COLLEGE/SCHOOL/SECTION:  ___College of Arts and Sciences__________

Course:  
Add:  _X_  Delete:  ___  
(check all that apply)  
Number  _ENSC 1101_  
Title  _Introduction to Environmental Systems Laboratory._  ___  
SCH  _1 SCH_  
Description  _An introductory laboratory course for majors and non-majors that emphasize the principles of environmental science. Students will conduct observational and manipulative experiments that examine effects of environmental factors on the biology and ecology of an ecosystem. The course will also involve discussions of case studies in environmental sustainability. This course must be taken concurrently with Introduction to Environmental Systems (ENSC 1301)._  
Prerequisite  ___  
New course will be part of major  _ENSC__  minor  _ENSC__  as a required  _X_  or elective  ___  course  
New course will introduce  _X___, reinforce  ___, or apply  ___ concepts

Justification: This course is intended to serve as a pipeline for the BS in Environment Science, which is currently a low performing degree. By adding a freshman level course into ENSC degree a greater number of students will be exposed to the environmental sciences, which should increase the number of students in the major.

If new, provide Course Prefix, Number, Title, _Measurable_ Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

Program:  
Delete:  ___  Add:  ___  Change:  ___  Attach new/changed Program of Study description and 4-year plan. If in current catalog, provide change and attach page with changes in red.

Minor:  
Add:  ___  Delete:  ___  Change:  ___  Attach new/changed minor. If in current catalog, provide change and attach page with changes in red.

Faculty:  
Add:  ___  Delete:  ___  Change:  ___  Attach new/changed faculty entry. If in current catalog, provide change and attach page with changes in red.

College Introductory Pages:  
Add information:  ___  Change information:  ___  Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Other:  Add information:  ___  Change information:  ___  Attach new/changed information. If in current catalog, provide change and attach page with changes in red.
Approvals:

Chair
Department Curriculum Committee

Chair
Department

Chair
College Curriculum Committee

Dean

03/01/10

Signature

Date

Tom Vaughan

Signature

Date

Dan Mott

Signature

Date

James A Norris

Signature

Date

Thomas R. Mitchell

Signature

Date
ENSC 1101
Introduction to Environmental Systems Laboratory Course

I. Course Description: An introductory laboratory course for majors and non-majors that emphasizes the principles of environmental science. Students will conduct observational and manipulative experiments that examine effects of environmental factors on the biology and ecology of an ecosystem. The course will also involve discussions of case studies in environmental sustainability. This course must be taken concurrently with Introduction to Environmental Systems (ENSC1301).

II. Learning Outcomes:

• To apply the scientific method to the study of environmental science.
• To identify human impacts on environmental systems.
• To develop scientific writing skills.

III. TEXTBOOK

No textbook is required for the laboratory course.

IV. INSTRUCTIONAL ACTIVITIES AND METHODS

The laboratory course will involve observational and manipulative experiments. Outdoor labs will include field sampling trips and observational field trips.

Grading Procedure: 60% lecture; 40% lab

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (4) 60%</td>
<td>Laboratory A/Q 25%</td>
</tr>
<tr>
<td>Final 20%</td>
<td>Laboratory Reports 50%</td>
</tr>
<tr>
<td>Class Activities 10%</td>
<td>Lab Practicum 25%</td>
</tr>
<tr>
<td>Final Project 10%</td>
<td></td>
</tr>
</tbody>
</table>
ENSC 1101  
Introduction to Environmental Systems Laboratory Course  
Tentative Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
</table>
| 1    | Laboratory Introduction and Discussion of Scientific Writing  
       Mineral and Plant Nutrition |
| 2    | Environmental Sustainability |
| 3    | Hierarchy and Texas Biomes - Native Plants |
| 4    | Systematics and the Dichotomous Key |
| 5    | Ecological Footprint |
| 6    | Waste Water Treatment Plant Field Trip |
| 7    | Simulating Effects of Acid Rain |
| 8    | Ecological Symbiosis |
| 9    | Simulating Effects of Acid Rain cont. |
| 10   | The Biology and Chemistry of Soil. |
| 11   | Drinking Water Treatment Plant Field Trip |
| 12   | Ecological Symbiosis cont. |
| 13   | Battling Germs with Disinfectants  
       Bacterial Contamination of Water |
| 14   | Battling Germs with Disinfectants cont.  
       Bacterial Contamination of Water cont. |
<p>| 15   | Lab Practicum |</p>
<table>
<thead>
<tr>
<th></th>
<th>Final Exam Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>