, national and global scale environmental issues. Students will develop and refine critical thinking skills and interdisciplinary problem-solving strategies. It serves to be a culminating experience for students on the "science-side" and the "studies-side" to collaboratively solve problems and discuss issues in the current environmental literature.

Electives: After required courses are completed, sufficient credits must be taken to meet the total minimum credits required for the degree.

Total Credits for Degree: 124

Theme in Environmental Advocacy This theme is designed for students who may wish to pursue careers in environmental advocacy either through public or nonprofit organizations. Skills and knowledge useful to advocates include policy analysis, journalism, understanding how people react to risk and disasters, the role of public opinion, interest groups and parties in the policy process, and organizational management and leadership. Students will take 5 courses to fulfill this theme.

In junior or senior year, must take the following:

MAST692 Environmental Values, Movements and Policy

Choose any 4 courses from the following list except that students may not take both UAPP325 and UAPP467, nor may they take more than two of the following courses: UAPP330, UAPP 334, UAPP410, UAPP419, UAPP472

- APEC450 Environmental Law
- ENGL 409 Topics in Journalism: Environmental Journalism
- HIST 337 American Environmental History
- POSC318 Public Opinion
- POSC320 Parties and Interest Groups
- POSC362 Diplomacy
- POSC363 International Law
- POSC380 Introduction to Law

- *Four of the following:*
 - GEOG/POSC 329 International Migration
 - MAST 673 International Law (LEST 673, POSC 604)
 - POSC 362 Diplomacy
 - POSC 363 International Law And Organization
 - POSC 409 Contemporary Problems In World Politics (when topic is appropriate)
 - POSC 451 Problems In Policy & Administration (when topic is appropriate, e.g., Comparative Environmental Policy & Politics)
 - POSC 640 International Development Policy and Administration
 - SOCI 331 World Population: Profiles And Trends

Concentration in Environmental Law, Policy and Politics studies environmental movements and the development of institutional processes, policies and laws that impact environmental quality. It studies specific policy areas and the connection between environmental progress and economic development.

Student must select 5 courses from the following 2 groups:

- *Two or three of the following:*
 - FREC 450 Topics In Environmental Law
 - GEOG 240 Environment and Behavior
 - GEOG 449 Environment and Society
 - HIST 337 American Environmental History
 - MAST 692 Environmental Values, Movements And Policy
 - POSC 380 Introduction To Law
 - POSC 363 International Law And Organization
 - SOCI 330 Population, Law And Society
 - SOCI 470 Environmental Sociology

AND

- *Two or three of the following:*
 - ENWC 413 Wildlife Policy and Administration (requires ENWC 201)
 - FREC 406 Agriculture and Natural Resource Policy
 - FREC/UAPP 611 Regional Watershed Management
 - GEOG 320 Water and Society
 - GEOG/UAPP 428/628 Issues In Land Use And Environmental Planning
 - MAST 620/POSC/UAPP 424/624 Energy Policy And Administration
 - MAST 622/POSC/UAPP 626 Conservation And Renewable Energy Policy
 - MAST 670 United States Ocean And Coastal Policy
 - MAST 671 Coastal Processes And Management
 - POSC 451 Topics In Policy And Administration: Climate Change Policy
 - POSC 456/656 Disaster And Politics

Concentration in Environmental Economics and Resource Policy studies the theories and the economic effects of national or local environmental policies and management of

- POSC408 International Organization
- SOCI323 Sociology of Risk
- SOCI471 Disasters, Vulnerability & Development
- UAPP325 Public Policy Analysis
- UAPP330 Public and Nonprofit Administration
- UAPP334 Financial Management Public and Nonprofit
- UAPP410 Politics and the Delivery of Public Policy
- UAPP 419 Policy Leadership and Ethics
- UAPP472 Nonprofit Organizations: Scope, Frameworks and Dynamics
- UAPP467 Environmental Policy Analysis
- UAPP697 Leading Organizations in Public and Nonprofit Sectors

Theme in Environmental Planning and Design This theme emphasizes environmental design, planning, and policy. Students gain knowledge at the interface of design, planning, and policy which will be helpful in developing more sustainable communities. Specific attention is directed to the political, economic, and social dimensions of environmental policies and decision making.

Five of the following:

- APEC 406 Agricultural and Natural Resource Policy
- CIEG 641 Risk Analysis*
- ENEP 424 Sustainable Energy Policy and Planning
- GEOG 315 Newark, Delaware: People, Politics and Place
- GEOG 325 Urban Geography
- GEOG 429 Urban Planning Practicum
- GEOG 434 Plan Sustainable Communities and Regions
- GEOG 449 Environment and Society
- MAST 663 Decision Tools for Policy Analysis
- PLSC 133 Ornamental Horticulture
- PLSC 232 Basic Landscape Design
- UAPP 406 Plan Sustainable Communities & Regions
- UAPP 413 Planning Theory and Urban Policy
- UAPP 429 Theory and Practice of Historical Preservation Planning
- UAPP 451 Issues in Land Use and Environmental Planning
- UAPP 467 Environmental Policy Analysis
- UAPP 467 Urban Planning and Governance
- UAPP 652 Geographic Information Systems in Public Policy

Prerequisites

* CIEG 315 Probability and Statistics for Engineers

Theme in Environment and Society This theme emphasizes how economic, social and environmental policies and decision making affect the ability of human population and societies to support themselves without depleting the Earth's resources and compromising the ability of future societies to meet their needs. The economic, national, and international dimensions of environment and society are emphasized. Key ideas explored in this theme are "conservation," "stewardship," and "living harmoniously with the natural environment" in the larger context of the economy and sustainability.

ECON152 Introduction to Macroeconomics: The National Economy

In junior or senior year, must take the following:

GEOG 422/622 Resources, Development and the Environment

One of the following:

- APEC324 Introduction to Resource Economics
- APEC406 Agricultural and Natural Resource Policy
- APEC410 International Agricultural Trade and Marketing
- ECON311 Economics of Developing Countries
- ECON340 International Economics
- POSC311 Politics of Developing Nations

Two of the following:

natural resources (like land, water, soil, plants, and animals) to preserve them for future generations.

- *Three of the following:*
 - ECON 350 Energy Economics
 - FREC 406 Agriculture and Natural Resource Policy
 - FREC 424 Resource Economics
 - FREC 420 Agriculture in Economic Development
 - FREC 429 Community Economic Development
 - FREC 480 Geographic Information Systems

AND

- *Two of the following:*
 - ENWC 413 Wildlife Policy and Administration (requires ENWC 201)
 - FREC/UAPP 611 Regional Watershed Management
 - FREC/LEST 450 Topic in Environmental Law
 - GEOG 320 Water and Society
 - GEOG 422/622 Resources, Development, and The Environment
 - MAST 622/POSC/UAPP 626 Conservation and Renewable Energy Policy
 - POSC 424 Energy Policy and Administration
 - POSC 456/656 Disaster and Politics

Concentration in Environment, Society and Sustainability *studies the integration of economic, social and environmental policy and decision making relating to the ability for society to live and function without depleting the Earth's resources and compromising the ability of future societies to meet their needs.*

- GEOG 422/622 Resources, Development, and The Environment

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- *Four of the following:*
 - FREC 450 Topics In Environmental Law
 - FREC 424 Resource Economics
 - FREC 429 Community Economic Development
 - GEOG 449 Environment and Society
 - GEOG 320 Water and Society
 - GEOG 345 Cultural Geography
 - GEOG 372 Geographic Information Systems OR
FREC 480 Geographic Information Systems
 - HIST 337 American Environmental History
 - MAST 622/POSC/UAPP 626 Conservation and Renewable Energy Policy
 - MAST 692 Environmental Values, Movements and Policy
 - PLSC 140 People and Plants: Feast or Famine
 - POSC 456/656 Disaster and Politics
 - POSC 640 International Development Policy and Administration
 - SOCI 330 Population, Law and Society
 - SOCI 331 World Population: Profiles and Trends
 - SOCI 470 Environmental Sociology

BUAD309 Management and Organizational Behavior
BUAD429 Sustainability and Green Business
ENEP425 Energy Policy and Administration
ENEP427 Sustainable Energy Policy and Planning
ENWC413 Wildlife Administration & Policy (Prerequisite: ENWC 201)
GEOG310 Social Geography
GEOG315 Newark, Delaware: People, Politics, and Place
GEOG320 Water and Society
GEOG449 Environment and Society
HIST337 American Environmental History
MAST462 Climate Change: Policy, Equity, and Mitigation
MAST628 Offshore Wind Power: Science, Engineering & Policy
MAST622 Conservation and Renewable Energy Policy
MAST660 International and National Ocean Policies
POSC317 Gender and Politics
POSC480 Topics in Environmental Politics

ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson Tracey De Pederdy Date 20 Feb 2014
Dean of College Nancy M. Conroy Date 7 Feb 14
Chairperson, College Curriculum Committee [Signature] Date 14 Feb 14
Chairperson, Senate Com. on UG or GR Studies _____ Date _____
Chairperson, Senate Coordinating Com. _____ Date _____
Secretary, Faculty Senate _____ Date _____
Date of Senate Resolution _____ Date to be Effective _____
Registrar _____ Program Code _____ Date _____
Vice Provost for Academic Affairs & International Programs _____ Date _____
Provost _____ Date _____
Board of Trustee Notification _____ Date _____
Revised 10/23/2007 /khs

Letter of Support by Dr. Shirley Vincent, NCSE
[program evaluator; see Appendix A]

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Approvals from Departments and Programs
Affected by Programmatic Revisions



National Council for Science and the Environment

Improving the scientific basis for environmental decision-making

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February 4, 2014

University of Delaware Faculty Senate

Dear Members of the Senate,

Delphis Levia, the Director of the Environmental Science and Environmental Studies (ESS) programs, asked me to comment on the proposed changes to the degrees and their concentrations. The changes are informed by the recommendations made in my 2011 strategic and comparative assessment, which compares the ESS programs to their peers nationally and draws upon the extensive research conducted by the National Council for Science and the Environment on trends and best practices for interdisciplinary environmental programs. The recommendations were also based upon interviews with the programs' students, faculty and administrators.

I strongly support the four key changes to the ESS programs as described in the proposals. These changes build upon the programs' existing strengths while enhancing their ability to prepare students for environmental careers and will position the ESS programs more competitively in the national interdisciplinary environmental education landscape. The key changes include: 1) redesigning the concentrations to represent interdisciplinary themes that align with environmental career paths and include the key knowledge and professional skills required for interdisciplinary environmental professionals; 2) adding an additional core course in Earth Systems: Science and Policy for both majors to develop knowledge and skills in systems understanding and approaches for complex environmental/sustainability problem-solving; 3) requiring a series of three shared core courses that bring the environmental science and studies student cohorts together at the beginning, middle and end of their studies in a shared problem-solving capstone course; and 4) restructuring the administration of the programs to reflect the students' desire that their home college be the College of Earth, Ocean and Environment which will facilitate their sense of belonging, allow more interaction with other environmental science and studies students, and provide consistency in their advising and program requirements.

I believe these changes will be of great benefit to the ESS students, will further enhance the reputation and competitiveness of the ESS programs, and will position the programs for additional growth and development.

I would be pleased to answer any questions the Senate may have and can be reached by phone at 918-629-5143 or by email at svincent@NCSEonline.org.

Sincerely,

Shirley Vincent, PhD

Director of Education Research

National Council for Science and the Environment



February 4, 2014

MEMORANDUM

TO: Dr. Del Levia, Professor and Faculty Director
ENSC and ENVR Programs

FROM: Dr. Nancy M. Targett
Dean

SUBJECT: Support for changes proposed for the Environmental Studies program

I write to formalize my support for the proposed revisions to the Environmental Studies program that has been submitted for review.

These curricular and administrative changes are a result of recommendations from a program review conducted by an external nationally recognized expert with the specifics developed by the UD multi-college faculty committee that advises you as faculty director of the program.

The changes reflect best practices in the environmental field and bring the degree programs in line with current practices and processes at UD. Additionally and more importantly, the changes help eliminate confusion for students and are in their best interests from a cohort, curricular and preparation standpoint. The thematic areas give students more ability to explore current and future environmental issues such as water resources, renewable energy and earth system and societal connections in a cross and multidisciplinary way.

The Department of Geography and the College of Earth, Ocean, and Environment stand ready to implement these proposed changes. We are committed to serve our students while working closely with our colleagues throughout the university's many colleges and disciplines.

If you have questions or require additional information, please feel free to contact me.



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

3 messages

Delphis Levia <dlevia@udel.edu>

Thu, Feb 6, 2014 at 6:35 PM

Dear Colleague,

I write to you regarding programmatic revisions to the Environmental Science and Environmental Studies degree programs (see attached) which I intend to submit to the Faculty Senate for approval by February 15, 2014. These revisions are the culmination of a year long discussion by the Environmental Council composed of faculty from your College or Department. [Faculty members that served on the Council were: Delphis Levia, Tracy Deliberty, Paul Imhoff, Janet Johnson, Jerry Kaufman, John Madsen, and Steven Hastings. Tom Sims and Murray Johnston participated in initial discussions.]

As Director, I respectfully request an email confirmation or approval from you, on behalf of your College or Department, that you are okay with the Program's continued listing and use of your courses. Many of you have approved use of your courses in the current version of the majors. With a few of exceptions, the reconfigured majors are largely the same so the course demand should remain the same. The big change was a reduction in the number of concentrations to a lower number of more cross-cutting themes that mirror the interdisciplinary core of the majors.

The big course additions are:

PLSC 204/205 for environmental science majors

GEOG 372 or APEC 480 added to core of both majors

ENSC/ENVR 300 for both majors

ECON 151 or APEC 150 for environmental science majors [APEC100 no longer required for environmental science]

Broaden list of theme classes in environmental studies, for example, in UAPP and POSC

Again, I would very much having an email approval from you on or before February 14th.

I thank you for your support of these two important undergraduate interdisciplinary environmental programs.


Kind regards,
Del Levia

--

Delphis F. Levia, Ph.D.
Professor of Ecohydrology
Director, Environmental Science & Environmental Studies
University of Delaware, Newark, DE 19716-2541, USA
Series Editor, Springer-Verlag, Ecological Studies Series
Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

2 attachments

 **FINAL_BS_ENSC_ProgRev_6Feb14.pdf**
79K

 **FINAL_BA_ENVR_ProgRev_6Feb14.pdf**
41K

Blake Meyers <meyers@dbi.udel.edu>
To: Delphis Levia <dlevia@udel.edu>

Thu, Feb 6, 2014 at 11:04 PM

Dear Del,
I approve the use of our classes in the Environmental Science and Environmental Studies degree programs.

best,
Blake

Blake C. Meyers, Ph.D.
Edward F. and Elizabeth Goodman Rosenberg Professor
and Department Chair
Department of Plant and Soil Sciences
University of Delaware

E-mail: meyers@dbi.udel.edu
Phone: [302-831-3418](tel:302-831-3418)

From: "Delphis Levia" <dlevia@udel.edu>
To: "Delphis Levia" <dlevia@udel.edu>
Sent: Thursday, February 6, 2014 6:35:40 PM
Subject: Email approval requested for proposed program revisions by Feb 14th, please

[Quoted text hidden]

Delphis Levia <dlevia@udel.edu>
To: Blake Meyers <meyers@dbi.udel.edu>

Fri, Feb 7, 2014 at 10:07 AM

Dear Blake,

Thank you for your support.

Take care,
Del

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

John A. Pelesko <pelesko@math.udel.edu>

Fri, Feb 7, 2014 at 10:42 AM

To: Delphis Levia <dlevia@udel.edu>

Dear Delphis,

The Department of Mathematical Sciences is happy to continue to support your program and your revisions.

Best,

John A. Pelesko

[Quoted text hidden]

[Quoted text hidden]

--

John A. Pelesko

Professor and Chair

Department of Mathematical Sciences

University of Delaware



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

mckay jenkins <mckay@udel.edu>

Sat, Feb 8, 2014 at 3:41 PM

To: F JR Levia <dlevia@udel.edu>

Dear Professor Levia,

As a co-director of the Environmental Humanities minor, I approve of these revisions to your programs. Especially given the growing variety of environmental programs on campus, I think fewer concentrations with more interdisciplinary opportunities for our students is a fine idea indeed.

Best of luck with the proposal,

mckay jenkins

mckay jenkins
tilghman professor of english
journalism and environmental humanities
university of delaware
www.mckayjenkins.com

[Quoted text hidden]

[Quoted text hidden]

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Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Duncan, Randall Lyle <rlduncan@udel.edu>

Sun, Feb 9, 2014 at 3:58 PM

To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Dear Dr. Levia,

The proposed changes to your major requirements in Environmental Science and Environmental Studies are consistent with our teaching mission. The Department of Biological Sciences supports these changes.

Best regards,

Randy

Randall L. Duncan, Ph.D.

Professor and Chair

Dept. of Biological Sciences

University of Delaware

"Never...never...never...never give up!!"

Winston Churchill

From: Delphis Levia [mailto:dlevia@udel.edu]

Sent: Thursday, February 06, 2014 6:36 PM

To: Levia, Delphis F, JR

Subject: Email approval requested for proposed program revisions by Feb 14th, please

Dear Colleague,

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Murray Johnston <mvj@udel.edu>

Sun, Feb 9, 2014 at 7:32 PM

To: Delphis Levia <dlevia@udel.edu>

Dear Del,

On behalf of the Chemistry and Biochemistry Department, I confirm that we approve of these program revisions.

Thank you for shepherding this program so well.

Best,

Murray

Murray V. Johnston
Professor and Chair
Department of Chemistry and Biochemistry
University of Delaware
Newark, DE 19716

Office: Brown Laboratory, Room 102C
Phone: [302.831.1247](tel:302.831.1247)
Fax: [302.831.6335](tel:302.831.6335)
Email: mvj@udel.edu
Internet: www.udel.edu/chem/johnston/

[Quoted text hidden]

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Butkiewicz, James L <jimb@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Tue, Feb 11, 2014 at 3:28 PM

Dear Del,

I approve of the continued listing of Economics courses for your programs.

Jim Butkiewicz

From: Delphis Levia [mailto:dlevia@udel.edu]
Sent: Thursday, February 06, 2014 6:36 PM
To: Levia, Delphis F, JR
Subject: Email approval requested for proposed program revisions by Feb 14th, please

Dear Colleague,

[Quoted text hidden]
[Quoted text hidden]
[Quoted text hidden]
[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Support for ENSC and ENVR programs

1 message

Moline, Mark Alan <mmoline@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Wed, Feb 12, 2014 at 10:58 AM

Dear Dr. Levia,

I would like to document the support of the School of Marine Science and Policy for the programmatic revisions of both the ENSC and ENVR programs. Both programs draw significantly from a broad set of courses offered in the School and uniquely integrate courses from other University units to offer students a strong curriculum in these growing interdisciplinary areas. Courses from SMSP that these two programs draw on include the following:

MAST 200 The Oceans

MAST 673 International Law (LEST 673, POSC 604)

MAST 663 Decision Tools for Policy Analysis

MAST 692 Environmental Values, Movements And
Policy

MAST 620/POSC/UAPP 424/624 Energy Policy And
Administration

MAST 670 United States Ocean And Coastal Policy

MAST 671 Coastal Processes And Management

MAST 462 Climate Change: Policy, Equity, and Mitigation

MAST 628 Offshore Wind Power: Science, Engineering & Policy

MAST 622 Conservation and Renewable Energy Policy

MAST 660 International and National Ocean Policies

MAST 482 Introduction to Ocean Science

MAST/GEOG 408 Radiative Transfer in Ocean & Atmosphere

MAST/GEOG 409 The Ocean and Climate Variation

MAST 427/627: Marine Biology

MAST 629: Topics in Marine Ecology

MAST 402/902 Introduction to Physical Ocean Science

MAST/GEOG 408 Radiative Transfer in Ocean & Atmosphere

MAST 421/621 Coastal Field Biology

MAST 427/627 Marine Biology

MAST 437/637 Geological Oceanography

MAST 441 Algal Ecological Physiology

MAST 442 Coral Reef Ecology

MAST 451/651 Marine Invertebrate Diversity

MAST 630 Ichthyology

MAST 646 Chemical Oceanography

Representing the faculty of the School, we are fully supportive of formalizing these programs and look forward to continued interaction with these students.

Regards,

Mark

Mark A. Moline, Director

School of Marine Science and Policy

College of Earth, Ocean, and Environment

University of Delaware

700 Pilottown Road

Lewes, DE 19958

(302) 645-4263

mmoline@udel.edu



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Watson, George H. <ghw@art-sci.udel.edu>

Thu, Feb 13, 2014 at 5:34 PM

To: Delphis Levia <dlevia@udel.edu>

Cc: "'Ardis, Ann' (aardis@UDeL.Edu)" <aardis@udel.edu>, "Wilson, David C." <dcwilson@art-sci.udel.edu>, "Doren, Douglas J." <doren@art-sci.udel.edu>, "Shenkle, Cynthia W." <cshenkle@art-sci.udel.edu>

This looks fine to us, Del.

George Watson

Dean, College of Arts & Sciences

From: Delphis Levia [mailto:dlevia@udel.edu]

Sent: Thursday, February 06, 2014 6:36 PM

To: Delphis Levia

Subject: Email approval requested for proposed program revisions by Feb 14th, please

Dear Colleague,

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

2 attachments



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41K



Delphis Levia <dlevia@udel.edu>

Approval for ENSC and ENVR program revisions

Aristigueta, Maria P <mariaa@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Fri, Feb 14, 2014 at 5:04 PM

Delphis, I approve the courses from our School with one change. UAPP 604 Leadership should be UAPP 697 Leading Organizations in Public and Nonprofit Sectors. The other changes are all fine.

Thanks and best wishes, Maria

Maria P. Aristigueta

Director, School of Public Policy and Administration

Charles P. Messick Professor of Public Administration

Vice President, American Society for Public Administration

[\(302\) 831-4570](tel:(302)831-4570)

www.sppa.udel.edu

<http://www.ipa.udel.edu/directory/homepages/aristigueta.html>

From: Delphis Levia [mailto:dlevia@udel.edu]
Sent: Friday, February 14, 2014 4:57 PM
To: Aristigueta, Maria P
Subject: Re: Approval for ENSC and ENVR program revisions

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Please send email approval for revisions to environmental science and studies

Mohun, Arwen Palmer <mohun@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Mon, Feb 17, 2014 at 8:52 AM

Dear Del,

Sorry for the delay. I needed to check with Adam Rome who, as you know, is the primary stakeholder in these changes. He has let me know that he believes the changes will improve the program. I am therefore happy to tell you that the History Department approves the proposed revisions.

With best wishes,

Arwen

Arwen P. Mohun
Professor and Chair
Department of History
University of Delaware

From: Delphis Levia [mailto:dlevia@udel.edu]
Sent: Monday, February 17, 2014 8:51 AM
To: Mohun, Arwen Palmer
Subject: Please send email approval for revisions to environmental science and studies

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

BUAD309 and 429 for Environmental Studies Major

2 messages

Shapiro, Stewart A <sshapiro@udel.edu>

Mon, Feb 17, 2014 at 2:16 PM

To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Delphis,

The Department of Business administration is fine with BUAD309 and BUAD429 being in the list of electives that students choose form in the Environmental Studies major.

With regard to BUAD429 Sustainability and Green Business I do want to point out that whoever is advising or monitoring students in the Environmental Studies major should be made aware that BUAD429 is not always Sustainability and Green Business. In the recent past and for the next year the only sections of BUAD429 are and will be Sustainability and Green Business which is taught by supplemental faculty. BUAD429 is actually Selected Topics in Management, so there could be sections of BUAD429 that are on completely different topics than Sustainability and Green Business.

Regards,

Stewart Shapiro

Stewart Shapiro, Ph.D.

Chairman, Department of Business Administration

Professor of Marketing

University of Delaware

Alfred Lerner College of Business & Economics

237 Alfred Lerner Hall | Newark, DE 19716

P: 302-831-2516 | F: 302-831-4196 | E: sshapiro@udel.edu

web: www.lerner.udel.edu

Delphis Levia <dlevia@udel.edu>

Mon, Feb 17, 2014 at 3:23 PM

To: "Shapiro, Stewart A" <sshapiro@udel.edu>

Stewart,

Thank you for your support and this information.

Take care,

Del Levia

Delphis F. Levia, Ph.D.

Professor of Ecohydrology

Director, Environmental Science & Environmental Studies

University of Delaware, Newark, DE 19716-2541, USA

Series Editor, Ecological Studies- Analysis and Synthesis (Springer-Verlag)

Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Shenton, Tripp <shenton@udel.edu>

Mon, Feb 17, 2014 at 9:31 AM

To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Cc: "Ogunnaike, Babatunde A." <ogunnaik@udel.edu>, "Imhoff, Paul T." <imhoff@udel.edu>, "Barner, Kenneth E." <barner@udel.edu>, "Advani, Suresh G" <advani@udel.edu>, "Lenhoff, Abraham M" <lenhoff@udel.edu>, "Martin, David C." <milty@udel.edu>

Approved

Harry W. "Tripp" Shenton III, Ph.D.

Professor and Chair

Department of Civil and Env. Engineering

301-B Dupont Hall

University of Delaware

Newark, Delaware 19716

(302)831-2447

(302)831-3640 Fax

Email: shenton@udel.edu

From: Delphis Levia [mailto:dlevia@udel.edu]

Sent: Saturday, February 15, 2014 1:54 PM

To: Shenton, Tripp; Barner, Kenneth E.; Advani, Suresh G; Lenhoff, Abraham M; Martin, David C.

Cc: Ogunnaike, Babatunde A.; Imhoff, Paul T.

Subject: Re: FW: Email approval requested for proposed program revisions by Feb 14th, please

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Ogunnaike, Babatunde A. <ogunnaik@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Mon, Feb 17, 2014 at 4:33 PM

You have my approval.

Babatunde A. Ogunnaike

William L. Friend Chaired Professor of Chemical Engineering

Dean, College of Engineering

University of Delaware,

Newark, DE 19716

302-831-8017

From: Delphis Levia [mailto:dlevia@udel.edu]

Sent: Monday, February 17, 2014 3:55 PM

To: Ogunnaike, Babatunde A.

Subject: Re: Email approval requested for proposed program revisions by Feb 14th, please

Dear Dean Ogunnaike,

All of the COE departmental chairs [CIEG, ELEG, MEEG, MSEG, CHEG] have now given support for the proposed environmental science and studies programmatic revisions. Thank you. If it is possible, and you wish to send an email approval as well, it would also be greatly appreciated. Thank you.

Kind regards,

Del Levia

Delphis F. Levia, Ph.D.

Professor of Ecohydrology

Director, Environmental Science & Environmental Studies

University of Delaware, Newark, DE 19716-2541, USA

Series Editor, Ecological Studies- Analysis and Synthesis (Springer-Verlag)

Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

On Mon, Feb 17, 2014 at 9:40 AM, A. M. Lenhoff <lenhoff@udel.edu> wrote:



Delphis Levia <dlevia@udel.edu>

Email approval requested for proposed program revisions by Feb 14th, please

Bauer, Gretchen M <gbauer@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Tue, Feb 18, 2014 at 9:26 AM

Dear Del, the department of political science and international relations is pleased to support and participate in the Environmental Science and Environmental Studies degree programs, including the revisions that you have proposed.

Gretchen Bauer

Professor and Chair

Political Science and IR

University of Delaware

302 831 2357

www.udel.edu/poscir

From: Delphis Levia [mailto:dlevia@udel.edu]

Sent: Thursday, February 06, 2014 6:36 PM

To: Levia, Delphis F, JR

Subject: Email approval requested for proposed program revisions by Feb 14th, please

[Quoted text hidden]



Delphis Levia <dlevia@udel.edu>

Geological Sciences supports the revised ENSC and ENVR program

James Pizzuto <pizzuto@udel.edu>

Tue, Feb 18, 2014 at 5:18 PM

To: Delphis Levia <dlevia@udel.edu>, James Pizzuto <pizzuto@udel.edu>

I am happy to report that our faculty voted today to approve the proposed revisions to the ENSC and ENVR programs. We look forward to working with you to successfully implement the new program.

Best,

--

Jim Pizzuto
Professor and Interim Chair
Dept. of Geological Sciences
101 Penny Hall
255 Academy Street
University of Delaware
Newark, DE 19716
[302-831-2710](tel:302-831-2710)
pizzuto@udel.edu



Delphis Levia <dlevia@udel.edu>

Changes to Environmental Studies Major

Awokuse, Titus O <kuse@udel.edu>

Tue, Feb 18, 2014 at 6:31 PM

To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Cc: "Hastings, Steven E" <hastings@udel.edu>, "Awokuse, Titus O" <kuse@udel.edu>

Dear Del,

Based on our discussions of yesterday,

I support the proposed changes to the BA in Environmental Studies degree with the updated theme title of "Environment and Society". Also, I agree with the proposed list of APEC department courses included in the degree requirements.

Titus Awokuse

Professor and Chair

Dept. of Applied Economics & Statistics

213 Townsend Hall

University of Delaware

Newark, DE 19716

Phone: 302-831-1323

----- Original message -----

From: Delphis Levia

Date: 02/17/2014 7:35 PM (GMT-05:00)

To: "Awokuse, Titus O"

Subject: Re: Request for a mtg

Dear Titus,

It was great to meet you today.

I have now polled the members of the Environmental Council and they are okay with changing the Environmental Studies theme name to "Environment and Society" per our discussion. I will make sure that this change is reflected in the paperwork filed with the Faculty Senate.

I now look forward to your prompt approval of APEC classes in the revised environmental science and environmental studies curricula. Thank you.

Kind regards,

Del

Delphis F. Levia, Ph.D.

Professor of Ecohydrology

Director, Environmental Science & Environmental Studies

University of Delaware, Newark, DE 19716-2541, USA

Series Editor, Ecological Studies- Analysis and Synthesis (Springer-Verlag)

Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

On Fri, Feb 14, 2014 at 1:36 PM, Delphis Levia <dlevia@udel.edu> wrote:



Delphis Levia <dlevia@udel.edu>

Request for email approval for use of a few ENEP classes in program revisions

John Byrne <jbbyrne@udel.edu>

Wed, Feb 19, 2014 at 6:24 PM

To: Delphis Levia <dlevia@udel.edu>, Syed Shah <ismat@udel.edu>

Cc: Lisa Schulz <lschulz@udel.edu>

Dear Del,

I give my email approval for the programmatic changes in both environmental science (with the theme name change stated) and environmental studies.

Regards,
JB

John Byrne, Director and
Distinguished Professor of
Energy and Climate Policy
Center for Energy &
Environmental Policy

Phone: (302) 831-8405
FAX: (302) 831-3098

University of Delaware
Newark, DE 19716-7301 USA

Website: <http://ceep.udel.edu/>
Biosketch: <http://ceep.udel.edu/Bios/Byrne.pdf>

On Wed, Feb 19, 2014 at 3:45 PM, Delphis Levia <dlevia@udel.edu> wrote:

Dear JB (and Lisa),

I am happy to report that the Council supports the name change of the theme from "Sustainable Energy" to "Energy and Environment". I know that you liked this renaming as well, JB, based on our telephone conversation. I agree that this will lead to less confusion among students.

JB, I now ask for a quick email approval for the programmatic changes in both environmental science (with the theme name change as stated above) and environmental studies. I am thrilled we were able to resolve this to everyone's satisfaction so quickly.

Cheers,
Del

Delphis F. Levia, Ph.D.
Professor of Ecohydrology
Director, Environmental Science & Environmental Studies
University of Delaware, Newark, DE 19716-2541, USA
Series Editor, Ecological Studies- Analysis and Synthesis (Springer-Verlag)
Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

On Wed, Feb 19, 2014 at 8:17 AM, Delphis Levia <dlevia@udel.edu> wrote:

Thanks.



Department of Geography

COLLEGE OF EARTH, OCEAN AND
ENVIRONMENT

University of Delaware
Newark, Delaware 19716-2541
Ph: 302/831-2294/2295
Fax: 302/831-6654

20 February 2014

MEMO TO: Del Levia
Director of Environmental Science & Studies Program

MEMO FROM: Tracy DeLiberty
Chair of Geography

On behalf of Geography Department, we are pleased to support the revisions to the Environmental Science and Studies Programs. Changes in the core provide students with additional breadth and the themes are more appropriately aligned with fields of employment. Moreover, the changes are in line with the external program review.

Our Department will support the revisions in a number of ways. Our faculty will continue to serve as advisors and mentors, and we will offer the geography core and concentration courses as needed given our faculty resources.



Delphis Levia <dlevia@udel.edu>

Mtg request

Bowman, Jacob L <jlbowman@udel.edu>
To: "Levia, Delphis F, JR" <dlevia@udel.edu>

Thu, Feb 20, 2014 at 1:58 PM

Del,

You have my full approve.

Take care,
Jake

Sent from my iPhone

On Feb 20, 2014, at 1:40 PM, "Delphis Levia" <dlevia@udel.edu> wrote:

Jake,

Given the below, I would like your full approval now so I can finish this paperwork.

I am okay with the change of the theme description. Good catch. I changed one word. Now reads: "**Theme in Ecoscience** focuses on studying the nature of ecosystems as well as the interaction of organisms with their physical and biological environment. Courses cover the breadth of ecoscience. Students interested in studying ecoscience with an emphasis on the physical environment would best fit this theme. Graduates from the theme in Ecoscience should be prepared to gain employment as environmental scientists or seek graduate education in Environmental Science."

With regard to your final point, there will still be an Environmental Council. It is the intent to have faculty from all participating colleges on the Council. This is a plus and benefits students.

Thanks for all your help,
Del

Delphis F. Levia, Ph.D.
Professor of Ecohydrology
Director, Environmental Science & Environmental Studies
University of Delaware, Newark, DE 19716-2541, USA
Series Editor, Ecological Studies- Analysis and Synthesis (Springer-Verlag)
Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

On Thu, Feb 20, 2014 at 12:16 PM, Bowman, Jacob L <jlbowman@udel.edu> wrote:

Del,

My department approves of the Ecoscience theme under the Environmental Science degree. We also approve of the courses listed for the major and theme. The number for landscape ecology is ENWC820. We also approve of listing ENWC413 under the Environmental Studies degree.

Appendix A

Strategic Programmatic Assessment

Prepared by

Dr. Shirely Vincent, National Council of Science and the
Environment (NSCE)

Expert on interdisciplinary environmental education

Appendix A is included as a separate file
since it is a secured document.