EA 501: Environmental Stressors

In Workflow

1. 15FOR GR Director of Curriculum (joe_roise@ncsu.edu)
2. 15FOR Grad Head (stgower@ncsu.edu)
3. CNR CC Coordinator GR (yvonne_lee@ncsu.edu)
4. CNR CC Meeting GR (yvonne_lee@ncsu.edu)
5. CNR CC Chair GR (Ilona_Peszlen@ncsu.edu)
6. CNR Final Review GR (yvonne_lee@ncsu.edu)
7. CNR Dean GR (ag_kirkman@ncsu.edu)
8. celeprev (celeprev@ncsu.edu)
9. ABGS Coordinator (george_hodge@ncsu.edu; lian_lynch@ncsu.edu; mlnosbis@ncsu.edu)
10. ABGS Meeting (george_hodge@ncsu.edu; lian_lynch@ncsu.edu; mlnosbis@ncsu.edu)
11. ABGS Chair (george_hodge@ncsu.edu; lian_lynch@ncsu.edu; mlnosbis@ncsu.edu)
12. Grad Final Review (george_hodge@ncsu.edu; lian_lynch@ncsu.edu; mlnosbis@ncsu.edu)
13. PeopleSoft (none)

Approval Path

1. Sat, 16 Apr 2016 17:14:20 GMT
   Joseph Roise (joe_roise): Approved for 15FOR GR Director of Curriculum
2. Sat, 16 Apr 2016 17:17:25 GMT
   Joseph Roise (joe_roise): Approved for 15FOR Grad Head
   Yvonne Lee (yvonne_lee): Approved for CNR CC Coordinator GR
   Yvonne Lee (yvonne_lee): Approved for CNR CC Meeting GR
   Ilona Peszlen (Ilona_Peszlen): Approved for CNR CC Chair GR
   Yvonne Lee (yvonne_lee): Approved for CNR Final Review GR
7. Mon, 25 Apr 2016 17:18:35 GMT
   Adrianna Kirkman (ag_kirkman): Approved for CNR Dean GR
8. Tue, 03 May 2016 20:46:58 GMT
   Catherine LePrevost (celeprev): Approved for celeprev
9. Wed, 04 May 2016 12:41:05 GMT
   Melissa Nosbisch (mlnosbis): Rollback to celeprev for ABGS Coordinator
10. Tue, 10 May 2016 17:22:33 GMT
    Catherine LePrevost (celeprev): Approved for celeprev
11. Thu, 12 May 2016 13:30:57 GMT
    George Hodge (george_hodge): Approved for ABGS Coordinator
12. Fri, 12 Aug 2016 18:36:46 GMT
    Melissa Nosbisch (mlnosbis): Approved for ABGS Meeting

New Course Proposal

Date Submitted: Mon, 21 Mar 2016 14:53:39 GMT

Viewing: EA 501 : Environmental Stressors

Changes proposed by: reinders

Change Type

Major
Course Prefix
EA (Environmental Assessment)

Course Number
501

Dual-Level Course
No

Cross-listed Course
No

Title
Environmental Stressors

Abbreviated Title
Env Stressors

College
College of Natural Resources

Academic Org Code
Forestry (15FOR)

CIP Discipline Specialty Number
03.0104

CIP Discipline Specialty Title
Environmental Science.

Term Offering
Fall Only

Year Offering
Offered Every Year

Effective Date
Fall 2016

Previously taught as Special Topics?
Yes

Number of Offerings within the past 5 years
4

<table>
<thead>
<tr>
<th>Course Prefix/Number</th>
<th>Semester/Term Offered</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA 590</td>
<td>Fall 2013</td>
<td>19</td>
</tr>
<tr>
<td>EA 590</td>
<td>Spring 2013</td>
<td>16</td>
</tr>
<tr>
<td>EA 590</td>
<td>Fall 2014</td>
<td>17</td>
</tr>
<tr>
<td>EA 590</td>
<td>Fall 2015</td>
<td>19</td>
</tr>
</tbody>
</table>

Course Delivery
Distance Education (DELTA)

Grading Method
Graded/Audit

Credit Hours
3

Course Length
15 weeks

Contact Hours (Per Week)

<table>
<thead>
<tr>
<th>Component Type</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>3</td>
</tr>
</tbody>
</table>

Course Is Repeatable for Credit
No

Instructor Name
Dr Catherine LePrevost

Instructor Title
Teaching Assistant Professor

Grad Faculty Status
Assoc

DELTA/Online Enrollment:
Open when course_delivery = distance OR course_delivery = online OR course_delivery = remote

<table>
<thead>
<tr>
<th>Delivery Format</th>
<th>Per Semester</th>
<th>Per Section</th>
<th>Multiple Sections?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC</td>
<td>15</td>
<td>N/A</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Course Prerequisites, Corequisites, and Restrictive Statement

Graduate Standing

Is the course required or an elective for a Curriculum?
Yes

Which Curricula are Affected?

<table>
<thead>
<tr>
<th>SIS Program Code</th>
<th>Program Title</th>
<th>Required or Elective?</th>
</tr>
</thead>
<tbody>
<tr>
<td>15EAMR</td>
<td>Masters of Environmental Assessment</td>
<td>Required</td>
</tr>
</tbody>
</table>

Catalog Description
Introduces students to how organisms are affected by and respond to changes or stressors—both natural and human-induced—in the environment. With a focus on the concepts most significant to the field of environmental assessment, the course emphasizes the fundamental processes and effects of pollutants and naturally-occurring substances in the environment, including emerging issues and historically significant cases.

Justification for new course:
Environmental Stressors is a required course in the Environmental Assessment program. The field of environmental assessment bridges the gap between scientific research and the use of science in decision-making, regulation, and environmental management. By understanding and evaluating the sources, fate, and effects of pollutants in the environment, one can develop a scientific basis for assessing risks and thus support regulatory,
enforcement, and remedial-action decisions. The Environmental Stressors course enhances students’ understanding of the effects of pollutants and naturally-occurring substances.

The course has been offered as an EA 590 Special Topics course for 4 semesters with enrollment of more than 15 students each semester. Environmental Stressors meets Environmental Assessment students’ needs for a core course offered via DE delivery and with an emphasis on environmental assessment science.

Does this course have a fee?

No

Consultation

<table>
<thead>
<tr>
<th>College(s)</th>
<th>Contact Name</th>
<th>Statement Summary</th>
</tr>
</thead>
</table>
| College of Engineering      | Yahya Fathi    | Fri, May 6, 2016 at 10:57 AM
Dear Professor LePrevost,  |
I do not see any overlap or conflict between <EA 501: Environmental Stressors> and any ISE course. If you have a specific ISE course that you wish to check against, please let me know, and I will communicate with the course instructor.  |
Best,  |
Yahya Fathi  |
Tue, May 10, 2016 at 10:31 AM
Dear Dr. LePrevost,  |
I checked with the instructors for ISE742. They have no concerns about the title or the content of the proposed course (EA 501) for potential conflict.  |
Thank you,  |
Yahya Fathi  |
DGP, ISE  |

College of Humanities and Social Sciences  
Deanna Dannels

I see no duplication with COM 536, Seminar in Environmental Communication, or with our associated COM 798 or CRD 701 courses.

Instructional Resources Statement

Current Instructor will continue to teach this course. No new resources required.

Course Objectives/Goals

Student Learning Outcomes

1. Describe the current understanding and emerging issues in sources and effects of environmental stressors.

2. Research, assess, and communicate the implications of an environmentally-stressed population, system, or location.

3. Conceptualize and explain the complexity of environmental stressors and the significance in the field of environmental assessment.

Student Evaluation Methods

<table>
<thead>
<tr>
<th>Evaluation Method</th>
<th>Weighting/Points for Each</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum_post</td>
<td>15%</td>
<td>Students must communicate on readings and discuss in small groups</td>
</tr>
<tr>
<td>Project</td>
<td>25%</td>
<td>Cases completed in small groups and presented to class</td>
</tr>
<tr>
<td>Exam</td>
<td>30%</td>
<td>Midterm</td>
</tr>
</tbody>
</table>
## Final Exam

Final written exam 30%

## Syllabus

### EA 501 Env Stressors Syllabus revised 050316.docx

### Additional Documentation

#### Additional Comments

- mlnosbis 4/26/2016: No directly overlapping courses. ISE 742 is Environmental Stress, Physiology, and Performance, but that seems to be focused on the stress toward human skilled performance. Possible consultation with DGPs Michael Kay (kay@ncsu.edu) or Yahya Fathi (fathi@ncsu.edu).
- ghodge 5/2/2016 Ask for consult from Kay and Fathi about course title. Ask instructor to add items 13 and 14 from our syllabus requirements list
- ghodge 5/12/2016 Ready for ABGS reviewers

#### ABGS Reviewer Comments:
- Awaiting consultation from CHASS regarding Environmental Communications course.

## Course Reviewer Comments

### Topical Outline/Course Schedule

<table>
<thead>
<tr>
<th>Topic</th>
<th>Time Devoted to Each Topic</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the Field, Biochemical and Molecular Methods</td>
<td>2 weeks</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Classes of Toxicants</td>
<td>1 week</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Absorption, Distribution, Metabolism, Elimination of Toxicants</td>
<td>3 weeks</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Acute Toxicity, Carcinogenicity, Mutagenicity</td>
<td>1 week</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Organ Toxicity</td>
<td>3 weeks</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Toxicity Testing, Diagnosis, Treatment</td>
<td>1 week</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Regulatory Toxicology, Human Health Risk Assessment</td>
<td>1 week</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Environmental Toxicology, Fate and Transport, Ecological Risk Assessment</td>
<td>1 week</td>
<td>2- 75 min lectures per week, student small group discussions based on lecture and readings. Several 60 min live discussions sections are offered during the semester</td>
</tr>
<tr>
<td>Case-Based Learning in Environmental Stressors</td>
<td>3 weeks</td>
<td>Four cases assigned over the course of the semester. Questions that accompany each case completed in small groups, and each group presents one case to the class in a debate format during a live session.</td>
</tr>
</tbody>
</table>
Rollback: Please consult Dr. Kay and Dr. Fathi regarding the course title. Enter consultation summaries in the consultation fields of the CIM form.

Key: 9135