May 18, 2017

MEMORANDUM

TO: Craig Beyrouty
   Dean, College of Agricultural and Natural Resources

FROM: Elizabeth Beise
       Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Bachelor of Science in Agricultural and Resource Economics - Environmental and Resource Economics (PCC Log No. 16049)

At its meeting on May 5, 2017, the Senate Committee on Programs, Curricula and Courses approved the proposal to modify the Bachelor of Science in Agricultural and Resource Economics by establishing a specialization in Environmental and Resources Economics. A copy of the proposal is attached.

The change is effective Fall 2017. Please ensure that the change is fully described in the Undergraduate Catalog and in all relevant descriptive materials, including the undergraduate program’s four-year plan (contact Lisa Kiely at likiely@umd.edu for more information).

MDC/
Enclosure

cc: Andrew Harris, Chair, Senate PCC Committee
    Barbara Gill, Office of Enrollment Management
    Reka Montfort, University Senate
    Chip Denman, Division of Information Technology
    Pam Phillips, Institutional Research, Planning & Assessment
    Anne Turkos, University Archives
    Linda Yokoi, Office of the Registrar
    Cynthia Stevens, Office of Undergraduate Studies
    Joe Sullivan, College of Agriculture and Natural Resources
    Jim Hanson, Department of Agricultural and Resource Economics
Program: Environmental and Resource Economics  
Department/Unit: Agricultural and Resource Economics (AREC)  
College/School: AGNR  
Proposal Contact Person (with email): Jill Janofsky, Assistant Director; jjanofsk@umd.edu  

Type of Action (check one):  
☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)  
☐ Curriculum change is for an LEP Program  
☐ Rename a program or formal Area of Concentration  
☐ Establish/Discontinue a formal Area of Concentration  
☐ Other:  

Establish a new academic degree/certificate program  
☐ Create an online version of an existing program  
☐ Establish a new minor  
☐ Suspend/Discontinue a degree/certificate program  
☐ Establish a new Master or Certificate of Professional Studies program  
☐ New Professional Studies program will be administered by Office of Extended Studies

Approval Signatures - Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).  
1. Department Committee Chair  
2. Department Chair  
3. College/School PCC Chair  
4. Dean  
5. Dean of the Graduate School (if required)  
6. Chair, Senate PCC  
7. University Senate Chair (if required)  
8. Senior Vice President and Provost

Summary of Proposed Action (use additional sheet if necessary):

Instructions:  
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, and email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

Unit Code:  
012025001250301  
AGNR-Agricultural & Resource Economics
Proposal for New Environmental and Resource Economics Specialization within the Agricultural and Resources Economics Bachelor of Science Program

I. Mission and Purpose.

How does the proposed program support the Mission and Strategic Goals of the University? Why is it necessary?

See attached sheet EREC Justification and Background (Appendix A).

II. Characteristics of the Proposed Program

A. Educational objectives of the specialization.

The objective of the program is to provide a course of study that focuses on application of economic principles and analytical methods to issues related to the environmental and natural resources management.

B. Brief Catalog Description

The Agricultural and Resource Economics (AREC) department currently offers one degree program with two specializations: Agricultural and Resource Economics (to be renamed Agricultural Economics in fall 2017) and Agribusiness. The department proposes the addition of a new third specialization: Environmental and Resource Economics.

- Agricultural economics is a branch of applied economics that studies the production, distribution, and consumption of food and fiber. It includes the study of how markets for food and fiber function as well as the study of how agricultural and food policies influence the production and distribution of food and fiber.
- Agribusiness focuses on methods for maintaining or increasing the profitability of agricultural businesses, including input suppliers, marketing firms, exporters, and private information providers in addition to farm operators.
- Environmental economics is a branch of applied economics that studies the effects of economic activity on the environment and on natural resources. It focuses on policies for rectifying market failures associated with externalities such as pollution, public goods such as provision of environmental amenities like clean air and water and global climate, and common pool resources such as open access fisheries.

The Environmental and Resource Economics specialization requires (a) six pre-requisite courses in math, economic theory, and statistics (b) five upper level AREC courses
related to environmental economics, and (c) three supporting field courses, chosen from one of three possible field areas.

C. General Requirements for degree, including total number of credits and their distribution

See attached “Proposed Environmental and Resource Economics Specialization” (including a recommended 4-year plan). (Appendix B).

D. List of courses by title and number (including prerequisites)

See attached “Proposed Environmental and Resource Economics Specialization” (including a recommended 4-year plan). (Appendix B).

E. Expected student learning outcomes for new specialization:

- Acquire competencies necessary to apply the tools of economic analysis to a variety of issues related to the environment and use of natural resources.
- Acquire competencies necessary to analyze and draw inferences from data regarding issues related to environmental economics.
- Acquire knowledge of public policies and regulations related to the natural environment and resource use, and the ability to analyze the economic impact of existing and proposed policies.

F. Student audience to be served by the program and enrollment estimates.

We believe it will be attractive to students who wish to focus on environmental economics without the additional science and policy requirements in the ENSP core. We believe that it will be attractive to students who might have been turned off by the word “agricultural” in the AREC program title (erroneously believing that the major was somehow about farming). And we believe that by highlighting the University’s activity in the field of environmental economics (along with the AREC Department’s ranking as a leader in that field), it may even attract students who would otherwise choose to go elsewhere. We anticipate that the program may attract 10-20 students per year.

G. Impact on students’ technology fluency.

None.

H. New or updated facilities and equipment required.

None.

I. Description of proposed means of offering the program.
The program will utilize existing course offerings at UMCP. It will not entail (a) courses at an off-campus or other instructional site, (b) online or distance learning courses, (c) courses offered in cooperation with another institution, or (d) courses scheduled at non-traditional times.

J. Library resources required.

No additional library resources will be required.

K. Finance:

The new specialization will utilize existing courses and facilities, and will not require any new resources.

Appendix D: Emails of support from departments teaching courses in the proposed supporting fields for the new specialization.
Environmental and Resource Economics Specialization: Justification and Background
Appendix A

The field of environmental and resource economics has been expanding rapidly, with interest growing especially rapidly in the areas of climate change and energy. The Department of Agricultural and Resource Economics (AREC) is ranked as a national and international leader in the field, with faculty members serving on blue ribbon expert panels in the U.S. and abroad and as editors of leading scholarly journals in the field. The AREC department’s extension faculty are also highly active in this area. Some are working actively with utilities locally and nationally to develop innovative ways to promote energy conservation generally and among low income residents in particular while others are working on the design of policies to protect water quality, manage storm water, conserve forests, and facilitate the betterment of ecosystem services more generally. That level of expertise is projected to grow, with a departmental near term staffing plan calling for four additional faculty members in environmental and resource economics. Further, a majority of our graduate students are conducting research projects in this field.

We propose a new specialization within our program entitled Environmental and Resource Economics (EREC). We believe that such a specialization will attract more students to the College and the Department as well as having the potential to attract students to the University as a whole. It would expand the University’s offerings in the field of economics more generally by complementing the offerings of the Economics Department in an area that it does not currently staff and has no plans to expand into (as the letter of support from Professor Cropper, the chair of the Economics Department, attests). Such a major would make fuller use of existing faculty resources graduate student activity. In a later proposal, the degree program will be renamed to better reflect the variety of specializations within the major.

This proposed new specialization will differ from the existing AREC major and from the Environmental Science and Policy (ENSP) major by offering a set of courses that is sharply and exclusively focused on environmental economics. This new specialization will also present an opportunity to collaborate further with the Department of Economics in our plans to cross-list several courses taught by AREC faculty, thus opening seats for courses that at present are only available to AREC majors to Economics majors as well.

The existing AREC major was deliberately designed to allow maximum flexibility in developing a curriculum. Students can meet upper level AREC requirements by choosing from any 400 level AREC courses (and two of the 300 level courses offered by the department). Thus the students’ curriculum might include courses as different as Economics of Climate Change (AREC 454) and Economics of Commodity Markets (AREC 427). The existing AREC major also allows students to choose one of several supporting fields (courses outside the AREC major but related to the application of economics). These fields are also very different from one another: for example, Business Management, International Agriculture, and Agricultural
Sciences are three examples of existing supporting fields. This traditional AREC track will remain available to students (See Appendix C for this curriculum).

Through the proposed specialization, students will take upper level courses that focus on environmental economics. For example, Economics of Climate Change is on the list, but Economics of Commodity Markets is not. Supporting fields are also limited to specific areas that deepen students’ exposure to one of three foundational fields: a) social sciences related to environmental issues; b) basic science related to the environment; and c) preparation for graduate study in environmental economics.

A sharp focus on environmental economics distinguishes the proposed EREC specialization from the existing ENSP environmental economics concentration as well. As one of 12 concentrations overall across three colleges and one of 4 social science concentrations across two colleges, the field of environmental economics lacks salience in the existing ENSP major. Additionally, the ENSP major requires more coursework in basic science than those interested in environmental economics may want to take. The environmental economics concentration in ENSP does require (as do all ENSP concentrations) completion of the ENSP core, which includes three courses in fundamental science (introductory environmental science, and two of three from introductory biology, chemistry, and earth science), two courses in environmental policy (introductory environmental policy, geography), a course in applied science and policy, and a capstone. (The ENSP core requires courses in calculus, statistics, and introductory microeconomics which are also required as prerequisites in the proposed EREC curriculum.) The ENSP environmental economics curriculum also requires courses that have either not been offered for some time (ECON 481, Environmental Economics) due to staffing constraints or whose content is no longer directly relevant (ECON 454, Public Finance and Public Policy, which focuses on the microeconomics of tax policy and which now has a prerequisite that is not a part of the ENSP curriculum).

In sum, we believe that the proposed EREC specialization will attract undergraduates to the Agricultural and Resource Economics Department, the College of Agriculture and Natural Resources, and possibly to the University as a whole. We believe it will be attractive to students who wish to focus on environmental economics without the additional science and policy requirements in the ENSP core. We believe that it will be attractive to students who might have been turned off by the word “agricultural” in the AREC program title (erroneously believing that the major was somehow about farming). And we believe that by highlighting the University’s activity in the field of environmental economics (along with the AREC Department’s ranking as a leader in that field), it may even attract students who would otherwise choose to go elsewhere.

The AREC department is confident that it will have the faculty to offer sufficient courses to support the new EREC specialization. We are committed to maintaining our ranking as a leading department in the field of environmental economics. In line with that commitment, our hiring plan puts a high priority on maintaining and increasing size and quality of our existing environmental and resource economics faculty expertise. We will want to make sure that our faculty in this field have the opportunity to teach in their areas of expertise at the undergraduate level, hence we are confident in being about to offer sufficient numbers of courses in environmental economics to make the proposed EREC specialization vibrant and contemporary as well as viable.
**Environmental & Resource Economics: Proposed Specialization**

**Appendix B**

Gen Ed: 40-46 credits:
FSAW, FSPW, DSHU, DSHU, DSNS, DSNL, DSSP (2), SCIS (2), DVUP, DVCC, FOSC

**AREC prerequisite courses (6 required) (18 credits) (Common to all AREC majors)**
- AREC 250/ECON 200/AREC 240: Microeconomics (DSHS)
- ECON 201: Macroeconomics (DSHS)
- MATH 120 (Elementary Calc I) or MATH 140 (Calc I) (DSMS/FSAR)
- ECON 230/BMGT 230 (Statistics for Econ or Business) (FSAR)
- STAT 100 (or any other statistics course) (FSAR) OR STAT 400*
- AREC 326: Intermediate Applied Micro (or ECON 326 by permission of advisor only)

*Note: STAT 400 can be substituted for both STAT 100 AND BMGT 230.

**Upper-Level AREC courses (5 required) (15 credits)**
AREC 382: Computer-Based Analysis in Agricultural and Resource Economics
AREC 405: Economics of Production
AREC 422: Applied Econometrics
AREC 445: Agricultural Development, Population Growth, and Environment
AREC 446: Sustainable Development
AREC 453: Natural Resources and Public Policy
AREC 454: The Economics of Climate Change
AREC 455: Economics of Land Use
AREC 456: Energy & Environmental Economics
AREC 431 (currently listed as AREC 489L): Agricultural Water Quality, Policy, and Legal Issues
AREC 481 (to be cross-listed with ECON): Environmental Economics
Choose 3 courses from one of the following Environmental and Resource Economics supporting fields (9-12 credits)

**Social Sciences**
- ANTH 222: Introduction to Ecological and Evolutionary Anthropology
- ANTH 266: Changing Climate, Changing Cultures
- ANTH 305: Archaeological Methods and Practice
- ANTH 322: Method and Theory in Ecological Anthropology
- GVPT 273: Introduction to Environmental Politics
- GVPT 306: Global Environmental Politics
- SOCY 200: Human Societies
- SOCY 405: Scarcity in Modern Society
- SOCY 406: Globalization
- SOCY 415: Environmental Sociology
- PUAF 301 / AGNR 301: Sustainability

or any higher social sciences course chosen in consultation with advisor.

**Natural Sciences**
- AOSC 200/201: Weather and Climate
- CHEM 131/132: Chemistry I
- ENST 200: Fundamentals of Soil Science
- ENST 214: Introduction to Fish and Wildlife Science
- GEOG 201/211: Geography of Environmental Systems
- PHYS 121/122: Fundamentals of Physics I

Or any higher-level lab science course.

**Advanced Degree Prep**
- ECON 414 Game Theory*
- ECON 415: Market Design*
- ECON 422 Econometrics I* (Note: credit only granted for AREC 422 or ECON 422)
- ECON 423 Econometrics II*
- MATH 141 Calculus II
- MATH 240 Introduction to Linear Algebra
- MATH 241 Calculus III
- STAT 401: Applied Statistics & Probability II
- STAT 410: Intro to Probability Theory
- STAT 420: Introduction to Statistics
- STAT 430: Introduction to Statistical Computing with SAS

or any other upper-level econ/math/stat course chosen in consultation with advisor.
* Economics majors get first priority on these courses. AREC students will have to obtain permission directly from the Economics department on the first day of class, pending space availability. **Other courses can be approved by permission of an AREC advisor.**

**Sample Four-Year Plan:**

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<td>Natural Sciences w/ Lab (DSNL) (4)</td>
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<td>AREC 326 (3)</td>
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<td>Scholarship in Practice 1 (DSSP) (3)</td>
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**Total # of credits:** 120
Agricultural & Resource Economics: Current Curriculum (not changing)

Appendix C

Six (6) benchmark courses:

- Calculus I (Math 120 or Math140)
- ECON 200
- ECON 201
- AREC326 (we will accept ECON326 if completed)
- BMGT230 or equivalent
- STAT 100 or other statistics course

Seven (7) 400-level AREC courses

Six (6) courses from any of the following fields of study:

Business Management
Farm production
Food Production
Environmental and Resource Policy
International Agriculture
Political Process
Advanced Degree Preparation
Student-Designed Field

More information: http://www.arec.umd.edu/undergraduate/programs
February 9, 2017

Dr. Jim Hanson
Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742

Dear Dr. Hanson,

My staff and I have reviewed your proposed program in Environmental Economics to determine how it may impact our current Area of Concentration with the Environmental Science and Policy Program. While there is some overlap of courses we believe that your program will provide additional opportunities in the area of economics not currently present on campus. Specifically our program is strongly geared to those that want to apply economics to environmental decision making in policy whereas your proposed new program is more in-depth in theory and understanding of economics. We believe there is a niche for both programs and support your proposal to create this new program in the Department of Agriculture and Resource Economics in the College of Agriculture and Natural Resources.

Please don’t hesitate to contact me if I can provide any additional information.

Sincerely,

Joe H. Sullivan
Professor and Interim Director of ENSP
Dr. James Hanson  
Department of Agricultural and Resource Economics  
2200 Symons Hall  
University of Maryland  
College Park, MD 20742

Dear Jim,

The Economics Department is glad to support development of a new undergraduate major in Environmental and Resource Economics. The expertise and opportunities offered by your department complement rather than compete with the talent and programs here. As we have discussed, we are eager to cross-list ECON 481, Environmental Economics, as AREC 481, also titled Environment Economics. We have not been able to staff this course in the past year or two due to resource constraints. Hopefully I might teach a section sometime in the not too distant future. We do not presently have any courses focused on Natural Resources and Public Policy, so we are grateful for your offer to cross-list your AREC 455 course as an ECON course. I am sure many economics majors will appreciate this addition to the class schedule. I am confident there are other subjects where we can collaborate and increase the number of cross-listed courses, yielding benefits for both departments.

Please let me know if you need any additional information.

Yours truly,

Maureen Cropper  
Distinguished University Professor & Chair  
Department of Economics  
University of Maryland  
3114H Tydings Hall  
College Park, MD 20742
Dear Jim Hanson,

I have reviewed the EREC proposal. The Math Department can cover the expected enrollment and now supports the proposal.

Best,

Scott Wolpert
Re: AREC students taking courses in your department

Robert L. Infantino <rinfanti@umd.edu>  
To: "James C. Hanson" <jhanson1@umd.edu>  

Dear Jim,
Thanks for taking our recommendations into consideration in preparation the second draft you have circulated.
We support the inclusion of BSCI160 and 161 as a natural science course option.
Bob Infantino
Re: AREC students taking courses in your department

Steven Rolston <rolston@physics.umd.edu>
To: "James C. Hanson" <jhanson1@umd.edu>

Mon, Jan 2, 2017 at 2:09 PM

Jin:
sorry for the tardy reply - "No Objection".

-Steve

On Dec 13, 2016, at 2:50 PM, James C. Hanson <jhanson1@umd.edu> wrote:

Dr. Rolston,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

PHYS 121/122: Fundamentals of Physics I
PHYS 131: Fundamentals of Physics for Life Sciences
(or any higher-level physics course)

Thanks, Jim

Jim Hanson, Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742
<2016 EREC course list.docx>

*--------------------*
Steven L. Rolston
Chair, Dept. of Physics
Co-Director, Joint Quantum Institute
University of Maryland
College Park, MD 20742
(301) 405-5946
rolston@umd.edu
http://groups.jqi.umd.edu/rolston
Fwd: AREC students taking courses in your department

James C. Hanson <jhanson1@umd.edu>                            Mon, Dec 19, 2016 at 4:09 PM
To: Jill Sarah Janofsky <jjanofsk@umd.edu>, Howard Leathers <howardl@umd.edu>

Jim Hanson
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland  20742

-------- Forwarded message ---------
From: Chris Justice <cjustice@umd.edu>
Date: Mon, Dec 19, 2016 at 3:07 PM
Subject: Re: AREC students taking courses in your department
To: "James C. Hanson" <jhanson1@umd.edu>
Cc: "Ronald W. Luna" <ronaldl@umd.edu>, Ralph Dubayah <dubayah@umd.edu>

Jim

We have had a preliminary discussion and in principle it is OK for you to include this as an optional course in your listing.
The only practical problem that I see is that this course can be heavily subscribed and it may not always be easy to get in.
We are also in the process of evaluating TA resources for that class and may need a letter of support from you. Our Assoc. Chair (Ralph Dubayah) or the UG Director (Ron Luna) will most likely follow up with you in the first week of January

Chris

On Tue, Dec 13, 2016 at 2:46 PM, James C. Hanson <jhanson1@umd.edu> wrote:
   Dr. Justice,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

GEOG 201/211: Geography of Environmental Systems

thanks, Jim

Jim Hanson, Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland  20742
Re: AREC students taking courses in your department

William W Bowerman <wbowerma@umd.edu>  Thu, Dec 15, 2016 at 4:57 PM
To: "James C. Hanson" <jhanson1@umd.edu>

After discussing this request with the two instructors involved, we approve.
Thanks,
Bill

On Thu, Dec 15, 2016 at 4:55 PM, James C. Hanson <jhanson1@umd.edu> wrote:
  could you approve? three word statement is okay.

j

Jim Hanson  
Department of Agricultural and Resource Economics  
University of Maryland  
2200 Symons Hall  
College Park, Maryland 20742

On Tue, Dec 13, 2016 at 2:44 PM, James C. Hanson <jhanson1@umd.edu> wrote:  
Bill,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

ENST 200: Fundamentals of Soil Science  
ENST 214: Introduction to Fish and Wildlife Science  

thanks, Jim

Jim Hanson, Professor and Chair  
Department of Agricultural and Resource Economics  
University of Maryland  
2200 Symons Hall  
College Park, Maryland 20742

--
William W. Bowerman, Ph.D.  
Professor and Chair  
President, Chapter 22CP  
The Honor Society of Phi Kappa Phi  
Member, Council on the Environment  
University of Maryland
Re: AREC students taking courses in your department

Irwin Lester Morris <lmorris@umd.edu>  
To: "James C. Hanson" <jhanson1@umd.edu>  
Cc: Scott Kastner <skastner@umd.edu>  

Jim,

No objections.

Good luck with the new program.

Irwin

On Tue, Dec 13, 2016 at 1:55 PM, James C. Hanson <jhanson1@umd.edu> wrote:

Dr. Morris,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection". Thanks.

GVPT 273: Introduction to Environmental Politics
GVPT 306: Global Environmental Politics

thanks, Jim

Jim Hanson, Professor and Chair  
Department of Agricultural and Resource Economics  
University of Maryland  
2200 Symons Hall  
College Park, Maryland 20742
Re: AREC students taking courses in your department

Roberto Patricio Korzeniewicz <korzen@umd.edu>  
To: "James C. Hanson" <jhanson1@umd.edu>  
Cc: "Jeffrey W. Lucas" <jlucas2@umd.edu>, "Linda L. Moghadam" <moghadam@umd.edu>, "Karina J. Havrilla" <khavrilla@umd.edu>

Dear Jim,

We have no objections, and support your proposed program. The only caveat, of course, is that some of the listed courses (such as globalization) are not taught own a regular basis.

Best,

Patricio

On Dec 13, 2016, at 1:59 PM, James C. Hanson <jhanson1@umd.edu> wrote:

Dr. Korzeniewicz,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a “supporting field” that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

SOCY 200: Human Societies
SOCY 405: Scarcity in Modern Society
SOCY 406: Globalization
SOCY 415: Environmental Sociology

thanks, Jim

Jim Hanson, Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742
<2016 EREC course list.docx>
Re: AREC students taking courses in your department

Janice Reutt-Robey <rrobey@umd.edu>  
To: "James C. Hanson" <jhanson1@umd.edu>  
Cc: Michael P Montague-Smith <mpms@umd.edu>  

Dear James,

The department of chemistry & biochemistry has no objections to this proposal.

Janice Reutt-Robey

Janice E. Reutt-Robey  
Professor & Chair  
Dept. of Chemistry & Biochemistry  
University of Maryland  
College Park, MD 20742-2111

Tel. 301-405-1788; Fax. 301-314-9121  
Email: rrobey@umd.edu

On Tue, Dec 13, 2016 at 2:42 PM, James C. Hanson <jhanson1@umd.edu> wrote:

Dr. Reutt-Robey,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

CHEM 131/132: Chemistry I  
(or any higher-level Chem course)

thanks, Jim

Jim Hanson, Professor and Chair  
Department of Agricultural and Resource Economics  
University of Maryland  
2200 Symons Hall  
College Park, Maryland 20742
Re: AREC students taking courses in your department

Paul A. Shackel <pshackel@umd.edu> Tue, Dec 13, 2016 at 6:20 PM
To: "James C. Hanson" <jhanson1@umd.edu>
Cc: "Michael J. Paolisso" <mpaoliss@umd.edu>

Hi Jim,

Sounds like a great program. We really enjoy having students from other disciplines in our classes. However, I am on leave this semester, so I must defer to our acting chair - Michel Paolisso. He is cc's on this message. Good luck with the program.

Paul

On Tue, Dec 13, 2016 at 1:53 PM, James C. Hanson <jhanson1@umd.edu> wrote:

Dr. Shackel,

The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection". Thanks.

ANTH 222: Introduction to Ecological and Evolutionary Anthropology
ANTH 266: Changing Climate, Changing Cultures
ANTH 305: Archaeological Methods and Practice
ANTH 322: Method and Theory in Ecological Anthropology

thanks, Jim

Jim Hanson, Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742

--
Paul A. Shackel

Professor
Department of Anthropology
1111 Woods Hall
4302 Chapel Lane
University of Maryland
College Park, MD 20742

301-405-1425
pshackel@umd.edu
Re: AREC students taking courses in your department

James A. Carton <carton@umd.edu>  
To: "James C. Hanson" <jhanson1@umd.edu>  

Tue, Dec 13, 2016 at 2:58 PM

Jim,
we're happy to have you include aosc200/201. Best wishes for your new major. Jim

James Carton
Chair, Dept. Atmos. Oceanic Science, Univ. Maryland, College Park, MD 20742
www.atmos.umd.edu/~carton; 301-405-5365

On Tue, Dec 13, 2016 at 2:34 PM, James C. Hanson <jhanson1@umd.edu> wrote:
Dr. Carton,
The Department of Agricultural and Resource Economics (AREC) is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from departments outside AREC. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep. As you can see, students must choose 3 courses from a list of 6-10 courses (depending on which supporting field they choose). Therefore, we believe students will be able to complete these fields without putting a burden on any one course or department. We anticipate that the number of students in the new program will be in the range of 10-20 per year.

If you have no objection to our including the course(s) from your department/program in our curriculum (listed below), please send me a reply email stating your support or "no objection".

AOSC 200/201: Weather and Climate

Thanks, Jim

Jim Hanson, Professor and Chair
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742
On Thu, Dec 8, 2016 at 10:18 AM, James C. Hanson <jhanson1@umd.edu> wrote:

Thanks.

Could you allocate the supporting field courses (title and number) to the appropriate department too?

thanks, Jim

Jim Hanson
Department of Agricultural and Resource Economics
University of Maryland
2200 Symons Hall
College Park, Maryland 20742

On Thu, Dec 8, 2016 at 10:04 AM, Jill Janofsky <jjanofsk@umd.edu> wrote:

Jim and Howard:

As requested - here is a list of the chairs in the departments of the courses we are planning for the new supporting fields. Let me know if you need anything else:

Anthropology: Paul A. Shackel, pshackel@umd.edu
Government and Politics: Irwin Morris, imorris@umd.edu
Sociology: Roberto Patricio Korzeniewicz, korzen@umd.edu
Atmospheric and Oceanic Science: James Carton, carton@umd.edu
Biology: William Fagen, bfagan@umd.edu
Chemistry: Janice E. Reutt-Robey, rrobey@umd.edu
Environmental Science and Technology: William Bowerman, wbowerma@umd.edu
Geographical Sciences: Christopher Justice, cjustice@umd.edu
Physics: Steven Rolston, rolston@umd.edu
Economics: Maureen Cropper, mcropper@econ.umd.edu
Math: Scott Wolpert, swolpert@umd.edu

Draft of a message to the chairs:

Dear Department Chairs,

The AREC department is in the process of submitting a proposal to the PCC for a new major: Environmental and Resource Economics. A required component of this major will be the completion of a "supporting field" that will require courses from your respective departments. I have attached a list of the courses that we are proposing - they are listed on the second page. Students will be required to complete 3 courses in one of the following tracks: social sciences, natural sciences, or advanced degree prep.

--

Jill Janofsky
Assistant Director of Undergraduate Programs
Department of Agricultural and Resource Economics (AREC)
College of Agriculture and Natural Resources
University of Maryland, College Park
2200 Symons Hall
(301) 405-1291
jjanofsk@umd.edu