Proposal Form For Addition And Revision Of Courses

1. Proposing College / School: Engineering
   Department: N/A

2. Course Prefix and Number: ENGR 1113

3. Effective Term: Summer 20

4. Course Title: Introduction to Engineering
   Abbreviated Title (30 characters or less): Introduction to Engineering

5. Requested Action:
   - Add a Course
   - Proposed Course Number: ENGR 1113
   - Type of Revision:

6. Course Credit:

<table>
<thead>
<tr>
<th>Contact/Group Hours</th>
<th>Scheduled Type</th>
<th>Weekly or Per Term?</th>
<th>Credit Hours</th>
<th>Anticipated Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lecture</td>
<td>weekly</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>lab</td>
<td>weekly</td>
<td>1</td>
<td>20</td>
</tr>
</tbody>
</table>

   Total Credit Hours: 2

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

8. Prerequisites/Corequisites:
   None

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)
    ENGR 1113: Introduction to Engineering (2) Lec. 1, Lab. 3. Introduction to engineering design, engineering teams, graphical presentation, technical writing, oral presentation.

11. May Count Either:
    - ENGR 1110
    - ENGR 1113
    (Indicate if this particular course cannot be counted for credit in addition to another)

12. Affected Program(s):
    (Respond "N/A" if not included in any program; attach memorandum if more space is required)
    | Program Type | Program Title | Requirement or Elective? |
    |--------------|---------------|--------------------------|
    | various      | engineering undergraduate programs |

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: This is a distance-ed version of ENGR 1110. Helpful for transfer students and entering freshmen.

(Include a concise, yet adequate rationale for the addition/revision of the course, citing accreditation, assessments (faculty, graduate, and/or external) where applicable)

15. Resources: existing resources are adequate

(Indicate whether existing resources such as library materials, classroom/laboratory space, and faculty appointments are adequate to support the proposed addition/revision; if additional resources are required, indicate how such needs will be met, referencing the appropriate level of authorization -- i.e.: Dean -- where necessary; if no additional resources or shifting of resources will be necessary, respond "Not Applicable")

16. Student Learning Outcomes: Students should be able to design a system in teams and communicate their work to others.

(State in measurable terms (reflective of course level) what students should be able to do when they have completed this course)

17. Course Content Outline:

<table>
<thead>
<tr>
<th>Week</th>
<th>Content</th>
</tr>
</thead>
</table>
| 1    | Week 1: course orientation & introduction to engineering and teams  
|      | Lab: engineering and teams |
| 2    | Week 2: the engineering design process  
|      | Lab: team design, review, and presentation exercise |
| 3    | Week 3: basic circuits  
|      | Lab: LEGO motors measurement |
| 4    | Week 4: tables and spreadsheets  
|      | Lab: LEGO motors study and graphing exercise |
| 5    | Week 5: engineering statistics  
|      | Lab: statistical analysis and modeling exercise |
| 6    | Week 6: engineering simulation  
|      | Lab: Simulink exercise |
| 7    | Week 7: introduction to MATLAB  
|      | Lab: MATLAB exercise |
| 8    | Week 8: engineering visuals  
|      | Lab: Solid Edge tutorials  
|      | Professional development memo due. |
| 9    | Week 9: tech writing -- prose  
|      | Lab: MATLAB revisited exercise  
|      | Preliminary design report due. |
| 10   | Week 10: tech writing -- organization  
|      | Lab: design report development |
| 11   | Week 11: risk and safety  
|      | Lab: risk analysis  
|      | Week 12: oral presentations  
|      | Lab: tour of engineering facility  
| 13   | Week 13: financial engineering |
| 14   | Week 14: engineering ethics  
|      | Lab: final design presentation  
|      | Final design report due.  
|      | Professional development memo due. |

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

18. Assignments / Projects: All lab material will be purchaseable or downloadable. Textbooks can be ordered online from the AU Bookstore. Students will have access to the instructor and/or TA during lab hours for help with technical issues related to software. The College of Engineering Network Services personnel are also available for help via email for software installation. No advanced math requiring tutoring is expected.

Recorded lectures posted online via an LMS (currently Canvas), other resources and instructions posted online via an LMS, online discussion via web forum in an LMS, quizzes delivered via LMS, electronic submission of assignments via LMS and/or email.
Web forums within an LMS will be set up for peer and student-instructor interaction. Synchronous lab sessions will be conducted using audio/video chat rooms available within the LMS. Office hours will be held for live chat and possibly video chat. Email will be encouraged.

Discussion Participation
Participation in online discussion, both with one's team, and as individuals with the class as a whole, is vital to the class learning experience. Interaction will be expected on class and team forums, which will be made available in a password-protected course management system provided by Auburn University. The professor will sometimes post questions to stimulate discussion. Remember that discussion is not a scheduled activity, so students must establish a regular pattern of checking the discussion on their own. Participating early is encouraged so that others can react to your contributions.

Labs/Homework
Homework assignments will be based on work done individually and by teams in the lab exercises. Individuals will submit their own independent homework assignment unless otherwise specified. Individual grades resulting from team projects/reports will be adjusted to reflect individual participation, as measured by peer evaluation at the end of the course.

Professional Development Meetings/Memos
You are expected to attend two approved professional development presentations/meetings sometime during the term and submit a one-page memo describing what you learned for each meeting.

Quizzes
Quizzes will be available at the end of every online lecture, based on the reading assignment for that week and the lecture.

A team preliminary design report is required to encourage an early start on the design project and to obtain feedback for the final design report.

A final design report produced by each team is required to document the term-length design project that brings together all the topics learned through the course.

A final design presentation from each team is required to demonstrate their design work and oral technical presentation skills.

(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:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs/Homework</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Prelim Design Report</td>
<td>5%</td>
</tr>
<tr>
<td>Final Design Report</td>
<td>25%</td>
</tr>
<tr>
<td>Final Design Presentation</td>
<td>10%</td>
</tr>
</tbody>
</table>

Course grades will be assigned based on the standard 10-point scale listed below.

- 90 – 100 A
- 80 – 89 B
- 70 – 79 C
- 60 – 69 D
- <60 F

(List all components of the course grade -- including attendance and/or participation if relevant -- with point totals for each; indicate point totals and ranges or percentages for grading scale; for S/U grading, detail performance expectations for a passing grade)
20. Justification for Graduate Credit:

(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, 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 (V/TT).