Category I Proposal Transmittal Sheet
Submit proposals to: Office of Academic Planning and Assessment
110 Kerr Admin -- Oregon State University

For instructions, see http://oregonstate.edu/ap/curriculum/cati.html. Please attach Proposal, Library Evaluation (performed by the library), Liaison Correspondence, Faculty Curriculum Vitae, and Budget Sheets, as appropriate.

Check one:

Full Proposal
- New degree program
- New certificate program or administrative unit
- Major change in existing program
- Establishment of a new College or Department

Abbreviated Proposal
- Rename of an academic program or unit
- Reorganization – moving responsibility for an academic program from one unit to another
- Merging or splitting an academic unit
- Termination of an academic program or unit
- Suspension or reactivation an academic program or unit

For proposals to establish a new center or institute, contact the Research Office (737-3437).

For requests to offer existing certificate and degree programs at new locations, use the New Location Request Form available on the Web: http://www.ous.edu/aca/aca-forms.html

Title of Proposal: Rename and Restructure EEPM Degree
Effective Date: Fall 2010

Department/Program: Agricultural and Resource Economics
College: Agricultural Sciences

I certify that the above proposal has been reviewed and approved by the appropriate Department and College committees:

[Signatures and dates]

Susan Casalbo
Print (Department Chair/Head; Director)

Stella M. Cookley
Print (Dean of College)
Proposal to Change the Name and Requirements for Bachelor of Science Degree in Environmental Economics, Policy and Management

Oregon State University

Sponsoring Department:
Agricultural and Resource Economics
Description of Proposed Program

1. Program Description

   a. Proposed CIP number

   b. Provide a brief overview (approximately 1-2 paragraphs) of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor and concentrations offered.

Background

The Environmental Economics, Policy and Management (EEPM) program came into being in 1997 as an option under the Agricultural and Resource Economics (AREC) degree. At that time the AREC degree had only 11 students. Fred Obermiller became the advisor for the AREC degree program and actively promoted the EEPM option. In 2002 the options were dropped and the AREC degree was renamed as EEPM. In Fall 2003 Fred was diagnosed with cancer and passed away a year later. EEPM advising responsibilities were assumed by our ABM advisor, but there was no longer a faculty member to promote and advocate for the EEPM degree. Enrollment numbers reached a plateau and then declined from 2005 to 2009, but did turn around significantly in Fall 2009.

Because of the low graduation numbers, the Provost’s Office identified the degree as a candidate for termination after 2009. The department made a case that the degree be allowed to continue because it fit within the strategic plan of the university, particularly with the new divisional arrangement. The Provost’s Office agreed but directed that the degree be reorganized and a recruitment plan be put in place to build graduation numbers to at least 20 graduates per year.

Proposed Changes

There are a number of programs similar to the EEPM offered at other universities around the U.S. Perhaps the most successful in terms of enrollment is the degree in Environmental Economics and Policy (EEP) jointly offered by the College of Natural Resources and the College of Letters and Science at the University of California – Berkeley. EEP is one of two degrees jointly offered by these two colleges, the other being Environmental Science. Their EEP degree was created in 2004 and by the 2008-09 academic year had grown to 126 students and 50 graduates. This growth occurred apparently without any impact on enrollments for Environmental Science. The defining characteristics of Berkeley’s EEP program are (1) a focus on rigorous training in calculus, statistics and economics, (2) field courses in the resource and environmental economics area that are topical and of interest to students, and (3) a large number of unrestricted electives that permit students to explore their own interests in the environmental sciences.

Although the Berkeley model has much to offer, exit interview feedback from students suggests our current EEPM degree has also been well received. A number of our graduates have gone on to graduate programs in law, economics, public policy and other fields. They have credited their undergraduate education with being fundamental to their later success.
Consequently, it seemed to be more prudent to expand the opportunities provided in this degree program by creating options for students, rather than by simply restructuring the EEPM degree. Consequently, we propose the following changes to the EEPM degree.

1. Rename the degree to Environmental Economics and Policy (EEP);
2. Create three options under this degree, to be titled the General Option, the Economics Option and the Policy Option. These will be simultaneously submitted as Category II proposals.
   a. The Economics option would be closely patterned after the EEP program at UC-Berkeley, with
      i. a core set of required classes in economics, statistics and math;
      ii. a larger set of resource and environmental economics courses selected from a set of upper division offerings; and
      iii. approximately 70 hours of free electives that students can use to pursue their own interests in the biological, physical or social sciences. In short, this option would be very quantitative, but would offer students greater flexibility to design their own program.
   b. The Policy option would look much like the current EEPM degree, with less focused training in economics and more breadth of coursework in environmental sciences, political sciences and related subject areas. In general, this option would provide more breadth and less depth in economics, with a greater focus on the socio-economic dimensions of environmental sciences.
   c. The General option would be patterned after the Policy option, but would be available to distance students. Consequently, all courses offered under this option would be available through distance education.

3. The department would offer seven new courses in the environmental and resource economics area. Several faculty would be involved in offering these classes, thereby broadening participation in the degree program. The new degree also strengthens ties between our program and coursework in Forestry and COAS. All these classes would initially be offered live, some would also be offered through distance education.

4. Penny Diebel would be transferred from our program at EOU to assume responsibility for the leadership of this degree, and oversee advising and recruiting students for this new program. The addition of her teaching appointment to our mix of teaching resources will allow us to offer most of these new courses.

c. Course of Study – proposed curriculum, including course numbers, titles and credit hours.
The check sheets for the two proposed EEP options are provided in Appendix A. Changes made in the EEP Policy option from the old EEPM degree are highlighted in bold italics. The EEP Economics option and General option are entirely new so are all in bold italics. There will be seven new courses created in conjunction with the restructuring of this degree program. The classes (with Category II proposal numbers) are:
d. Manner in which program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery).

The program will be delivered on-campus in Corvallis. Current courses will continue to be offered on the same schedule as before. Classes will be offered more often if demand justifies a change. The department offers a number of EEPM classes through distance education, so is well situated to offer the EEP degree on-line. A limited number of the new classes would be added to the suite of distance classes already offered.

e. Ways in which the program will seek to ensure quality, access and diversity. The EEPM program has always attracted strong students. Requiring rigorous coursework in economics, statistics and mathematics will keep the quality high in this option. The requirements in place for the new Economics option match those that we require of students entering our nationally ranked graduate programs in Applied Economics. The EEPM degree has shown more diversity than our ABM degree, we don’t expect that things will change with these new revisions.

f. Anticipated fall term headcount and FTE enrollment over each of the next five years.

We project the following enrollment and graduation numbers:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Enrollment</td>
<td>25</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Degrees Awarded</td>
<td>10</td>
<td>12</td>
<td>16</td>
<td>20</td>
<td>22</td>
</tr>
</tbody>
</table>

g. Expected degrees/certificates produced over the next five years. The graduation numbers provided in Table 2 are based on a 40% student enrollment to graduation ratio. This is a bit lower than the 50% ratio we have experienced with the EEPM program from 2003-08.

h. Characteristics of students to be served (resident/nonresident/international; traditional/nontraditional; full-time/part-time, etc)

The EEPM degree typically served traditional, full-time students. Most are from Oregon, although we have attracted some outstanding nonresident students. The distance option will open this degree program up to a new group of prospective students. We expect the
Economics option may also be appealing to transfer students and students entering OSU through the INTO program.

i. Adequacy and quality of faculty delivering the program. The AREc and Forest Economics programs have enjoyed a longstanding reputation for excellence in resource and environmental economics. This program utilizes the talents and course offerings across both the Colleges of Agricultural Sciences and Forestry, as well as offering coursework that may be attractive to some students in Oceanography and Atmospheric Sciences. In our view, the key to the future success of this program is having an outstanding undergraduate teacher and advisor (Penny Diebel) take the reins of this program.

j. Faculty resources – full-time, part-time, adjunct
At present, we have 16 faculty members on tenure and tenure-track appointments in the department in Corvallis. John Antle will be joining the department in Fall 2010 and Penny Diebel will transfer from our EOU program by Fall 2010. Diebel will take on leadership and advising responsibilities for the EEP program and will teach several of the new classes. Antle will teach one of the new classes. Some of the one credit, alternate year classes will be picked up by existing faculty. We also have graduate students who need teaching experience and who could either teach some of these classes, or take over existing classes and free up faculty to teach some of these new classes.

k. Other professional faculty and staff
Tjodie Richardson has served for more than a decade as the department’s undergraduate advisor for the ABM program. Since 2005 she has also advised the EEPM students. We anticipate her continuing to handle many of the day to day responsibilities associated with advising, freeing Penny Diebel up to provide career advising and focus on recruiting.

l. Facilities, library and other resources
We anticipate no additional needs in faculties, library support or other resources.

m. Anticipated start date
We anticipate being able to offer the EEP degree beginning in Fall 2010.

2. Relationship to Mission and Goals

a. Manner in which the proposed program supports the institution’s mission and goals for access; student learning; research and/or scholarly work; and service.
The degree program continues to support OSU’s mission and goals, as was the case under the EEPM degree. Nothing new is added in this area as a result of renaming the degree and offered a second option to the program. A degree like EEP would serve as a bridge with all three colleges making up the new Division of Earth Systems Science. This point is explained in greater detail in section 2b.

b. Connection of the proposed program to the institution’s strategic priorities and signature areas of focus.
The revised degree program is exceptionally well positioned to address the signature area *Advancing the Science of Sustainable Earth Ecosystems*. Economics represents the key human dimension of sustainable ecosystems. Understanding physical and biological systems that underlie Earth ecosystems cannot, by itself, change human behavior toward those systems. The economic dimension allows students to understand the motivations that humans have to consume or preserve ecosystems, as well as providing tools to modify behavior in socially beneficial ways.

The AREc Department offers four undergraduate courses that served the wider OSU community in the resource and environmental economics area: AREC 250, 253, 351 and 352. The proposed program will add seven new courses to this list, all of which will have AREC 351 and (or) AREC 352 as prerequisites. Because enrollment in these two classes is dominated by students outside AREc (such as Fish & Wildlife, Environmental Science and Natural Resources), we expect to see significant numbers of nonmajors in these classes. In addition, we have included a number of economics classes from the College of Forestry in the EEP economics electives as a way of broadening our student’s exposure to other programs in the university. In short, we believe this program will lead to greater integration of our undergraduate program within the new Division of Earth Systems Science.

c. Manner in which the proposed program contributes to the Oregon University System goals for access; quality learning; knowledge creation and innovation; and economic cultural support of Oregon and it’s communities.
We anticipate changing the degree name and adding two additional options will not change goals for access, quality learning, knowledge creation and innovation, and economic cultural support.

d. Manner in which the program meets broad statewide needs and enhances the state’s capacity to respond effectively to social, economic and environmental challenges and opportunities.
We anticipate the proposed changes will provide students with a flexible option under this degree (within the Economics option), such that students can put together a set of classes that complete their rigorous economic training. For example, a student interested in graduate school in forestry economics could couple the EEP – Economics option with minors in forest management and fisheries and wildlife. This would also be the first economics-type degree offered statewide through distance education, so provides Oregonians who cannot attend OSU the opportunity to pursue this kind of degree.

3. Accreditation

a. Accrediting body or professional society that has established standards in the area in which the program lies, if applicable.
No accreditation body or professional society exists for this degree program.

b. Ability of the program to meet professional accreditation standards.
Not applicable.
c. If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation. Proposal is for an undergraduate degree only.

d. If accreditation is a goal, the proposal should identify the steps being taken to achieve accreditation.
Accreditation is not a goal.

4. Need
a. Evidence of market demand.
Enrollments in the current EEPM program suggest a good demand base. The changes being proposed are designed to enhance demand from students within Oregon and beyond its borders.

b. If the program’s location is shared with another similar OUS program, proposal should provide externally validated evidence of need.
The EEPM degree exists at OSU campuses in Corvallis and LaGrande. Budget cuts are forcing the closure of the EEPM degree at LaGrande and consolidation of the program to the Corvallis campus.

c. Manner in which the program would serve the need for improved educational attainment in the region and state.
The existing EEPM degree already has a base of support, graduating 5-10 students per year. We believe the name change and additional options will allow us to build on the existing student interest. Coupled with an active recruiting program and an advisor dedicated to this program, we believe we can double or triple the number of students graduating from this program each year. Certainly the success enjoyed by the UC-Berkeley program is evidence that our goal is realistic. Graduates should be well prepared to undertake a career in public or private agencies engaged in the planning or management of natural resources, or to enter a graduate school for further study in such fields as agricultural and resource economics, economics, law, public policy, or resources administration.

d. Manner in which the program would address the civic and cultural demands of citizenship.
No changes from the EEPM degree planned in this area.

5. Outcomes and Quality Assessment
a. Expected learning outcomes of the program.
Students graduating with an EEP degree will meet the following learning outcomes:
1. An understanding of microeconomic theory training at the intermediate level, i.e., having a basic understanding of producer theory, consumer theory, how markets work and prices are formulated, market failure and its causes, and welfare theory.
2. An understanding of macroeconomic theory at the principles level, i.e., national income accounting, savings versus consumption, how interest rates are formed, government spending and its impact on the economy, and how government is financed.
3. A basic understanding of natural resource and environmental economics, including efficiency concepts and other criteria for evaluating environmental and resource management and policy, understanding possible sources of inefficiency such as externalities and imperfect market structures, basic policy instruments to control externalities (including taxes, standards, subsidies, liability rules, and voluntary approaches), political economy and the choice of policy instruments in practice, and understanding basic issues in the management of specific resources (including fishery, forests, land and water).

4. An understanding of algebra and introductory calculus.

5. Training in statistics and regression techniques and an understanding of how these are applied to address economic problems.

6. Computer skills needed to analyze economic issues.

7. Development of oral and written communication skills.

8. An Understanding of the legal system, particularly as it applies to environmental issues and natural resource use.

b. Methods by which the learning outcomes will be assessed and used to improve curriculum and instruction.
No changes are planned from the current assessment methods for EEPM. Briefly, this consists of examinations and papers written in class. We also conduct exit interviews with students to obtain feedback about each class and how well it was taught. Students also provide feedback about the overall program structure. The department also periodically conducts alumni surveys to obtain feedback on the program.

c. Program performance indicators, including prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate.
The EEPM degree was temporarily suspended in Fall 2009 because the Provost’s Office did not feel that there were enough students graduating from the program to justify its continuation. When the appeal was granted and the program allowed to continue, it was with the stipulation that the program be redesigned and a recruitment program instituted to boost graduation levels past the 20 graduates per year mark. Therefore, the success of this restructuring effort will be evaluated strictly on this measure, i.e., boosting enrollment such that there are 20 students graduating from the program each year.

d. Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas.
No changes are planned in this area.

6. Program Integration and Collaboration
a. Closely related programs in other OUS universities and Oregon private institutions.
Changing the degree name to EEP and creating three options moves the degree away from science-based environmental programs like Natural Resources and Environmental Sciences and production-based programs like Forest Management. The economics programs at the University of Oregon and Portland State University offer no undergraduate degrees in the environmental economics area.
b. Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for collaboration.
One focus of this revised proposal is to increase collaboration between the three colleges comprising the Division of Earth Sciences at OSU. This is being done in two ways. First, we are now including a number of courses in the EEP degree that are taught in the College of Forestry. Second, we are offering a new set of courses that will appeal to students in the College of Forestry and the College of Oceanography and Atmospheric Sciences. A number of these courses should also be attractive to environmentally oriented students in the College of Science.

c. If applicable, proposal should state why this program may not be collaborating with existing similar programs.
Not applicable.

d. Potential impacts on other programs in the areas of budget, enrollment, faculty workload, and facilities use.
Penny Diebel currently carries a 9-month, 90% teaching appointment at the LaGrande program and teaches 6-7 classes per year. Her position is funded through the Department of Agricultural and Resource Economics at OSU. Consequently, moving her from LaGrande to Corvallis is simply a reassignment of location and does not represent a budgetary change to the department. Moving her position to Corvallis will provide the resources to offer most of these new classes. John Antle was hired in late 2007 as a faculty member, his arrival has been delayed until Summer 2010. Resources for the Antle hire were in place before work was initiated to restructure the EEPM degree. The remaining courses will be few in number and will come from existing resources. Facility needs and budget dollars for these two new faculty are already committed.

7. Financial Sustainability
a. Business plan for the program that anticipates and provides for its long-term financial viability, addressing anticipated sources of funds, the ability to recruit and retain faculty, and plans for assuring adequate library support for the long term.
Again, the key to long term viability (according to the Provost’s Office) is student numbers and number of degrees awarded. The EEP degree fits well within the first of the university’s three areas of distinction: Advancing the Science of Sustainable Earth Ecosystems. The strategic plan provides further details about this area of distinction:

> Improving the understanding of the earth ecosystems upon which all life depends, and promoting their sustainability through high-impact public policy involvement with issues such as climate change, food security and safety, renewable energy production, and economically viable natural resource management.

The proposed program directly addresses the area of economically viable natural resource management. As concern grows for protecting and restoring increasingly scarce natural resources, there will be increased demand for the skills that economists bring to these discussions. Consequently, as OSU moves forward and grows in enrollment, we expect to see
growth in all the university’s signature areas. The EEP degree will be a key part of that growth.

The department will also need a more focused effort to market the program to prospective students as a way to build enrollment. Marketing efforts will include

(i) Developing a new website for the EEP degree, along with accompanying materials;
(ii) Visiting with UESP students about the program and what it has to offer;
(iii) Targeted mailings to OSU applicants interested in this general area;
(iv) Working with our extension and outreach efforts within the college;
(v) Quality advising and coursework, to create positive word of mouth among students.

b. Plans for development and maintenance of unique resources (buildings, laboratories, technology) necessary to offer a quality program in this field.
There is no need for new or additional resources because of the change from the EEPM to EEP degree.

c. Targeted student/faculty ratio (student FTE divided by faculty FTE).
The current average enrollment, projected enrollment, and estimated student credit hours for the proposed classes in AREc are provided in Table 3. Assuming each 3 credit class represents 0.10 FTE of faculty teaching time, the current courses used in the EEPM program (and as service courses in other majors) represents 35 credit hours of coursework or 1.17 FTE of teaching time. However, the department has lacked faculty to teach AREC 434 over the last 4 years, so effectively this means 32 credit hours of coursework and 1.07 FTE. The current ratio of student credit hours per FTE is 1050. Under the proposed EEP degree with projected enrollments, each year the department will commit 39.5 credit hours or 1.31 FTE of teaching time. The only course being dropped will be one section of AREC 253, which is being done to allow the instructor (Christian Langpap) to pick up a graduate class in the Applied Economics program. New faculty resources for the proposed program will be made available by (a) relocating Penny Diebel from LaGrande to the Corvallis campus and (b) adding John Antle to the faculty. Projected ratio of student credit hours per FTE will be 1193, so the department will improve the productive use of its teaching resources.

Table 3. Current and Projected Enrollment Data for AREC Classes Used in EEP Degree

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Credit Hours</th>
<th>Times Offered Per Year</th>
<th>Per Class Average Enrollment 2007-09</th>
<th>Per Class Projected Enrollment 2014-15</th>
<th>Estimated Student Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREC 250</td>
<td>3</td>
<td>3</td>
<td>40</td>
<td>50</td>
<td>360 450</td>
</tr>
<tr>
<td>AREC 253</td>
<td>4</td>
<td>2</td>
<td>34</td>
<td>60</td>
<td>272 240</td>
</tr>
<tr>
<td>AREC 300</td>
<td>3</td>
<td>1</td>
<td>25</td>
<td>35</td>
<td>75 105</td>
</tr>
<tr>
<td>AREC 351</td>
<td>3</td>
<td>1</td>
<td>49</td>
<td>60</td>
<td>147 180</td>
</tr>
<tr>
<td>AREC 352</td>
<td>3</td>
<td>1</td>
<td>60</td>
<td>70</td>
<td>180 210</td>
</tr>
<tr>
<td>AREC 432</td>
<td>3</td>
<td>1</td>
<td>20</td>
<td>25</td>
<td>80 100</td>
</tr>
<tr>
<td>AREC 434</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>20</td>
<td>0 60</td>
</tr>
<tr>
<td>AREC 454/554</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>9 18</td>
</tr>
<tr>
<td>AREC 450/550</td>
<td>1</td>
<td>Alternate</td>
<td>---</td>
<td>25</td>
<td>0 12.5</td>
</tr>
<tr>
<td>Course Code</td>
<td>Section</td>
<td>Type</td>
<td>Credits</td>
<td>Term 1</td>
<td>Term 2</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>--------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>AREC 313</td>
<td>3</td>
<td>1</td>
<td>---</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>AREC 452/552</td>
<td>3</td>
<td>1</td>
<td>---</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>AREC 446/556</td>
<td>1</td>
<td>Alternate</td>
<td>---</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>AREC 457</td>
<td>1</td>
<td>Alternate</td>
<td>---</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>AREC 448</td>
<td>1</td>
<td>Alternate</td>
<td>---</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>AREC 458</td>
<td>1</td>
<td>Alternate</td>
<td>---</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>1123</td>
<td>15</td>
</tr>
</tbody>
</table>

1. Class is taught by one faculty member and 1-2 graduate students. Class is also offered on-line 3 times per year in 2008-09 with average enrollment of 25 students per term.
2. Class is also required of ABM majors and minors.
3. Class is also offered on-line two times per year with average enrollment of 28 students per term.
4. One section of 352 is taught in AREC and another section in Economics. Only the AREC section is included here. AREC also offers the class on-line one time per year with average enrollment of 28 students.
5. Class is also offered on-line one time per year with average enrollment of 10 students.
6. Enrollment numbers are for undergraduates only. Most enrollment is at the graduate level.
7. AREC 253 will be offered once a year beginning in the 2009-10 school year. Projected enrollments reflect this change.
8. New class to be created and first offered in 2010-11.
9. Class was discontinued in 2002. Enrollments prior to that time were mostly MRM students and averaged about 15 students per class. We anticipate they will again use the class and will represent the bulk of students enrolled.
10. Class will be offered in odd years only. Class will also be advertised in Water Resources master’s program.
11. Class will be offered in even years only.
12. Class will be offered in odd years only.
* Current OSU Baccalaureate Core course.

d. Resources to be devoted to student recruitment

We project that the department will devote 0.10 FTE toward recruiting of students to this new degree program.

8. External Review

Not applicable for this proposal.
**Agricultural & Resource Economics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREC 121</td>
<td>Discovering Agri &amp; Res Economics</td>
<td>2</td>
</tr>
<tr>
<td>AREC 250</td>
<td>Intro. to Environ. Econ. &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td>or ECON 201</td>
<td>Introduction to Microeconomics</td>
<td>4</td>
</tr>
<tr>
<td>AREC 253</td>
<td>Environ Law, Policy and Econ</td>
<td>4</td>
</tr>
<tr>
<td>AREC 311</td>
<td>Intermediate Microeconomic Theory I</td>
<td>4</td>
</tr>
<tr>
<td>AREC 313</td>
<td>Welfare Economics and Resource Policy</td>
<td>3</td>
</tr>
<tr>
<td>AREC 351</td>
<td>Natural Resource Econ. &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td>AREC 352</td>
<td>Environmental Economics &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td>AREC 434</td>
<td>Environmental and Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>AREC 461</td>
<td>Ag. &amp; Food Policy Issues or</td>
<td>4</td>
</tr>
<tr>
<td>AREC 434/470</td>
<td>Project/Internship</td>
<td>6</td>
</tr>
<tr>
<td>AREC, ECON or FOR – 8 credits upper division courses from the following list:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR 432</td>
<td>Economics of Recreation Resources</td>
<td>4</td>
</tr>
<tr>
<td>FOR 460</td>
<td>Forest Policy</td>
<td>4</td>
</tr>
<tr>
<td>ECON 407</td>
<td>Energy Economics</td>
<td>4</td>
</tr>
<tr>
<td>AREC 399H</td>
<td>Environment, Sustainability &amp; Quality of Life</td>
<td>1</td>
</tr>
<tr>
<td>AREC 454/554</td>
<td>Rural Development Economics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>AREC 475</td>
<td>Negotiation in Bus and Res Management</td>
<td>1</td>
</tr>
<tr>
<td>AREC 450</td>
<td>Valuing Ecosystem Services</td>
<td>1</td>
</tr>
<tr>
<td>AREC 452/552</td>
<td>Marine Economics</td>
<td>3</td>
</tr>
<tr>
<td>AREC 456/556</td>
<td>Economics of Water Conservation in Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>AREC 457</td>
<td>Economics of Global Climate Change</td>
<td>1</td>
</tr>
<tr>
<td>AREC 448</td>
<td>Biodiversity Economics</td>
<td>1</td>
</tr>
<tr>
<td>AREC 458</td>
<td>Development, Sustainability, and the Environment</td>
<td>1</td>
</tr>
<tr>
<td>AREC 432</td>
<td>One-Three classes from the following:</td>
<td></td>
</tr>
<tr>
<td>FOR 462</td>
<td>Environmental Law</td>
<td>4</td>
</tr>
<tr>
<td>SOC 448</td>
<td>Law and Society</td>
<td>4</td>
</tr>
<tr>
<td>FW 415</td>
<td>Fisheries and Wildlife Law and Policy</td>
<td>3</td>
</tr>
<tr>
<td>PS 474</td>
<td>Two classes from the following:</td>
<td>4</td>
</tr>
<tr>
<td>PS 475</td>
<td>Nat. Res. Policy and Bureaucratic Politics</td>
<td>4</td>
</tr>
<tr>
<td>PS 476</td>
<td>Environmental Politics &amp; Policy</td>
<td>4</td>
</tr>
<tr>
<td>PS 477</td>
<td>Science and Politics</td>
<td>4</td>
</tr>
<tr>
<td>PS 474</td>
<td>International Env. Politics &amp; Policy</td>
<td>4</td>
</tr>
<tr>
<td>BI 370</td>
<td>Two classes from the following:</td>
<td>3</td>
</tr>
<tr>
<td>CSS 305</td>
<td>Principles of Soil Science</td>
<td>4</td>
</tr>
<tr>
<td>CSS 306</td>
<td>and Problem Solving: Soil Sci. Appl.</td>
<td>1</td>
</tr>
<tr>
<td>CSS 335</td>
<td>Introduction to Water Science &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td>FOR 111</td>
<td>Introduction to Forestry</td>
<td>3</td>
</tr>
<tr>
<td>FW 251</td>
<td>Principles of Fish &amp; Wildlife Conservation</td>
<td>3</td>
</tr>
<tr>
<td>FW 350</td>
<td>Endangered Species, Soc. &amp; Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>OC 331</td>
<td>Introduction to Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>RNG 341</td>
<td>Rangeland Ecology &amp; Management</td>
<td>3</td>
</tr>
</tbody>
</table>
### SOCIAL SCIENCES
- **Introduction to Macroeconomics**: ECON 202 (4) C- or above
- **Intro. to U.S. Government and Politics**: PS 201 (4)
- **Introduction to Sociology**: SOC 204 (3)

### COMPUTERS AND TECHNOLOGY
- **Computer Applications in Agriculture**: AG 111 (3)
- **or Computer Appls. and Implications**: CS 101 (4)
- **Introduction to GIS**: GEO 365 (4)

### COMMUNICATIONS
- **Writing I**: WR 121 (3) C- or above
- **Writing II**: WR 214/222 (3)
- **Writing III**: COMM 111/114 (3)
- **Additional course**: WR 323/327 (3) C- or above

### MATHEMATICS
- **College Algebra**: MTH 111 (4) C- or above
- **Calculus for Mgmt. & Science**: MTH 241 (4) C- or above

### STATISTICS
- **Intro. to Statistical Methods**: ST 351 (4) C- or above

### QUANTITATIVE COURSES - choose two courses
- **Agricultural Price and Market Analysis**: AREC 447 (4)
- **Introduction to Econometrics**: ECON 424 (4)
- **Introduction to Statistical Methods**: ST 352 (4)

### HEALTH & HUMAN PERFORMANCE
- **Lifetime Fitness for Health**: HHS 231 (2)
- **Lifetime Fitness or Activity Course**: HHS 241 - 248 (1)

### SYNTHESIS (must be in different departments)
- Contemporary Global Issues
- Science, Tech. & Society

### PERSPECTIVES (2 classes allowed in same dept.)
- One Bacc Core Chemistry class
- Biological Science
- 1 add’l Phys/Bio Science

Western Culture
- Cultural Diversity
- Literature & the Arts
- Social Processes

- Diff., Power & Discrimination  
- 38-42 elective credits
ENVIRONMENTAL ECONOMICS AND POLICY MAJOR (Code # 099)
Economics Option (New)

Name:

AGRICULTURAL & RESOURCE ECONOMICS
Discovering Ag & Resource Economics AREC 121 (2)
Intro. to Environ. Econ. & Policy AREC 250 (3) C- or above
or Introduction to Microeconomics ECON 201 (4) C- or above
Introduction to Econometrics ECON 424 (4)
Environ Law, Policy and Econ AREC 253 (4)
Intermediate Microeconomic Analysis AREC 311 (4) C- or above
Welfare Economics and Resource Policy AREC 313 (3) New Course
Natural Resource Econ. & Policy AREC 351 (3)
Environmental Economics & Policy AREC 352 (3)
Ag. & Food Policy Issues or AREC 461 (4)
Environmental & Resource Economics AREC 434 (3)

AREC, ECON, FOR or MRM – 20 credits upper division courses from the following list (or approved by advisor):
Forest Resource Economics I FOR 330 (4)
Forest Resource Economics II FOR 331 (4)
Economics of Recreation Resources FOR 432 (4)
Techniques for Forest Resource Analysis FOR 457 (4)
Forest Policy FOR 460 (4)
Natural Resource Policy and Law FOR 462 (3)
Public Policy Analysis ECON 439 (4)
Energy Economics ECON 407 (4)
Transportation Economics ECON 465/565 (4)
Environment, Sustainability & Quality of Life AREC 399H (1)
Environmental Law AREC 432 (3)
Rural Development Economics and Policy AREC 454/554 (3)
Negotiation in Bus and Res Management AREC 475 (1)
Valuing Ecosystem Services AREC 450 (1) New Course
Marine Economics AREC 452/552 (3) New Course
Economics of Water Conservation in Agriculture AREC 456/556 (1) New Course
Economics of Global Climate Change AREC 457 (1) New Course
Biodiversity Economics AREC 448 (1) New Course
Development, Sustainability, and the Environment AREC 458 (1) New Course

SOCIAL SCIENCES
Introduction to Macroeconomics ECON 202 (4) C- or above

COMPUTERS AND TECHNOLOGY
Computer Applications in Agriculture AG 111 (3)
or Computer Appls. and Implications CS 101 (4)
**EEP CHECKSHEET**  
**Economics Option**  
**Page 2**

### COMMUNICATIONS
- **Writing I**  
  WR 121  
  (3)  
  C- or above
- **Writing II**  
  WR 214/222  
  (3)
- **Writing III**  
  COMM 111/114  
  (3)
- **Additional course**  
  WR 323/327  
  (3)  
  C- or above

### MATHEMATICS
- **College Algebra**  
  MTH 111  
  (4)  
  C- or above
- **Elementary Functions**  
  MTH 112  
  (4)  
  C- or above
- **Differential Calculus**  
  MTH 251  
  (4)  
  C- or above

### STATISTICS
- **Intro. to Statistical Methods**  
  ST 351  
  (4)  
  C- or above

### HEALTH & HUMAN PERFORMANCE
- **Lifetime Fitness for Health**  
  HHS 231  
  (2)
- **Lifetime Fitness or Activity Course**  
  HHS 241 - 248  
  (1)

### SYNTHESIS (must be in different departments)
- **Contemporary Global Issues**
- **Science, Tech. & Society**

### PERSPECTIVES (2 classes allowed in same dept.)
- **Physical Science**
- **Biological Science**
- **I add’l Phy/Bio Science**
- **Western Culture**
- **Cultural Diversity**
- **Literature & the Arts**
- **Social Processes**

- **Diff., Power & Discrimination**

### 63-64 Elective Credits
ENVIRONMENTAL ECONOMICS AND POLICY MAJOR (Code # 099)
General Option (Distance and On-Campus)

Name: ____________________________

AGRICULTURAL & RESOURCE ECONOMICS

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Environ. Econ. &amp; Policy</td>
<td>AREC 250</td>
<td>3</td>
<td>C- or above</td>
</tr>
<tr>
<td>or Introduction to Microeconomics</td>
<td>ECON 201</td>
<td>4</td>
<td>C- or above</td>
</tr>
<tr>
<td>Environ Law, Policy and Econ</td>
<td>AREC 253</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Applied Economic Analysis</td>
<td>AREC 300</td>
<td>3</td>
<td>C- or above</td>
</tr>
<tr>
<td>or Intermediate Microeconomic Theory I</td>
<td>AREC 311</td>
<td>4</td>
<td>C- or above</td>
</tr>
<tr>
<td>Welfare Economics and Resource Policy</td>
<td>AREC 313</td>
<td>3</td>
<td>New Course</td>
</tr>
<tr>
<td>Natural Resource Econ. &amp; Policy</td>
<td>AREC 351</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Environmental Economics &amp; Policy</td>
<td>AREC 352</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ag. &amp; Food Policy Issues</td>
<td>AREC 461</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Environmental Law</td>
<td>AREC 432</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>AREC 406</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

16 credits upper division courses from AREC, ECON, FOR or PS

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology</td>
<td>BI 370</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Soil Science</td>
<td>CSS 305</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Introduction to Water Science &amp; Policy</td>
<td>CSS 335</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Introduction to Forestry</td>
<td>FOR 111</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Fish &amp; Wildlife Conservation</td>
<td>FW 251</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Endangered Species, Soc. &amp; Sustainability</td>
<td>FW 350</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Introduction to Oceanography</td>
<td>OC 331</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Rangeland Ecology &amp; Management</td>
<td>RNG 341</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
### EEP CHECKSHEET

**General Option**

**Page 2**

#### SOCIAL SCIENCES
- **Introduction to Macroeconomics**
  - Course: ECON 202
  - Credit: 4
  - Requirement: C- or above

- **Intro. to U.S. Government and Politics**
  - Course: PS 201
  - Credit: 4

- **Introduction to Sociology**
  - Course: SOC 204
  - Credit: 3

#### COMPUTERS AND TECHNOLOGY
- **Computer Applications in Agriculture**
  - Course: AG 111
  - Credit: 3

- **Introduction to GIS**
  - Course: GEO 365
  - Credit: 4

#### COMMUNICATIONS
- **Writing I**
  - Course: WR 121
  - Credit: 3
  - Requirement: C- or above

- **Writing II**
  - Course: WR 214/222
  - Credit: 3

- **Writing III**
  - Course: COMM 111/114
  - Credit: 3

- **Additional course**
  - Course: WR 323/327
  - Credit: 3
  - Requirement: C- or above

#### MATHEMATICS
- **College Algebra**
  - Course: MTH 111
  - Credit: 4
  - Requirement: C- or above

- **Elementary Functions**
  - Course: MTH 112
  - Credit: 4
  - Requirement: C- or above

- **Differential Calculus**
  - Course: MTH 251
  - Credit: 4
  - Requirement: C- or above

#### STATISTICS
- **Intro. to Statistical Methods**
  - Course: ST 351
  - Credit: 4
  - Requirement: C- or above

- **Introduction to Statistical Methods**
  - Course: ST 352
  - Credit: 4

#### HEALTH & HUMAN PERFORMANCE
- **Lifetime Fitness for Health**
  - Course: HHS 231
  - Credit: 2

- **Lifetime Fitness or Activity Course**
  - Course: HHS 241 - 248
  - Credit: 1

#### SYNTHESIS (must be in different departments)
- **Contemporary Global Issues**
- **Science, Tech. & Society**

#### PERSPECTIVES (2 classes allowed in same dept.)
- **One Bacc Core Chemistry class**
- **Biological Science**
- **1 add’n Phys/Bio Science**

#### Western Culture
- **Cultural Diversity**
- **Literature & the Arts**
- **Social Processes**

- **Diff., Power & Discrimination**
Hi Greg,

This looks fine to me. BI 370 is taught every term so it is more a Biology Program issue than a BOT issue. However, currently BPP does teach one of these terms for the on campus version for the Biology Program. Also, one of our faculty in BPP, Jeff Stone, teaches the only ecampus version of this course.

We look forward to contributing to your program, good luck with your Category 1.

Best regards,

Lynda

Perry, Greg - AREC wrote:

> Please find attached a proposal to restructure the undergraduate
> degree in Environmental Economics, Policy, and Management. There are a
> number of significant changes to this degree program. They include:
> > • Renaming the degree to *Environmental Economics and Policy*
> > • The creation of three options or tracks within the degree, including
> one to serve distance education students
> > • The addition of nine new courses, many of which can be used by
> undergraduate and graduate students interested in resources and
> environmental sciences
> > • Better integration of the degree within the new Division of Earth
> System Sciences
> > • We believe these changes will strengthen the existing EEPM degree and
> make it more attractive to students from all over the United States.
> It builds on OSU's strengths in resource and environmental economics
> and is well positioned within the proposed structural changes for the
> university.
> > We welcome your comments, suggestions, or concerns about these
> proposed changes. Please share your thoughts with me in the next two
> weeks (by *March 26, 2010*) so that we can move the proposal ahead in
> the review process.
> > Greg Perry
> > Professor
Comments: Proposal to Change the Name and Requirements for BS Degree in EEPM

This proposal renames the EEPM degree to Environmental Economics and Policy (EEP) and creates three options: General, Economics and Policy.

We would like to suggest that the ‘Economics Option’ be renamed either ‘Environmental Economics’ or ‘Applied Economics’ option. Similarly the Policy option might be called ‘Environmental Policy’. The economics moniker may be confusing since there are economics options in the undergraduate degree program offered in the Department of Economics.

The Berkeley EEP degree explicitly includes course equivalents in the Economics department which students may substitute for EEP courses. You might consider allowing that as well—that will give students more flexibility.

Examples:
Econ 352 or AREC 352
Econ 311 or Econ 411 or AREC 311

Economics is also offering a new Law, Economics and Regulation course which might be appropriate for the policy option.
Dear Greg,

Thanks for the opportunity to review the proposed changes in the EEPM degree. In general, the proposed changes look excellent to me, and I suspect that you are correct in predicting that these offerings will attract relatively large numbers of students. It would be most unfortunate if OSU undergraduates no longer had access to curricula such as you propose, particularly in this time of burgeoning interest in issues related to the environment and sustainability!

Please keep me updated on progress with the proposal. I am interested particularly in the availability of the new courses that will be offered, on-campus and by distance, as some will be of interest to Environmental Sciences undergraduates. As you probably know, about half of our majors are completing the degree completely by distance (~200 students enrolled by distance, depending on what you count and when you count it).

I have just a few comments/questions:

(1) Currently, Environmental Sciences undergraduates can use the Natural Resource and Environmental Law and Policy Minor or the Resource Economics Minor as their area of specialization. (The Environmental Sciences degree requires that each student complete a specialization— an approved Minor, Certificate, or Option— here’s a link to information about the on-campus curriculum: http://environmental.science.oregonstate.edu/undergrad/on_campus/current ) Will you continue to offer either or both of these Minors? I encourage you to consider offering at least one Minor, based on the curricula for existing Minors, but incorporating some of the new courses that are proposed, so that students who aren’t EEP majors can take advantage of the offerings. (As you know, a major in another Department can’t complete an Option offered by another unit, thus an Environmental Sciences major couldn’t take your Options.) If there is a way to make curricula analogous to the proposed Options available to students from other departments, that would be great – both for on- and off-campus students.

(2) Re. the Policy Option, “select two classes from the following list” – I suggest that you consider adding BI 301, Human Impacts on Ecosystems, which I teach in winter terms. It is a Bacc Core Synthesis course in the Contemporary Global Issues category, and its content and focus match well some of the other courses that you list. Here’s a link to its syllabus: http://oregonstate.edu/~muirp/syllabus.htm

(3) Re. the General Option, to the section “16 upper division credits selected from AREC, ECON…..etc.” you might consider adding FW (they have a major distance presence) and RNG as well.

(4) Re the General Option, please note that ENSC 479, Environmental Case Studies, is a WIC course that is offered every term by distance means. It might be helpful to you there.

Again, thanks for the opportunity to comment, and please keep me posted on progress.

Sincerely,
Pat Muir

Patricia S. Muir, Professor  
Dept of Botany & Plant Pathology  
Director, Environmental Sciences Undergraduate Program  
2082 Cordley Hall  
Oregon State University  
Corvallis, OR 97331-2902 USA  
(541) 737-1745
Greg:

In Political Science and the Public Policy program, we appreciate and respect your contribution to understanding applied economic issues, particularly as they are related to natural resource and environmental issues. We have had a long and productive relationship; we hope and trust it can continue. We have sent grad students in the MPP program to your department – that is, we have included a number of your courses on course lists for our students, and have recommended your courses to our students on an individual basis. AREC faculty have been very generous with their time, serving on and directing a number of MPP committees. So we are pleased your professional expertise will continue to be available, both for the campus at large and for our students.

With that said, we have reservations about the use of the term “policy studies” in the proposed new name for your department. There is already an existing Public Policy program shared between Sociology, Political Science, and Economics. Students – both those already on campus, but particularly potential students – might find the use of the term “policy” in two different colleges confusing, first when applying for admission and then once they are on campus. We also suspect there might be confusion among some of our colleagues in other colleges, such as Forestry and Oceanography, where graduate students in particular are encouraged to learn at least a bit about economics – as they can from your department – and public policy, which they can absorb here.

Otherwise, we are supportive of the changes you are proposing.

The Best,

Bill
William M. Lunch
Professor and Chair
Department of Political Science
Oregon State University
Corvallis, Oregon 97331
blunch@oregonstate.edu
541-737-6242 (phone)
541-737-2289 (fax)
From: Perry, Greg - AREC
Sent: Friday, March 12, 2010 5:08 PM
To: CAS Dept Heads; COS - Chairs & Directors; CLA Chairs & Directors; Doescher, Paul; Muir, Patricia; Crannell, Wanda; Fisher, Dianna; Maness, Thomas; McComb, Brenda; Harte, Michael James
Cc: Coakley, Stella - CAS; Green, Cary; Salwasser, Hal; Abbott, Mark Richard; Ramaswamy, Sonny
Subject: Abbreviated Category I Proposal for Environmental Economics, Policy and Management

Please find attached a proposal to restructure the undergraduate degree in Environmental Economics, Policy, and Management. There are a number of significant changes to this degree program. They include:

- Renaming the degree to Environmental Economics and Policy
- The creation of three options or tracks within the degree, including one to serve distance education students
- The addition of nine new courses, many of which can be used by undergraduate and graduate students interested in resources and environmental sciences
- Better integration of the degree within the new Division of Earth System Sciences

We believe these changes will strengthen the existing EEPM degree and make it more attractive to students from all over the United States. It builds on OSU’s strengths in resource and environmental economics and is well positioned within the proposed structural changes for the university.

We welcome your comments, suggestions, or concerns about these proposed changes. Please share your thoughts with me in the next two weeks (by March 26, 2010) so that we can move the proposal ahead in the review process.

Greg Perry
Professor
Department of Agricultural & Resource Economics
Greg,

Looks good and I'm glad we are not losing the degree. It should be a banner program for OSU!

Two comments.

1. I'm not sure the line is drawn that clearly in the discussion between the AREC, PS & FOR programs. For example how is the AREC degree fundamentally different from a PS or FOR degree with an economic emphasis. I know it is but this could be made more explicit,

2. MRM doesn't have undergraduate courses but undergraduates are welcome and encouraged to take MRM 530 Principles and Practice of Marine Resource Management and MRM 535 Rights-based Fisheries Management. Though definitely graduate courses they are accessible to Honors or graduate school bound undergraduates. You might want a sentence to this effect.

Cheers

Michael Harte
Professor & Director,
Marine Resource Management Program College of Oceanic and Atmospheric Sciences Sea Grant
Extension Specialist Oregon Sea Grant
104 COAS Administration Building
Oregon State University, Corvallis, 97331
Tel: + 1 541 737 1339
Fax: + 1 541 737 2064
mharte@coas.oregonstate.edu

On Mar 12, 2010, at 5:08 PM, Perry, Greg - AREC wrote:

> Please find attached a proposal to restructure the undergraduate
> degree in Environmental Economics, Policy, and Management. There are
> a number of significant changes to this degree program. They
> include:
> >
> > * Renaming the degree to Environmental Economics and Policy
> >
> > * The creation of three options or tracks within the degree,
> > including one to serve distance education students
> >
> > * The addition of nine new courses, many of which can be
> > used by undergraduate and graduate students interested in resources
> > and environmental sciences
> >
> > * Better integration of the degree within the new Division
> > of Earth System Sciences
> >
> > We believe these changes will strengthen the existing EEPM degree and
> > make it more attractive to students from all over the United States.
> > It builds on OSU's strengths in resource and environmental economics
I think this is a good plan but I am concerned that the enrollment growth is awfully ambitious over the next 3 years. Is it realistic?

Also, it's the College of Oceanic and Atmospheric Sciences, not Oceanography.

On 3/12/10 5:08 PM, Perry, Greg - AREC wrote:
> Please find attached a proposal to restructure the undergraduate degree in Environmental Economics, Policy, and Management. There are a number of significant changes to this degree program. They include:
>   
>   • Renaming the degree to *Environmental Economics and Policy*
>   
>   • The creation of three options or tracks within the degree, including one to serve distance education students
>   
>   • The addition of nine new courses, many of which can be used by undergraduate and graduate students interested in resources and environmental sciences
>   
>   • Better integration of the degree within the new Division of Earth System Sciences
>   
> We believe these changes will strengthen the existing EEPM degree and make it more attractive to students from all over the United States. It builds on OSU's strengths in resource and environmental economics and is well positioned within the proposed structural changes for the university.
>   
> We welcome your comments, suggestions, or concerns about these proposed changes. Please share your thoughts with me in the next two weeks (by *March 26, 2010*) so that we can move the proposal ahead in the review process.
>   
> Greg Perry
>   
> Professor
>   
> Department of Agricultural & Resource Economics
Budget Outline Form
Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, the budgetary impact should be reported as zero.

Institution: **Oregon State University**
Program: **Environmental Economics & Policy**
Academic Year: **2010-11**

Indicate the year: **First**
Prepare one page each of the first four years

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Current Budgetary Unit</td>
<td>Institutional Reallocation from Other Budgetary Unit</td>
<td>From Special State Appropriation Request</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td>LINE ITEM TOTAL</td>
</tr>
</tbody>
</table>

**Personnel**
- Faculty (Include FTE)
- Graduate Assistants (Include FTE)
- Support Staff (Include FTE)
- Fellowships/Scholarships
- OPE
- Nonrecurring

**Personnel Subtotal**

**Other Resources**
- Library/Printed
- Library/Electronic
- Supplies and Services: **250**
- Equipment
- Other Expenses

**Other Resources Subtotal**

**Physical Facilities**
- Construction
- Major Renovation
- Other Expenses

**Physical Facilities Subtotal**

**GRAND TOTAL**: **250**
Budget Outline Form
Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, the budgetary impact should be reported as zero.

Institution: Oregon State University
Program: Environmental Economics & Policy
Academic Year: 2011-12

Indicate the year:  
- First 
- Second [X] 
- Third 
- Fourth

Prepare one page each of the first four years

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Current Budgetary Unit</td>
<td>Institutional Reallocation from Other Budgetary Unit</td>
<td>From Special State Appropriation Request</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td>LINE ITEM TOTAL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personnel</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Assistants (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support Staff (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowships/Scholarships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonrecurring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Resources</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Library/Printed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library/Electronic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies and Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Resources Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Facilities</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Renovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Facilities Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRAND TOTAL</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Budget Outline Form
Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, the budgetary impact should be reported as zero.

Institution: Oregon State University
Program: Environmental Economics & Policy
Academic Year: 2012-13

Indicate the year: First

Prepare one page each of the first four years

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Current</td>
<td>Institutional</td>
<td>From Special State</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td></td>
</tr>
<tr>
<td>Budgetary Unit</td>
<td>Reallocation from Other Budgetary Unit</td>
<td>Appropriation Request</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Other Resources</th>
<th>Physical Facilities</th>
<th>Grand Total</th>
<th>LINE ITEM TOTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>Library/Printed</td>
<td>Construction</td>
<td>(include FTE)</td>
<td>(include FTE)</td>
<td>(include FTE)</td>
</tr>
<tr>
<td>Graduate Assistants</td>
<td>Library/Electronic</td>
<td>Major Renovation</td>
<td>Other Expenses</td>
<td>Physical Facilities Subtotal</td>
<td></td>
</tr>
<tr>
<td>Support Staff</td>
<td>Supplies and Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowships/Scholarships</td>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPE</td>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonrecurring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Subtotal</td>
<td>Other Resources Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical Facilities Subtotal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>GRAND TOTAL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Budget Outline Form

Estimated Costs and Sources of Funds for Proposed Program

Total new resources required to handle the increased workload, if any. If no new resources are required, the budgetary impact should be reported as zero.

Institution: Oregon State University
Program: Environmental Economics & Policy
Academic Year: 2013-14

Indicate the year:  
First  Second  
Third  Fourth  

Prepare one page each of the first four years

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
<th>Column C</th>
<th>Column D</th>
<th>Column E</th>
<th>Column F</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Current Budgetary Unit</td>
<td>Institutional Reallocation from Other Budgetary Unit</td>
<td>From Special State Appropriation Request</td>
<td>From Federal Funds and Other Grants</td>
<td>From Fees, Sales and Other Income</td>
<td>LINE ITEM TOTAL</td>
</tr>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Assistants (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support Staff (Include FTE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowships/Scholarships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonrecurring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library/Printed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library/Electronic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies and Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Resources Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Renovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Facilities Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GRAND TOTAL | | | | | |
Library Evaluation for Category I Proposal

Proposal to change the name and requirement for Bachelor of Science Degree in Environmental Economics, Policy and Management

Title of Proposal

Agricultural and Resource Economics

Department

College of Agriculture

College

The subject librarian responsible for collection development in the pertinent curricular area has assessed whether the existing library collections and services can support the proposal. Based on this review, the subject librarian concludes that present collections and services are:

[ ] inadequate to support the proposal (see budget needs below)
[ ] marginally adequate to support the proposal
[ X ] adequate to support the proposal

Estimated funding needed to upgrade collections or services to support the proposal (details are attached)

Year 1: 

Ongoing (annual):

Comments and Recommendations:

The collection is adequate to support the proposed EEP degree. No extra money at the present moment is required to strengthen the collection to support the EEP program.

Date Received:

MAY YING CHAU

Subject Librarian

Date Completed:

Loretta Pielli

Signature

Head of Collection Development

5-14-10

Date

University Librarian

Date

Scarlett Butcher

Signature

5-14-10

C:\Documents and Settings\chaum\Desktop\Cat I\Cat I lib assess report form.doc
Summary

The inventory of resources at OSU Libraries indicates strong support for Environmental Economics and Policy (EEP) both in the areas of monographs and journals. If all the resources remain intact and uninterrupted by a critical budget shortfall, and the subject librarians maintain the same vigor in their collection development activities, the OSU collections will be able to sustain the anticipated growth of students in the next five years in the EEP program.

Recommendation

The collection is adequate to support the proposed EEP degree. No extra money at the present moment is required to strengthen the collection.

Overview:

The Agricultural & Resource Economics (AREC) department at the Oregon State University is highly regarded both nationally and internationally. This department is in the process of revitalizing its Bachelor of Science Degree program in Environmental Economics, Policy and Management. It will be renamed Environmental Economics and Policy with three options; they are the General Option (including distant education), the Environmental Economics Option, and the Environmental Policy Option. These options have required classes in economics (environmental economics and socio-economic), statistics, math and environmental, biological, physical, or social sciences. Remote access to these resources in the library is important since many distant education courses are offered. Due to the restructuring of the Environmental Economics and Policy (EEP) program in the AREC department, the new or renamed courses offered involve collaborations with the College of Forestry and the College of Oceanic and Atmospheric Sciences.

Collections

Monographs

The projected number of students in the EEP program over the next five years (2011-2015) is expected to jump from 30 to 62 students. The EEP program will attract more non-resident students and international students. Due to this new approach, remote access to books and articles is essential. Recently, the subject reference librarians in Agriculture (May Chau) and Economics (Laurie Bridges) have begun to include more electronic books (ebooks) in their collection development activities. A simple keyword search using “ebook” in the OSU Libraries’ catalog revealed ebook collections in several areas relating to the proposed degree. (See Table 1) This analysis is done separately from a WorldCat Collection Analysis for a more precise count, since the WorldCat Collection Analysis cannot be limited to ebooks only. Therefore, subject headings used in Table 1 are different from those in Table 2.
Table 1 E-Book Collections

<table>
<thead>
<tr>
<th>Subject</th>
<th>Total Library holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>59</td>
</tr>
<tr>
<td>Agriculture</td>
<td>55</td>
</tr>
<tr>
<td>Biology</td>
<td>550</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>173</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>37</td>
</tr>
<tr>
<td>Statistics</td>
<td>285</td>
</tr>
<tr>
<td>Marine Science</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: Ebooks are remotely accessible and most allow simultaneous multiple users.

In the future the number of the electronic books available in the OSU Libraries’ collection will continue to grow as more books are published in electronic format.

A WorldCat Collection Analysis was done to create an accurate assessment of the libraries’ collection of monographs related to the proposed degree. The analysis in Table 2 shows that the collection of relevant materials has grown 10.2 percent in the area of agricultural economics. Table 2 also shows a steady growth of relevant resources in other disciplines that support this program.

Table 2 WorldCat Collection Analysis

<table>
<thead>
<tr>
<th>Subject</th>
<th>Total OSU holdings</th>
<th>OSU holdings, 2000-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economics (under Business &amp; Economics) plus Agricultural Economics (under Agriculture)</td>
<td>3122</td>
<td>319 (10.2%)</td>
</tr>
<tr>
<td>Monographic held at OSU in Supporting disciplines</td>
<td>Total OSU holdings</td>
<td>OSU holdings, 2000-2010</td>
</tr>
<tr>
<td>Agriculture</td>
<td>44761</td>
<td>5613 (12.5%)</td>
</tr>
<tr>
<td>Biological Sciences (all areas in the discipline)</td>
<td>37838</td>
<td>5777 (15.2%)</td>
</tr>
<tr>
<td>Business &amp; Economics (all areas in the discipline)</td>
<td>75866</td>
<td>7766 (10.2%)</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>1283</td>
<td>665 (51.8%)</td>
</tr>
<tr>
<td>Forestry</td>
<td>7228</td>
<td>806 (11.1%)</td>
</tr>
<tr>
<td>Government Document</td>
<td>133771</td>
<td>34117 (25.5%)</td>
</tr>
<tr>
<td>Conservation of Natural Resources</td>
<td>303</td>
<td>47 (15.5%)</td>
</tr>
<tr>
<td>Statistics</td>
<td>1009</td>
<td>114 (11.2%)</td>
</tr>
</tbody>
</table>
The book holdings, in both print and electronic formats, at the OSU Libraries are adequate to support the Environmental Economics and Policy (EEP) program. The electronic format is especially advantageous for distant education students since remote access is instantaneous. The OSU Libraries also accommodate distant education students’ needs for print monographs by delivering books directly to student residences using FedEx.

In addition, the WorldCat Collection Analysis also shows that we have 80.36% of the core books in Agricultural Economics when compared to our peer institutions (University of California Berkeley, Northeastern University, University of Minnesota, and Utah State University).

**Journals**

Table 3 provides an analysis of journal holdings relating to the proposed EEP degree.

<table>
<thead>
<tr>
<th>Journal titles</th>
<th>ISSN</th>
<th>Impact factor</th>
<th>Cited by OSU faculty (1981-2008)</th>
<th>Library holdings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOOD POLICY</td>
<td>0306-9192</td>
<td>1.351</td>
<td>7</td>
<td>Online 1995-present; Print 1975-2005</td>
</tr>
<tr>
<td>J AGR ECON</td>
<td>0021-857X</td>
<td>1.271</td>
<td>21</td>
<td>Online 2007-2008; Print varies</td>
</tr>
<tr>
<td>EUR REV AGRIC ECON</td>
<td>0165-1587</td>
<td>1.023</td>
<td>4</td>
<td>Online 2007-2008; Print 1973-2006</td>
</tr>
<tr>
<td>AM J AGR ECON</td>
<td>0002-9092</td>
<td>0.967</td>
<td>842</td>
<td>Online 1968-present; Print 1968-1989/1990-2006</td>
</tr>
<tr>
<td>AUST J AGR RESOUR EC</td>
<td>1364-985X</td>
<td>0.719</td>
<td>14</td>
<td>Online 1998-present; Print 1997-2006</td>
</tr>
<tr>
<td>REV AGR ECON</td>
<td>1058-7195</td>
<td>0.71</td>
<td>35</td>
<td>Online 2000-2009; Print 1991-2006</td>
</tr>
<tr>
<td>CAN J AGR ECON</td>
<td>0008-3976</td>
<td>0.609</td>
<td>55</td>
<td>Online 1997-present; Print 1952-2006</td>
</tr>
<tr>
<td>J AGR RESOUR ECON</td>
<td>1068-5502</td>
<td>0.412</td>
<td>68</td>
<td>Print 1992-present</td>
</tr>
</tbody>
</table>

OSU Libraries has current subscriptions for six of the nine journals listed under the subject “Agricultural Economics” in the Journal Citation Report published by ISI Web of Knowledge. Articles from the journals for which we don’t have current subscriptions can be easily obtained using our rapid interlibrary loan service.
Databases

In addition to journals listed above, the OSU Libraries has many full text databases that include journals pertinent to the EEP program.

Table 4

<table>
<thead>
<tr>
<th>Database</th>
<th>Content</th>
<th>Full text</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgEcon Search</td>
<td>Agricultural and applied economics</td>
<td>yes</td>
<td>1932-</td>
</tr>
<tr>
<td>Agricola</td>
<td>Agriculture</td>
<td>Bibliographic record + abstract</td>
<td>1970-present</td>
</tr>
<tr>
<td>Aquatic Sciences &amp; Fisheries Abstract</td>
<td>Biological &amp; ecological aspects of marine and freshwater environments</td>
<td>Bibliographic record + abstract</td>
<td>1978- present</td>
</tr>
<tr>
<td>BioOne</td>
<td>Biological, Ecological and Environmental Sciences including global warming, ecological and biodiversity conservation</td>
<td>yes</td>
<td>Varies by journals</td>
</tr>
<tr>
<td>Business Economics &amp; Theory</td>
<td>Economics</td>
<td>yes</td>
<td>1980- present</td>
</tr>
<tr>
<td>Business Source Premier</td>
<td>Business</td>
<td>yes</td>
<td>1886- present</td>
</tr>
<tr>
<td>CABI</td>
<td>International scope, agriculture, forestry, nutrition &amp; veterinary medicine</td>
<td>Bibliographic record + abstract</td>
<td>1973- present</td>
</tr>
<tr>
<td>LexisNexis</td>
<td>News, business and legal topics</td>
<td>yes</td>
<td>Varies by journals</td>
</tr>
<tr>
<td>DEO Green Energy</td>
<td>Green energy, patent, technical reports</td>
<td>yes</td>
<td>1959- present</td>
</tr>
<tr>
<td>Environmental Issues: Social Issues Primary Sources Collection</td>
<td>Environmental issues</td>
<td>yes</td>
<td>2006- present</td>
</tr>
</tbody>
</table>

Library Staff and Expertise

May Chau and Laurie Bridges share responsibility for agricultural economics. They manage the collection and provide instruction upon request. They also conduct one-on-one consultation for in-depth research.

Other library faculty members that provide expertise to support the EEP program are Bonnie Avery (Forestry and Rangeland Resources), Janet Webster (Fisheries and
Wildlife Management), Andrea Wirth (Environmental Science), Hannah Rempel (Biological Sciences), and Valery King (Government Documents).

The staff at OSU Libraries provides reference service both in person and online. Students, especially those in distant education, can take advantage of our online chat service. Reference questions can also be answered through text messaging.