Proposal Form For Addition And Revision Of Courses

1. Proposing College / School: Agriculture, Engineering
   Department: Biosystems Engineering

2. Course Prefix and Number: BSEN 5560
3. Effective Term: Fall 2012

4. Course Title: Site Design for Biosystems
   Abbreviated Title (30 characters or less): Site Design for Biosystems

5. Requested Action:
   - Renumber a Course
   - Add a Course
   - Revise a Course

   Current Course Number: BSEN 4560
   Proposed Course Number: BSEN 5560
   Type of Revision:

6. Course Credit:

<table>
<thead>
<tr>
<th>Contact/Group Hours</th>
<th>Scheduled Type (e.g.: Lab, Lecture, Practicum, Directed Study)</th>
<th>Weekly or Per Term?</th>
<th>Credit Hours</th>
<th>Anticipated Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hours (Repeatability):</td>
<td>3</td>
<td>Lecture</td>
<td>Weekly</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Lab</td>
<td>Weekly</td>
<td>1</td>
<td>40</td>
</tr>
</tbody>
</table>

   Total Credit Hours: 3

7. Grading Type:
   - Regular (ABCDF)
   - Satisfactory/Unsatisfactory (S/U)
   - Audit

8. Prerequisites/Corequisites:
   Use "P:" to indicate a prerequisite, "C:" to indicate a corequisite, and "P/C:" to indicate a prerequisite with concurrency.
   P: BSEN 3230 or departmental approval

9. Restrictions: List specific restriction in space above.
   - College
   - Major
   - Standing
   - Degree

10. Course Description:
    (20 Words or Less; exactly as it should appear in the Bulletin)
    Develop student skills in computer-aided site design and restoration by using rural and urban best management practices to reduce environmental impacts

11. May Count Either: or
    (Indicate if this particular course cannot be counted for credit in addition to another)

   Program Type
   (e.g.: minor, major, etc.)

   Program Title
   (e.g.: MS in Chemistry, Performance Option, Minor in Art)

   Requirement or Elective?
   (required or optional?)

12. Affected Program(s):
    (Respond "N/A" if not included in any program; attach memorandum if more space is required)

   | Major | BS Biosystems Engineering |

13. Overlapping or Duplication of Other Units' Offerings:
    (If course is included in any other degree program, is used as an elective frequently by other unit(s), or is in an area similar to that covered by another college/school, attach correspondence with relevant unit)
    - Applicable
    - Not Applicable
14. Justification: Course is already being taught. Change is for the Accelerated Masters Program.

15. Resources: No additional resources are required.

16. Student Learning Outcomes:
(a) To become familiar with planning tools needed to develop new land parcels or restore previously developed land parcels or streams for improved use.
(b) To delineate site boundaries, road centerlines, and sub-watershed boundaries as part of a site development plan.
(c) To establish predevelopment site conditions and control runoff by utilizing integrated urban and rural best management practices.
(d) To study feasible alternatives for erosion and sediment control compliance.
(e) To develop a project site plan that accommodates the needs of production agriculture or forestry, rural development, or urban renewal in an environmentally conscious manner.

17. Course Content Outline:

Instructor: Mark Dougherty, 203 Corley Bldg. (doughmp@auburn.edu) 844-8939
Credit Hours: 2 lecture hours/week, 3 Lab hours/week; Total of 3 credit hours for 15 weeks
Prerequisite: BSEN 3230 or departmental approval

Textbook:

Course Description:
The course is designed to develop student skills in computer-aided site design and restoration. The design approach uses an integrated suite of rural and urban best management practices to reduce environmental impact compared to predevelopment conditions. Labs include survey data acquisition, digital terrain mapping, and development of site plans.

Course objectives:
(a) To become familiar with planning tools needed to develop new land parcels and restore previously developed land parcels or streams for improved use.
(b) To delineate site boundaries, road centerlines, and sub-watershed boundaries as part of a site development plan.
(c) To establish predevelopment site conditions and control runoff by utilizing integrated urban and rural best management practices.
(d) To study feasible alternatives for erosion and sediment control compliance.
(e) To develop a project site plan that accommodates the needs of production agriculture or forestry, rural development, or urban renewal in an environmentally conscious manner.

Course Content:
Lecture topics
Week 1: Requirements of a site design
Week 2: Review of hydrologic design. Pre- and post-development runoff
Week 3: Site analysis, feasibility, and approvals for site development
Week 4: Low volume roadway planning
Week 5-6: Low volume road layout
Week 7: Stream crossings and culvert sizing
Week 8-10: Site layout, grading and design
Week 11: Erosion and sediment control planning
Week 12: Stormwater management
Week 13: Water distribution and wastewater collection
Week 14: Stream restoration design - Cost estimating
Week 15: Project presentations

Lab Topics
Week 1: Cleanwater Alabama Conference
Week 2: City of Auburn Web GIS resources for site design
Week 3: Field Data Collection
Week 4: CAD Mapping
Week 5-6: Site visit (TBA)
Week 7: Horizontal and vertical alignment layout
Week 8: CIVIL 3D - culvert sizing
Week 9-11: CIVIL 3D - Profiles, surfaces and grading
Week 12-13: CIVIL 3D - Material Calculation and Pipeline alignments
Week 14: Plan Profile drawings
Week 15: Project presentations

Assignments in appropriate books and technical literature will be made to correspond with lecture topics.

Assessment:
Homework 25%
Quiz 1 25%
Quiz 2 25%
Final Exam 25%
Total of 100 points

Grade Assignment
A = 90 - 100 %
B = 80 - 89.9 %
C = 70 - 79.9 %
D = 60 - 69.9 %
F = below 60 %

Class Policy Statements:
(a) Class Attendance: It is critical that you attend class regularly to be successful in the course. Class attendance and participation will be taken into consideration in case of a borderline final grade. If you miss a class, it is the student's responsibility to become informed of any material presented or assignments announced during an absence.

(b) Electronic devices: Only calculators approved by the National Council of Examiners for Engineering and Surveying (NCEES) are permitted for use on exams, quizzes, etc. The following are currently the only calculators permitted: (1) Hewlett Packard – HP 33S, (2) Casio – FX 115MS or FX 115MSPlus (may have SR designation), (3) Texas Instruments – TI 30X IIS, and (4) Texas Instruments – TI 36X SOLAR. Students may check with the instructor to see if any other calculator may be permitted. Use of other electronic devices with communication capabilities are also prohibited during exam or quiz periods (e.g. computers, cell phones, cameras, PDAs, beepers, pagers, iPads, Zunes, cameras, etc.) If these types of electronic devices are seen in use during the quiz or exam, they may be confiscated and the student may face disciplinary action through the academic honesty policy.

(c) Cell phones: To provide the optimal learning environment for all students, all cellular phones must be turned OFF or otherwise inactivated during class, lab, quiz, and exam periods. Text messaging or emailing
during class is prohibited.
(d) Disputes over grades: All grade objections are to be submitted to the
instructor in writing no later than one week after an assignment is returned
to the class. Otherwise, grade objections will not be entertained. Grade
objections should be very specific, i.e., objections that simply ask that a
problem be re-graded without providing detailed explanation will not be
considered. The original exam or assignment that corresponds with the
objection must be submitted along with the written objection. All reviewed
objections are final, and multiple objections for the same assignment by the
same student are prohibited.

Auburn University Diversity Statement
Diversity at Auburn University encompasses the whole of human
experience and includes such human qualities as race, gender, ethnicity,
physical ability, nationality, age, religion, sexual orientation, economic
status, and veteran status. These and other socially and historically
important attributes reflect the complexity of our increasingly diverse
student body, local community, and national population. Diversity is a core
value at Auburn University. The Office for Diversity and Multicultural Affairs
strives to offer a comprehensive range of exemplary educational programs
that foster and sustain an environment that promotes academic excellence,
respects differences, and accepts inclusiveness. Auburn University
recognizes and values the considerable educational benefits emanating
from diversity as we prepare our students for life and leadership in a
multicultural world. Students who interact with and learn about people from
a variety of backgrounds are more apt to understand, appreciate, and excel
in the community they inhabit. In this context, diversity is aligned with
Auburn University’s land grant mission of providing its students with a
superior education in service to the needs of Alabama, the nation, and the
world. More information can be found at -www.auburn.edu/diversity/

Academic Honesty Statement:
Academic Honesty Policy: The Auburn University student academic
honesty code can be found at https://sites.auburn.edu/admin/
universitypolicies/Policies/AcademicHonestyCode.pdf. All academic
honesty violations or alleged violations of code will be reported to the Office
of the Provost, which will then refer the case to the Academic Honesty
Committee.

Students with Disabilities Statement:
Disability Accommodations: Students who need special accommodations in
class, as provided for by the American Disabilities Act, should arrange a
confidential meeting with the instructor during office hours the first week of
classes - or as soon as possible if accommodations are needed
immediately. You must bring a copy of your Accommodation Memo and an
Instructor Verification Form to the meeting. If you do not have these forms
but need accommodations, make an appointment with The Program for
Students with Disabilities, 1244 Halley Center, 844.2096 or follow the steps
on the website for the office to request for accommodation (https://fp.
auburn.edu/disability/students/requestaccommodations.asp)

(Provide a comprehensive, week-by-week breakdown of course content, including assignment due dates)

18. Assignments / Projects:

| Homework 25%  |
| Quiz 1 25%    |
| Quiz 2 25%    |
| Final Exam 25%|
| Total of 100% |

(List all quizzes, projects, reports, activities and other components of the course grade -- including a brief description of each
assignment that clarifies its contribution to the course's learning objectives)

19. Rubric and Grading Scale:

Grades will be assigned as follows (T=% of total points):
T ≥ 90% A
20. Justification for Graduate Credit:  
N/A

(Include a brief statement explaining how the course meets graduate educational standards (i.e.: rigorous standards for evaluation, development of critical thinking and analytical skills, etc.).)

(Included below are standard statements regarding course policies. If necessary, a statement may be altered to reflect the academic policies of individual faculty members and/or the academic unit or department, provided that there is no conflict with the Tiger Cub, Faculty Handbook, or any existing university policy.)

POLICY STATEMENTS

Attendance: Although attendance is not required, students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence.

Excused Absences: Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student’s immediate family, the death of a member of the student’s immediate family, trips for student organizations sponsored by an academic unit, trips for university classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance, and religious holidays. Students who wish to have an excused absence from class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request, and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required. Please see the Tiger Cub for more information on excused absences.

Make-Up Policy: Arrangement to make up a missed major examination (e.g., hour exams, mid-term exams) due to properly authorized excused absences must be initiated by the student within one week of the end of the period of the excused absence(s). Except in unusual circumstances, such as the continued absence of the student or the advent of university holidays, a make-up exam will take place within two weeks of the date that the student initiates arrangements for it. Except in extraordinary circumstances, no make-up exams will be arranged during the last three days before the final exam period begins.

Academic Honesty Policy: All portions of the Auburn University student academic honesty code (Title XII) found in the Tiger Cub will apply to university courses. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations: Students who need special accommodations in class, as provided for by the Americans With Disabilities Act, should arrange for a confidential meeting with the instructor during office hours in the first week of classes (or as soon as possible if accommodations are needed immediately). The student must bring a copy of their Accommodation Letter and an Instructor Verification Form to the meeting. If the student does not have these forms, they should make an appointment with the Program for Students with Disabilities, 1288 Haley Center, 844-2096 (VTV).