TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:

1. Program Title: Conservation and Environmental Planning
2. Department(s): Plant and Earth Science
3. College(s): Agriculture, Food, and Environmental Science
4. Proposal prepared by: Eric Sanden Date: 2-6-15
5. Check all that apply
   - [ ] New program   - [X] Existing program
   - [ ] Change in course name   - [ ] Change in number of credits
   - [ ] Change in major   - [ ] Change in minor
   - [ ] Change in course content   - [ ] Change in emphasis/option
6. Other Programs/Departments Consulted (Requires letters of comment from all Departments or Programs substantially affected):
   a.) Biology   b.) Geography   c.) Ag. Engineering   d.) Ag. Economics
7. Catalog year (and semester) of Implementation: Semester Fall Year 2015
8. Have all courses in this program been approved? Yes [X] No [ ]
   If "No" which courses have not been approved:
9. Attach Request Narrative
   Include in narrative on attached pages a rationale for the requested changes or creation of program.
   Include clarification concerning any courses that have not yet been approved. If requesting a program change also include a listing of course array for both the current and proposed program.
10. UNIT APPROVALS: Requires signatures of all Department Chairs and Deans whose programs will be substantially affected by the changes or proposal. Signature lines for the affected Departments and Colleges (noted in "6" above), are on the addendum to this form. These signatures should be obtained prior to review by all other shared governance levels.

Department Curriculum Committee Chair (optional)

Department/Program Chair: Donovan Taylor Date: 9 Feb 2015
College Curriculum Committee Chair: Donovan Taylor Date: 12 Feb 2015
Dean of College: [Signature] Date: FEB 12 2015
University Curriculum Cmtt. Chair: Ada Tyrer Date: 2/20/2015
Academic Policy & Program Cmtt. Chair: [Signature] Date: 3/9/15
Faculty Senate Chair: [Signature]
Provost / Vice Chancellor: [Signature]
Chancellor: [Signature]

*NOTE: The master copy of this transmittal & accompanying documents must be filed in the Provost's office upon final approval. The Provost's office will notify all appropriate administrative offices [Registrar, Dean(s), Department Chair(s)] of approvals & necessary actions to implement changes.

Revised December 2012
Narrative for Conservation and Environmental Planning Major Program Change

Remediating the impacts of human activity and restoring performance and balance to natural systems have become defining themes in resource management. To better serve the interests in the St. Croix Valley and beyond, and to prepare our students for successful careers, the Environmental Science and Management Unit within the Plant and Earth Science Department is initiating a reconfiguration of two of programs.

The Conservation program will be redesigned to include additional training in restoration theory and practice, and to provide additional flexibility. The Community Planning program, which was suspended in 2013, will be reconfigured to Environmental Planning, focusing on the built environment and remediating its impacts on natural areas. To provide a more coherent curriculum, greater discipline recognition by students, and maximum synergies, these two programs will be merged into the Conservation and Environmental Planning Major. For the major, students will take a common set of core courses and then specialize into either the Conservation Option or the Environmental Planning Option to gain more specialized training.

These program updates will prepare our students to seize the opportunities and meet the challenges in a rapidly changing natural resource management discipline.

The current curricula and new curriculum are summarized below with changes highlighted (yellow in the proposed curriculum are new requirements, blue in the current curriculum no longer required). A more complete curriculum of the proposed Conservation and Environmental Science Major Curriculum is attached along with letters from Biology, Geography, Agricultural Engineering and Agricultural Economics Departments.
Current Conservation Major

**Core Courses**
ESM 109 Intro. to Forestry  
ESM 151 Intro. to Land Use Theory and Practice  
ESM 220 Environmental Sustainability  
ESM 270 Internship  
ESM 303 Env. Policies and Admin.  
**ESM 343 Woodlot Management**  
ESM 360 Hydrology and Water Quality  
ESM 363 GIS Applications in Resource Management  
ESM 485 Seminar: Resource Mgt.  
SOIL 120 Intro. to Soils  
SOIL 440 Soil and Water Conservation  
AGEC 450 Intro. to N.R. Econ.  
BIOL 344 Wildlife Biology  
BIOL 360 Ecology  

**Supporting Courses**
GEOG 250 Intro. to GIS  
ENGL 266 Business Writing/ENGL 367 Technical Writing  
AGEC 230 Intro. to Ag. Economics/ECON 201 Principles of Microeconomics  
CHEM 120 Introduction to General Chemistry/ CHEM 121 General Chemistry

**Directed Electives**
11-13 cr.

**General Electives**
6 cr.

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Proposed Conservation and Environmental Planning Major – Conservation Option

**Core Courses**
ESM 151 Intro. to Land Use Theory and Practice  
ESM 220 Environmental Sustainability  
ESM 245 Found. of Ecological Restoration  
ESM 270 Internship  
ESM 303 Env. Policies and Admin.  
ESM 333 Remote Sensing of Nat. Res. or  
ESM 363 GIS Applications in Res. Mgt.  
ESM 360 Hydrology and Water Quality  
ESM 485 Seminar: Resource Mgt.

**Supporting Courses**
SOIL 120 Intro. to Soils  
AGEC 230 Intro. to Ag. Economics  
GEOG 250 Intro. to GIS  
CHEM 215 Chem. Lab. Concepts and Techniques

**Conservation Option**
SOIL 440 Soil and Water Conservation  
GENG 235 Surveying  
BIOL 344 Wildlife Biology  
BIOL 360 Ecology  
AGEC 450 Intro. to N.R. Econ.  
ESM 109 Intro. to Forestry

**Directed Electives**
15 cr.

**General Electives**
5-10 cr.
Community Planning Major Curriculum
at the time of suspension in 2013

Core Courses
ESM 151 Intro. to Land Use Theory and Practice
ESM 220 Environmental Sustainability
ESM 251 Community Decision-Making
ESM 270 Internship
ESM 293 Community Analysis
ESM 303 Environmental Policies and Administration
ESM 305 Environmental Impact Assessment
ESM 351 Planning for Sustainable Communities
ESM 333 Remote Sensing of Natural Resources or
ESM 363 GIS Applications in Resource Mgt. or
GENG 265 Engineering Graphics
ESM 360 Hydrology and Water Quality
ESM 393 Comprehensive Planning
ESM 411 Site Planning and Development
ESM 435 Advanced Land Use Planning and Design
ESM 485 Seminar: Resource Management

Supporting Courses
GEOG 250 Intro to Cartography and GIS
SOIL 120 Introduction to Soil Science
GEOG 360 GIS: Theory and Methods
AGEC/ESM 445 Land Use and Sust. Ag. Law
ENGL 266 Business Writing/ENGL 367 Technical Writing

Directed Electives
24 cr.

General Electives
6-8 cr.

Proposed Conservation and Environmental Planning Major – Environmental Planning Option

Core Courses
ESM 151 Intro. to Land Use Theory and Practice
ESM 220 Environmental Sustainability
ESM 245 Found. of Ecological Restoration
ESM 270 Internship
ESM 303 Env. Policies and Admin.
ESM 333 Remote Sensing of Nat. Res. or
ESM 363 GIS Applications in Res. Mgt.
ESM 360 Hydrology and Water Quality
ESM 485 Seminar: Resource Mgt.

Supporting Courses
SOIL 120 Intro. to Soils
AGEC 230 Intro. to Ag. Economics
GEOG 250 Intro. to GIS
CHEM 215 Chem. Lab. Concepts and Techniques

Environmental Planning Option
ESM 251 Community Decision-Making
ESM 351 Planning for Sustainable Communities
ESM 411 Site and Landscape Planning
ESM 435 Adv. Land Use Planning and Design
AGEC/ESM 445 Land Use and Sust. Ag. Law
GEOL 269 Environmental Geology

Directed Electives
15 cr.

General Electives
7-12 cr.
# Proposed Conservation and Environmental Planning
## Major Curriculum

### University Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Global Perspectives</td>
<td>GEOL 350 – Geological Dest. of Nat.</td>
<td>3</td>
</tr>
<tr>
<td>Am. Cultural Div.</td>
<td>ENGL 228 – Lit. of Env. Justice</td>
<td>3</td>
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### General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 150, CHEM 115, ESM 105 (possible double counting)</td>
<td>36-39</td>
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### Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ESM 151</td>
<td>Intro. to Land Use Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>ESM 220</td>
<td>Environmental Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>ESM 245</td>
<td>Found. of Ecological Restoration</td>
<td>2</td>
</tr>
<tr>
<td>ESM 270</td>
<td>Internship</td>
<td>2-4</td>
</tr>
<tr>
<td>ESM 303</td>
<td>Env. Policies and Admin.</td>
<td>3</td>
</tr>
<tr>
<td>ESM 333</td>
<td>Remote Sensing of Nat. Res.</td>
<td>3</td>
</tr>
<tr>
<td>or ESM 363</td>
<td>GIS Applications in Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>ESM 360</td>
<td>Hydrology and Water Quality</td>
<td>4</td>
</tr>
<tr>
<td>ESM 485</td>
<td>Seminar: Resource Mgt.</td>
<td>1</td>
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</tbody>
</table>

### Support Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOIL 120</td>
<td>Intro. to Soils</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 230</td>
<td>Intro. to Ag. Economics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 250</td>
<td>Intro. To GIS</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 215</td>
<td>Chem. Lab. Concepts and Techniques</td>
<td>1</td>
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</tbody>
</table>

### Conservation Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOIL 440</td>
<td>Soil and Water Conservation</td>
<td>4</td>
</tr>
<tr>
<td>GENG 235</td>
<td>Surveying</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 210/230</td>
<td>Gen. Botany or Gen. Zoology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 344</td>
<td>Wildlife Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 360</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 450</td>
<td>Intro. to N.R. Econ.</td>
<td>3</td>
</tr>
<tr>
<td>ESM 109</td>
<td>Intro. to Forestry</td>
<td>2</td>
</tr>
</tbody>
</table>

### Directed Electives

15

### General Electives

5-10

### Total Credits

120
Directed Electives:


**Environmental Planning Option**

- ESM 251 Community Decision-Making 3
- ESM 351 Planning for Sustainable Communities 3
- ESM 411 Site and Landscape Planning 4
- ESM 435 Advanced Land Use Planning and Design 4
- AGEC/ESM 445 Land Use and Sustainable Ag. Law 3
- GEOL 269 Environmental Geology 3

Directed Electives 15

General Electives 7-12

Total Credits 120

Directed Electives:

ESM 343, ESM 345, ESM 363, SOIL 250, SOIL 311, SOIL 325, SOIL 350, AGEN 333, AGEN 355, AGEN 365, BIOL 230, BIOL 333, BIOL 354, BIOL 434, BIOL 444, GEOG 360, GEOG 366, GEOG 368 GEOG 460, GENG 121, GENG 368, GEOL 327, GEOL 445, CROP 263, CROP 266, CROP 267, CROP 368, CROP 468, HORT 250, HORT 255, HORT 268, HORT 310, HORT 327, HORT 347, HORT 352
Current Conservation Major Curriculum

Conservation Core 47-49 cr. hrs.
ESM 109 Introduction to Forestry 2 cr.
ESM 151 Introduction to Land Use Theory and Practice 3 cr.
ESM 220 Environmental Sustainability: Theory, Issues, and Management 3 cr.
ESM 270 Internship I 2-4 cr.
ESM 303 Environmental Policies and Administration 3 cr.
ESM 333 Remote Sensing of Natural Resources 3 cr.
ESM 343 Woodlot Management 3 cr.
ESM 360 Applied Hydrology and Water Quality 4 cr.
ESM 363 GIS Application in Resource Management 3 cr.
ESM 485 Seminar in Resource Management 1 cr.
SOIL 120 Introduction to Soil Science 3 cr.
SOIL 440 Soil and Water Conservation 4 cr.
AGEC 450 Introduction to Natural Resource Economics 3 cr.
BIOL 344 Wildlife Biology 4 cr.
BIOL 360 Ecology 3 cr.
BIOL 210 General Botany 3 cr.
or BIOL 230 General Zoology

Required Supporting Courses 14 cr. hrs.
GEOG 250 Introduction to Cartography and GIS 3 cr.
ENGL 266 Business Writing or ENGL 367 Technical Writing 3 cr.
AGEC 230 Agriculture Economics I 3 cr.
or ECON 201 Principles of Microeconomics
CHEM 120 Introduction to General Chemistry 6 cr.
or CHEM 121 General Chemistry 1 5 cr.

Directed Electives: 11-13 cr. hrs.
ACCT 201, 231, 232; AGEC 320, 345; AGED 202; AGEN 325, 333, 365; CROP 345, 462; ANSC 231, 257, 260; BIOL 240, 310 320, 324, 330, 333, 350, 354, 355, 434, 444; BLAW 265; CHEM 122, 200, 230, 251, 256, 356, 452; CI 202, 320, 322, 376, 430; ECON 202, 205; ESM 289, 300, 305, 307, 365, 370, 377, 411, 413, 435, 490; FINC 210, 345; GENG 235; GEOG 255, 360, 368, 450, 460; GEOI 202, 269, 327, 330, 417, 445; HORT 250, 452; INTS 200; JOUR 260, 265; MATH 147, 166; MKTG 310; MNGT 300, 430; PE D 201, 202, 301, 371; PHIL 303; PHYS 151, 152; POLS 355; PSYC 201; SOCI 245; SOIL 311, 325, 350, 460; ECON 226, MATH 226 or ANSC 341

General Electives: 6 cr. hrs.
Current Community Planning Major (at the time the Major was suspended)

Community Planning Core 41-43 cr. hrs.
ESM 151 Introduction to Land Use Theory and Practice 3 cr.
ESM 220 Environmental Sustainability: Theory/Issues and Mgt 3 cr.
ESM 251 Community Decision-Making 3 cr.
ESM 270 Internship 1 2-4cr.
ESM 293 Community Analysis 3 cr.
ESM 303 Environmental Policies and Administration 3 cr.
ESM 305 Environmental Impact Assessment 2cr.
ESM 351 Planning for Sustainable Communities 3 cr.
ESM 333 Remote Sensing of Natural Resources 3 cr.
or ESM 363 GIS Applications in Resource Management 3 cr.
or GENG 265 Engineering Graphics 3 cr.
ESM 360 Hydrology and Water Quality 4 cr.
ESM 393 Comprehensive Planning 3 cr.
ESM 411 Site Planning and Development 4 cr.
ESM 435 Advanced Land Use Planning and Design 4 cr.
ESM 485 Seminar: Resource Management 1 cr.

Support Courses 15 cr. hrs.
GEOG 250 Intro to Cartography and GIS 3 cr.
SOIL 120 Introduction to Soil Science 3 cr.
GEOG 360 GIS: Theory and Methods 3 cr.
AGEC/ESM 445 Land Use and Sustainable Agriculture Law 3 cr.
ENGL 266 Business Writing 3 cr.
Or ENGL 367 Technical Writing 3 cr.

Directed Electives: 24 cr. hrs.
AFES 492; AGEC 230, 231, 250, 320, 345, 355, 440, 441, 450; AGED 202; AGEN 150, 240, 325, 333, 365, 425, 443; ANTH 100, 205, 247, 348; BIOL 310, 314, 320, 330, 323, 333, 344, 350, 354, 355, 360, 434, 444; CSTA 106, 207, 208, 211, 222, 306, 316, 318, 440; ECON All; ESM 109, 333, 343, 363, 377, 412; FINC 335, 350; GENG 121, 201, 235, 236, 265, 368; GEOG All except 250, 360; GEOL 101, 269, 445, 446; HEAL 350; HIST All; HORT All; INTS 200, 377; MATH 326, 356, 357; MNGT 150, 250, 310, 355; MODL 377; PHIL 303, 304; POLS All; SOCI All; SOIL All except 120; SOWK 150, 205, 215, 260, 300

General Electives: 6-8 cr. hrs.
Support for revised Conservation and Environmental Planning program

Mark Bergland
Mon 10/13/2014 3:54 PM
Inbox
To:
Eric Sanden;

Dear Eric,

This email is in strong support of the revised Conservation and Environmental Planning program as proposed by the Plant and Earth Science Department. It will have positive impacts on our students in the Field Biology option of the Biology major, many of whom take courses from PES.

Mark

Mark Bergland, Chair
Biology Department, AGS 410
University of Wisconsin - River Falls
River Falls, WI 54022
mark.s.bergland@uwrf.edu
715-425-3591 (office) or 715-529-8845 (cell)
RE: Conservation Environmental Planning Program proposal

John Heppen
Tue 10/14/2014 11:09 AM
Inbox
To: Eric Sanden <eric.m.sanden@uwrf.edu>

Hello Eric,

I have read and reviewed the GIS/CAD emphasis and we in geography support this.

John

From: Eric Sanden
Sent: Thursday, October 09, 2014 5:33 PM
To: John Heppen
Subject: Conservation Environmental Planning Program proposal

John,

As per our recent telephone conversation, please review the attached proposal. We're combining the Conservation Major with a scaled back Planning program (going from the previous Community Planning to the more narrowly focused Environmental Planning).

Of particular relevance to the Geography Department is the GIS/CAD Emphasis. I took your suggestion and added Digital Image Processing course to the offerings.

Please review and provide comment. If you are in favor of this proposal, a letter of support would be greatly appreciated.

Eric Sanden
To:
Eric Sanden;

Eric,
We have reviewed the proposal for the Conservation and Environmental Planning Major and support the new curriculum.
Thanks
Joe

Joseph Shakal, Ph.D.
Associate Professor and Department Chair
Agricultural Engineering Technology
University of Wisconsin-River Falls
410 S 3rd St. River Falls, WI 54022
TEL: 715-425-3985
RE: Program Proposals Conservation and Environmental Planning

David Trechter

Wed 2/11/2015 12:16 PM
Inbox
To:
Eric Sanden;

Hi Eric,

The Agricultural Economics Department does not object to the changes proposed to the Conservation and Environmental Planning majors and minors.

David

From: Eric Sanden
Sent: Friday, February 06, 2015 8:23 AM
To: David Trechter
Subject: Program Proposals Conservation and Environmental Planning

David,

Attached please find the revised proposals for the Conservation and Environmental Planning major and the Environmental Planning minor. We’re holding off on the Restoration Management emphasis and the Conservation minor until after the new courses have been approved.

Please review and consider providing a letter of support. Let me know if you see any issues, especially with respect to the Agricultural Economics portion of the proposal.

Eric Sanden