CLEMSON UNIVERSITY **Curriculum and Course Change System - Print Change/Delete Course Form**

X **Change a Course - Abbrev & Number: BIOE- 4510**
Corresponding Lab Course: --
Corresponding Honors course: --
.. **Add Honors course:** --
Corresponding Graduate course: --
.. **Add Graduate course:** --
Course Title: Creative Inq Bio E

Brief Statement of Change:
Remove "may be repeated for a maximum of 6 credits". Our curriculum contains 12 credits of 'BioE Tech reqt', of which we allow 6 to be fulfilled by experiential learning courses such as CI, mentored research, internship. Since these credits can be earned through multiple courses, this ultimately is enforced through the departmental guidelines for BioE Tech Reqt that are coordinated with the Registrar's office. Many students take more than 6 credits of CI even though those above 6 only count as free elective-this change will simply remove the need to provide registration overrides for their enrollment.

Last Term taught: 201408	.. **Change Abbrev to:**
Effective Term: 08/2015	.. **Change Number to:**
.. **Change Catalog Title:**	.. **Change Transcript Title:**
from:	from: Creative Inq Bio E
to:	to:

.. **Change of Credit**	From: Fixed Credit: (,) Variable Credit: 1-6 (-), (-)	To: Fixed Credit: (,) Variable Credit: - (-),(+) 1 to 99

.. **Add cross-listing with the following child course(s):**
.. **Delete cross-listing with the following child course(s):**
.. **Reverse Parent/Child relationship with:**

.. **Change Method of Instruction**		.. **Change Course Modifier**		.. **Change General Education Designation**	
from:	to:	from:	to:	from:	to:
.. A-Lecture Only	..	.. Pass/Fail Only	..	.. Creative Inquiry	..
.. B-Lab (w/fee)	..	X Graded	..	.. English Composition	..
X D-Seminar	..	.. Variable Title	..	.. Oral Communication	..
.. E-Independent Study	..	.. Creative Inquiry	..	.. Mathematics	..
.. F-Tutorial (w/fee)	..	X Repeatable	..	.. Natural Science w/Lab	..
.. G-Studio	..	maximum credits		.. Natural Science w/Lab	..
.. H-Field course	..	from:		.. Math or Science	..
.. I-Study Abroad	..	to:		.. A&H (Literature)	..
.. L-Lab (no/fee)	..			.. A&H (Non-Literature)	..
.. N/B-Lecture/Lab(w/fee)	..			.. Social Science	..
.. N/L-Lecture/Lab(no fee)	..			.. CCA	..
				.. STS	..

X **Change Catalog Description:**
from: Disciplinary and multidisciplinary team research projects with the goal of developing the students' skills in literature research, engineering design, and data analysis. May be repeated for a maximum of six credits.
to: Disciplinary and multidisciplinary team research projects with the goal of developing the students' skills in literature research, engineering design, and data analysis.

.. **Change Prerequisite(s):**
from:
to:

Learning Objectives: Example syllabus objectives:
1) To learn to work with a team
2) To develop skills utilizing library and internet resources
3) To develop laboratory skills, including biomaterials handling and data collection
4) To build hypotheses and frame research questions
5) To design experiments to assess creative inquiry activities
6) To compile and evaluate research data
7) To communicate results in oral and written form.

Topical Outline: Example syllabus topical outline:
Literature research (3 weeks)
Outreach project (3 weeks)
Experimental labwork (9 weeks)

Evaluation: Individual Program Development Efforts
o Journal Club participation and homework 20%
o FoCI and Department Poster Shows, Community Outreach Project 20%
☐ Individual Clinical Partner Management
o Active Efforts to Engage clinical collaborators and collect implants 20%

o Logging and Management of Implant Data 20%
and Active Participation in Implant Cleaning and Processing
☐ Small Group Activities
o Prosthesis Descriptive Worksheets 10%
o New Ideas and Adding Value to the Program 10%
Grading Scale: A = 90 – 100% B = 80 – 89% C = 70 – 79% D = 60 – 69% F = 0 – 59%

Form Originator: KWEBB, Webb,Charles K **Date Form Created:** 4/6/2015
Form Last Updated by: , **Date Form Last Updated:** 4/6/2015
Form Number: 8150

Approval

Ken Webb	4/6/15	Patricia W. Marlowe	5/1/2015
Chair, Department Curriculum Committee	Date	Chair, Undergraduate Curriculum Committee	Date
[signature]	4/6/15		
Department Chair	Date	Chair, Graduate Curriculum Committee	Date
[signature]	4/17/15	J Robert S Jones	7/14/15
Chair, College Curriculum Committee	Date	Provost	Date
[signature]	4/24/15		
College Dean	Date	President	Date
Director, Calhoun Honors College	Date		

CLEMSON UNIVERSITY **Curriculum and Course Change System - Print Change/Delete Course Form**

X **Change a Course - Abbrev & Number: BIOE- 4910**
Corresponding Lab Course: --
Corresponding Honors course: BIOE--4910
.. **Add Honors course:** --
Corresponding Graduate course: --
.. **Add Graduate course:** --
Course Title: Research in Bio E

Brief Statement of Change:
Remove "may be repeated for a maximum of 6 credits" Our curriculum contains 12 credits of 'BioE Tech Reqt', of which we allow 6 to be fulfilled by experiential learning courses such as CI, mentored research, and internship. Since these credits can be earned through multiple courses, this ultimately is enforced through the departmental guidelines for BioE Tech Reqt that are coordinated with the Registrar's office. Many students take more than 6 credits of mentored research even though those above 6 only count as free elective-this change will simply remove the need to provide registration overrides for their enrollment.

Last Term taught: 201408	.. **Change Abbrev to:**
Effective Term: 08/2015	.. **Change Number to:**
.. **Change Catalog Title:**	.. **Change Transcript Title:**
from:	from: Research in Bio E
to:	to:

..	From: Fixed Credit: (,)	To: Fixed Credit: (,)
Change of Credit	Variable Credit: 1-6 (-), (-)	Variable Credit: - (-),(-)

1 to 99

.. **Add cross-listing with the following child course(s):**
.. **Delete cross-listing with the following child course(s):**
.. **Reverse Parent/Child relationship with:**

.. **Change Method of Instruction**		.. **Change Course Modifier**		.. **Change General Education Designation**	
from:	to:	from:	to:	from:	to:
.. A-Lecture Only	..	.. Pass/Fail Only	..	.. Creative Inquiry	..
X B-Lab (w/fee)	..	X Graded	..	.. English Composition	..
.. D-Seminar	..	.. Variable Title	..	.. Oral Communication	..
.. E-Independent Study	..	.. Creative Inquiry	..	.. Mathematics	..
.. F-Tutorial (w/fee)	..	X Repeatable	..	.. Natural Science w/Lab	..
.. G-Studio	..	maximum credits		.. Natural Science w/Lab	..
.. H-Field course	..	from:		.. Math or Science	..
.. I-Study Abroad	..	to:		.. A&H (Literature)	..
.. L-Lab (no/fee)	..			.. A&H (Non-Literature)	..
.. N/B-Lecture/Lab(w/fee)	..			.. Social Science	..
.. N/L-Lecture/Lab(no fee)	..			.. CCA	..
				.. STS	..

X **Change Catalog Description:**
from: Mentored research training for undergraduate students working with a faculty advisor, including literature review, experimental design, research documentation, and presentation of results. May be repeated for a maximum of 6 credits. Departmental honors students must take six credits under a single advisor and write an honors thesis.
to: Mentored research training for undergraduate students working with a faculty advisor, including literature review, experimental design, research documentation, and presentation of results. Departmental honors students must take six credits under a single advisor and write an honors thesis.

.. **Change Prerequisite(s):**
from:
to:

Learning Objectives: Students will be able to:
• Perform literature searches on biomedical engineering topics and identify the current state of knowledge and gaps for continued research
• Design and conduct experimental procedures
• Document experimentation in laboratory notebooks
• Disseminate research findings

Topical Outline: Literature review (6 hours / credit)
Experimental design (9 hours / credit)
Experimental research (28 hours / credit)

Evaluation: Quiz on safety / laboratory skills training: 10%
Attendance: 20%
Journal club presentation: 15%
Bi-weekly written goals /progress reports: 25%
End of semester oral research presentation: 30%

Form Originator: KWEBB, Webb,Charles K **Date Form Created:** 4/6/2015
Form Last Updated by: KWEBB, Webb,Charles K **Date Form Last Updated:** 4/6/2015
Form Number: 8151

Approval

Kim Webb	4/6/15	Jessica W. Mudrock	5/1/2015
Chair, Department Curriculum Committee	Date	Chair, Undergraduate Curriculum Committee	Date
[signature]	4/6/15		
Department Chair	Date	Chair, Graduate Curriculum Committee	Date
[signature]	4/17/15		
Chair, College Curriculum Committee	Date	Provost	Date
[signature]	4/20/15	Robert H Jones	7/15/15
College Dean	Date	President	Date
Director, Calhoun Honors College	Date		

CLEMSON UNIVERSITY **Curriculum and Course Change System - Print New Course Form**

Course Abbreviation & Number:
X **New Undergraduate Course:** CH- 4360
.. **New Honors Course:** --
X **New Graduate Course:** CH- 636

Effective Term: 05/2015
Catalog Title: Computational Quantum Chemistry and Electronic Structure Methods
Transcript Title: Comput. Quantum Chemistry
Fixed Credit Course: 3 (3,0)
Variable Credit Course: - (-), (-)

Method of Instruction	Course Modifier	General Education Designation
X A-Lecture Only	.. Pass/Fail Only	.. Creative Inquiry
.. B-Lab (w/fee)	X Graded	.. English Composition
.. D-Seminar	.. Variable Title	.. Oral Communication
.. E-Independent Study	.. Creative Inquiry	.. Mathematics
.. F-Tutorial (w/fee)	.. Repeatable	Natural Science No
.. G-Studio	maximum credits:	.. Lab
.. H-Field course		.. Natural Science w/Lab
.. I-Study Abroad		.. Math or Science
.. L-Lab (no/fee)		.. A&H (Literature)
.. N/B-Lecture/Lab(w/fee)		.. A&H (Non-Literature)
.. N/L-Lecture/Lab(no fee)		.. Social Science
		.. CCA
		.. STS

Add cross-listing with the following child course(s):

Catalog Description: Hands-on introduction to electronic structure calculations. Topics include types of quantum mechanical calculations, the theory behind ab initio and density functional theory methods, basis sets and basis set effects. Emphasis will be placed on understanding the results of the calculations and relating them to basic chemical principles.

Prerequisite(s): for CH 4360: CH 3320 / for CH 6360: graduate standing

Projected Enrollment:
Year 1 - 6 Year 2 - 8 Year 3 - 10 Year 4 - 10

Required course for students in:

Statement of need and justification based on assessment results of student learning outcomes: Computational chemistry is being increasingly used by chemists across a wide variety of disciplines. As computing power increases, quantum mechanical calculations are becoming more widely available and can be applied to larger systems. Today's chemists, no matter what their field, will be at an advantage if they can perform quantum mechanical electronic structure calculations and understand the results. The proposed course will be aimed at synthetic chemists as well as physical chemists. This course is intended to complement the computational chemistry course that is currently offered by the department (CH 8380). CH 6360 will be more hands-on, and will not cover molecular dynamics simulations. In addition, CH 6360 will also compliment the various quantum mechanics courses offered by the department.

Textbook(s): 1. Foresman, J. B. and Frisch, Æ. Exploring Chemistry with Electronic Structure Methods, 2nd Ed.; Gaussian, Inc: Pittsburg, PA, 1993.
2. Szabo, A. and Ostlund, N. S. Modern Quantum Chemistry: Introduction to Advanced Electronic Structure Theory; MacMillan Publishing Co, Inc: New York, 1982.

Learning Objectives: By the end of this course students should be able to:
-Explain the theory behind Hartree-Fock calculations, post-Hartree-Fock methods, and Density Functional Theory
-Choose a suitable basis set and level of theory for a calculation that is relevant to current undergraduate/graduate research projects
-Choose a proper type of calculation (ie single-point energy, vibrational calculation, geometry optimization) to answer a particular question
-Recognize common errors and take steps to correct the error.
-Critically evaluate relevant literature

Topical Outline: Week 1: Overview of computational chemistry
Week 2: Single-point energy calculations
Week 3: Basics of running a Gaussian calculation
Week 4: Geometry optimizations, frequency calculations, and characterizing stationary points
Week 5: Choice of model chemistry
Week 6: Basis set effects; use of the Gaussian checkpoint file
Week 7: Theory: Dirac notation; wave functions and operators
Week 8: Hartree-Fock calculations
Week 9: Configuration Interaction and Couple Cluster Theory
Week 10: Perturbation Theory
Week 11: Finish Perturbation Theory / Begin Density Functional Theory
Week 12: Density Functional Theory and the Kohn-Sham Equations
Week 13: Periodic boundary conditions, plane-wave basis sets, and pseudopotentials
Week 14: Calculation of NMR chemical shifts
Week 15: Final Project Presentations

Evaluation: Grading Scale – CH 4360
Homework.....10% A: 90-100%
Quizzes.....10% B: 80-89.9%
Two hour exams.....20% C: 70-79.9%
Final Presentation.....40% D: 60-69.9%
Final Exam.....20% F: < 60%

Grading Scale – CH 6360
Homework.....10% A: 90-100%
Quizzes.....10% B: 80-89.9%
Two hour exams.....20% C: 70-79.9%
Final Presentation.....40% F: < 70%
Final Paper.....20%

Add course requirements for honors and/or 600-level courses (if applicable): Final Exam
For students enrolled in CH 4360, the final exam will consist of performing calculations similar to those done in the homework, and interpreting the results. Students who have an A average on all work up to the final exam will be excused from the final.

Final Paper
For students enrolled in CH 6360, the final project will also have a written component. A 3-5 page paper in the format of a peer-reviewed scientific journal will be due by the end of the final exam period. The purpose of this component is to gain experience reading and citing the relevant scientific literature, and presenting results in a scientific paper. The written paper will be done individually, with no external help of any kind.

Form Originator: LCASABI,Casabianca,Leah Beck **Date Form Created:** 1/10/2015
Form Last Updated by: LCASABI, Casabianca,Leah Beck **Date Form Last Updated:** 4/14/2015
Form Number: 7974

Approval

		Patricia W. Morrison	5/1/2015
Chair, Department Curriculum Committee	Date	Chair, Undergraduate Curriculum Committee	Date
	4/17/15		
Department Chair	Date	Chair, Graduate Curriculum Committee	Date
R. Karl Dieter	4-17-15	Robert M. Jones	7/14/15
Chair, College Curriculum Committee	Date	Provost	Date
	4/17/15		
College Dean	Date	President	Date
	4/24/15		
Director, Calhoun Honors College	Date		

000105

Change 4000/6000 Course

Change a Course

Subject: BE-Biosystems Engineering
Number: 4150/6150
Effective Term: Fall 2015
Title:
Honors Course:
☐ Add Honors Course:
Last Term Course was taught: 201001
Brief Statement of Change Based on Assessment Results:
Since this course requires both ECE2070 and ECE2080, the review on basic electric circuit is not necessary. The credit hours can be reduced from 4 to 3. This course will be offered for graduate students also. But, the graduate students need to do more work than undergraduates. (See details in the syllabus)

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☑ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change of Credit

From
Fixed Credit Course

Credit Hrs	Contact Hrs
4	3

Variable Credit Course

Credit Hrs		Contact Hrs	
Min	Max	Min	Max

To
Fixed Credit Course

Credit Hrs	Contact Hrs
3	3

Variable Credit Course

Credit Hrs		Contact Hrs	
Min	Max	Min	Max

☑ Change Prerequisite(s) / Corequisite(s)

From ECE2070
To ECE2070 & ECE2080

Learning Objectives

To produce engineering students with the ability to analyze and design physical and biological systems, and to demonstrate that they have: a) the ability to apply knowledge of mathematics, science and engineering * b) the ability to design and conduct experiments, and analyze and interpret data * c) the ability to design a system, component or process to meet desired needs * d) the ability to function on multi-disciplinary teams e) the ability to identify, formulate, and solve engineering problems * f) the understanding of professional and ethical responsibility g) the ability to communicate effectively h) the broad education necessary to understand the impact of engineering solutions in a global and societal context i) a recognition of the need for, and an ability to engage in, life-long learning j) a knowledge of contemporary issues k) the ability to use techniques, skills and modern engineering tools used in engineering practice * * indicates ABET objective addressed in BE 415

Topical Outline

Lecture Topics#: Week 1. Introduction to process control* Week 2. Analog signal conditioning Week 3. Digital signal conditioning Weeks 4-5. Temperature measurement Week 6. Displacement, location or position measurements Week 7. Strain and pressure measurements Week 8. Flow measurement and level measurement Week 9. Optical sensors Week 10. Controller principles Week 11. Analog controllers Week 12. Analytical instrumentation Week 13. Instrument calibration and controller tuning Weeks 14-15. Data acquisition, relay controller, and programmable logic controller (PLC) Week 16. Final # No review will be given any longer on the basic electrical circuit knowledge and digital number system which are covered by the ECE2070 and ECE 2080. * Laplace transformation and second-order sensor are required only for graduate students Laboratory Topics: Week 1. Linear instrument models and dynamic

measurements (Get familiar with Oscilloscope) Week 2. Operational Amplifier Week 3. Hysteresis comparator (Schmitt Trigger) Week 4. Magnitude comparator Week 5. Analog-to-digital converter and digital-to-analog converter Week 6. Thermocouple sensor Week 7. Pressure sensor Week 8. Photoconductive detector Week 10. pH measurement and control Week 11. Humidity measurement Week 12. Turbidity measurement Week 13. Conductivity measurement Week 14. Time proportioning DC control circuit Week 15. PLC

Add course requirements for 6000-level courses

The weight of lab for 6000-level is increased to 35% including lab, lab summary report and extra project. The weights of midterm and final are reduced to 20% and 25%, respectively. Laplace transformation and second-order sensor are required only for graduate students.

Evaluation

4000

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

Homework (20%)-Individual activity Lab reports (20%)-Group activity Midterm (30%) Final (30%)

6000

A 90 - 100
B 80 - 89
C 70 - 79
F < 70

Homework (20%)-Individual activity Lab (35%):Lab (10%) Group activity and Lab summary report (10%): Besides the lab data summary,the graduate students need to write a whole lab report, including the background, objectives, methodology, and conclusions. In addition, the graduate students will have two more assays in the pre-lab and post-lab questions, respectively. Extra project (15%):The graduate students will be also asked to do two extra projects. Midterm (20%) Final:25%

Syllabus

Upload File: BE415 syllabus-20141202161049.pdf

Description: updated syllabus for BE415/615

Form

User ID:zheng9 **Name:** Yi Zheng
Date: 04/02/2015**Number:**7091

Chair, Department Curriculum Committee	Date
David D. Freedman Department Chair	4/21/15 Date
Chair, College Curriculum Committee	9/17/15 Date
College Dean	4/20/15 Date
Director, Calhoun Honors College	Date
Chair, Undergraduate Curriculum Committee	5/1/2015 Date
Chair, Graduate Curriculum Committee	Date
Robert H. Jones Provost	7/14/15 Date
President	Date

000108

Chair, Department Curriculum Committee — Date

Department Chair — Date

Chair, College Curriculum Committee — 4/17/15 — Date

College Dean — 4/20/15 — Date

Director, Calhoun Honors College — Date

Chair, Undergraduate Curriculum Committee — 5/1/2015 — Date

Chair, Graduate Curriculum Committee — Date

Provost — 7/14/15 — Date

President — Date

Add Undergraduate Course

000109

Course Attributes

Subject Abbreviation: ENGR-Engineering
Course Number: 1000
Effective Term: Summer 2015
College: Engineering and Science
Department: General Engineering
Catalog Title: Major Discovery Seminar
Transcript Title: Major Discovery Seminar
Cross-reference(s):
Grade Mode: Pass/No Pass

☐ **Additional Fee?**

Justification
Provide opportunity for students who are unsure of which engineering major to explore the profession and careers to be able to make a more informed decision about their major. Also, to allow students to explore engineering as a major who may not currently be engineering majors.

Form

User ID: jminor **Name:** John Minor
Date: 04/06/2015 **Number:** 7184

Syllabus

Upload File: ENGR 1000 Syllabus Fall 2015-20150406144451.pdf

Description: ENGR 1000 - Major Discovery Seminar

Hours

Fixed Credit Course

Credit Hrs	Contact Hrs
1	1

Variable Credit Course

Credit Hrs		Contact Hrs	
Min	**Max**	**Min**	**Max**

Rationale for Add Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☐ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☑ **Other (Please specify.)**

Profession and career exploration

Schedule Types

- ○ **Field Course**
- ○ **Independent Study**
- ○ **Internship**
- ○ **Lab No Fee**
- ○ **Lab With Fee**
- ○ **Lecture**
- ○ **Other**
- ◉ **Seminar**
- ○ **Studio**
- ○ **Tutorial**

Projected Enrollment

Year 1: 60
Year 2: 60
Year 3: 60
Year 4: 60

Evaluation

Undergraduate

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

Attendance: 50% Final Paper: 50%

Catalog Description

Introduction to the Engineering Majors offered at Clemson including the profession, best student practices, and career paths. Invited presenters and faculty provide lectures and demonstrations.

Statement of need and justification based on assessment of student learning outcomes

Provide opportunity for students who are unsure of which engineering major to explore the profession and careers to be able to make a more informed decision about their major. Also, to allow students to explore engineering as a major who may not currently be engineering majors.

Textbook(s)

None

Learning Objectives

000110

Introduce Students to the different majors offered at Clemson; Provide Students with the available information about each discipline to help the student make an informed choice; Help Students understand the different career paths for the various engineering disciplines

Topical Outline

Major Presentations: 7 hours – 88%; Majors' Curriculum and registration: 1 hrs - 12%

John C Min — 4/6/15

Chair, Department Curriculum Committee — Date

R J Watts — 4/6/15

Department Chair — Date

4/17/15

Chair, College Curriculum Committee — Date

4/20/15

College Dean — Date

Director, Calhoun Honors College — Date

Patricia W. Marshall — 5/1/2015

Chair, Undergraduate Curriculum Committee — Date

Chair, Graduate Curriculum Committee — Date

Robert H Jones — 7/14/15

Provost — Date

President — Date

000111

Change Undergraduate Course

Change a Course

Subject:	ENGR-Engineering
Number:	1060
Effective Term:	Summer 2015
Title:	Engr Discipline & Skills II
Honors Course:	HON 1060

☐ Add Honors Course:

Last Term Course was taught:201501

Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course and to make enrollment in ENGR 1060 easier for transfer students and students with Advanced Placement credit.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From	Pre-Req: ENGR 1051 with a grade of C or higher; Co-Req: MTHS 1040 or 1060
To	Preq: ENGR 1050 with a grade of C or better

Evaluation

Undergraduate

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

Assignments: 5% Mid-term exam: 35% Final exam: 60%

Syllabus

Upload File: ENGR 1060 Syllabus-20150406090652.pdf

Description: ABET Syllabus for ENGR 1060

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015**Number:**7147

000112

Chair, Department Curriculum Committee — 4/6/15 — Date

Department Chair — 4/6/15 — Date

Chair, College Curriculum Committee — 4/17/15 — Date

College Dean — 4/20/15 — Date

Director, Calhoun Honors College — Date

Chair, Undergraduate Curriculum Committee — 5/1/2015 — Date

Chair, Graduate Curriculum Committee — Date

Provost — 7/14/15 — Date

President — Date

Change Undergraduate Course

000113

Change a Course

Subject: ENGR-Engineering
Number: 1070
Effective Term: Summer 2015
Title: Programming & Prob Solving I
Honors Course: HON 1070
☐ Add Honors Course:
Last Term Course was taught:201501
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course and to make enrollment in ENGR 1070 easier for transfer students and students with Advanced Placement credit.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Co-Req: MTHS 1060 or 1070; Co-Req for honors students: MTHS 1080; Pre-Req with a grade of C or better or concurrent Enrollment: ENGR 1061

To Preq or concurrent enrollment: ENGR 1060 with a grade of C or better

Evaluation

Undergraduate

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

Assignments: 5% Mid-term exam: 35% Final exam: 60%

Syllabus

Upload File: ENGR 1070 Syllabus-20150406090552.pdf

Description: ABET Syllabus for ENGR 1070

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015**Number:**7153

000114

Chair, Department Curriculum Committee	Date 4/6/15
Department Chair	Date 4/6/15
Chair, College Curriculum Committee	Date 4/17/15
College Dean	Date 4/24/15
Director, Calhoun Honors College	Date
Chair, Undergraduate Curriculum Committee	Date 5/1/2015
Chair, Graduate Curriculum Committee	Date
Provost	Date 7/14/15
President	Date

000115

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1080
Effective Term: Summer 2015
Title: Programming & Prob Solving II
Honors Course: HON 1080
☐ Add Honors Course:
Last Term Course was taught: 201408
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course and to make enrollment in ENGR 1080 easier for transfer students and students with Advanced Placement credit.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-Req: ENGR 1061 with a grade of C or higher and ENGR 1071 with a grade of C or higher; Co-Req: MTHS 1060 or 1070. Co-Req for honors students: MTHS 1080.
To Preq: ENGR 1060 with a grade of C or better and ENGR 1070 with a grade of C or better

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Assignments: 5% Mid-term exam: 35% Final exam: 60%

Syllabus

Upload File: ENGR 1080 Syllabus-20150406095217.pdf

Description: ABET Syllabus for ENGR 1080

Form

User ID: jminor **Name:** John Minor
Date: 04/06/2015 **Number:** 7155

000116

Chair, Department Curriculum Committee	4/6/15 Date
Department Chair	4/6/15 Date
Chair, College Curriculum Committee	4/17/15 Date
College Dean	4/20/15 Date
Director, Calhoun Honors College	Date
Chair, Undergraduate Curriculum Committee	5/1/2015 Date
Chair, Graduate Curriculum Committee	Date
Provost	7/14/15 Date
President	Date

000117

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1090
Effective Term: Summer 2015
Title: Prog/Problem Solving Apps
Honors Course: HON 1090
☐ Add Honors Course:
Last Term Course was taught: 201408
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course and to make enrollment in ENGR 1090 easier for transfer students and students with Advanced Placement credit.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Co-Req: MTHS 1060 or 1070. Co-Req for honors students: MTHS 1080. Pre-Req with a grade of C or higher or concurrent enrollment: ENGR 1081
To Preq or concurrent enrollment: ENGR 1080 with a grade of C or better

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Project 1: 40% Project 2: 60%

Syllabus

Upload File: ENGR 1090 Syllabus-20150406095852.pdf

Description: ABET Syllabus for ENGR 1090

Form

User ID: jminor **Name:** John Minor
Date: 04/06/2015 **Number:** 7157

Chair, Department Curriculum Committee — Date: 4/6/15

Department Chair — Date: 4/6/15

Chair, College Curriculum Committee — Date: 4/17/15

College Dean — Date: 4/20/15

Director, Calhoun Honors College — Date

Chair, Undergraduate Curriculum Committee — Date: 5/1/2015

Chair, Graduate Curriculum Committee — Date

Provost — Date: 7/14/15

President — Date

000120

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1490
Effective Term: Summer 2015
Title: Introduction to Engineering
Honors Course:
☐ Add Honors Course:
Last Term Course was taught: 201408
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-requisite or concurrent enrollment: MTHS 1050
To None

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Projects: 50% Assignments: 50%

Syllabus

Upload File: ENGR 1490 Syllabus-20150406103114.pdf

Description: ABET Syllabus for ENGR 1490

Form

User ID: jminor **Name:** John Minor
Date: 04/06/2015 **Number:** 7159

000119

Chair, Department Curriculum Committee	4/6/15 Date
Department Chair	4/6/15 Date
Chair, College Curriculum Committee	4/17/15 Date
College Dean	4/20/15 Date
Director, Calhoun Honors College	Date
Chair, Undergraduate Curriculum Committee	5/1/2015 Date
Chair, Graduate Curriculum Committee	Date
Provost	7/14/15 Date
President	Date

000121

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1510
Effective Term: Summer 2015
Title: Engineering Skills
Honors Course:
☐ Add Honors Course:
Last Term Course was taught:999999
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-requisite or concurrent enrollment: MATH 1040 or 1060; Co-requisite: ENGR 1511.
To Co-requisite: ENGR 1511

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Exams: (4 @ 15% each) 60% Projects: (2 @ 5% each) 10%
Assignments: 30%

Syllabus

Upload File: ENGR 1510 Syllabus-20150406104833.pdf

Description: ABET Syllabus for ENGR 1510

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015 **Number:**7161

000122

John C Min — 4/6/15
Chair, Department Curriculum Committee — Date

R D Watts — 4/6/15
Department Chair — Date

4/17/15
Chair, College Curriculum Committee — Date

4/20/15
College Dean — Date

Director, Calhoun Honors College — Date

Patricia W. Marrongelle — 5/1/2015
Chair, Undergraduate Curriculum Committee — Date

Chair, Graduate Curriculum Committee — Date

Robert H Jones — 7/14/15
Provost — Date

President — Date

000123

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1520
Effective Term: Summer 2015
Title: Engineering Computer Skills
Honors Course:
☐ Add Honors Course:
Last Term Course was taught:201408
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-requisite: ENGR 1510 with a grade of C or higher; Pre-requisite or concurrent enrollment: MATH 1060; Co-requisite: ENGR 1521.
To Preq: ENGR 1510 with a grade of C or better; Co-requisite: ENGR 1521

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Exams: (4 @ 15% each) 60% Projects: (2 @ 5% each) 10%
Assignments: 30%

Syllabus

Upload File: ENGR 1520 Syllabus-20150406115409.pdf

Description: ABET Syllabus for ENGR 1520

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015**Number:**7169

C00124

John C Nin	4/6/15
Chair, Department Curriculum Committee	Date
[signature]	4/6/15
Department Chair	Date
[signature]	4/17/15
Chair, College Curriculum Committee	Date
[signature]	4/20/15
College Dean	Date
Director, Calhoun Honors College	Date
Jessica W. Thomas	5/1/2015
Chair, Undergraduate Curriculum Committee	Date
Chair, Graduate Curriculum Committee	Date
Robert M Jones	7/14/15
Provost	Date
President	Date

000125

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1530
Effective Term: Summer 2015
Title: Engineering Foundation Skills
Honors Course:
☐ Add Honors Course:
Last Term Course was taught:201408
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-requisite or concurrent enrollment: MATH 1040 or 1060; Co-requisite: ENGR 1531.
To Co-requisite: ENGR 1531

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Exams: (4 @ 15% each) 60% Projects: (2 @ 5% each) 10%
Assignments: 30%

Syllabus

Upload File: ENGR 1530 Syllabus-20150406120028.pdf

Description: ABET Syllabus for ENGR 1530

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015**Number:**7171

000126

4/6/15

Chair, Department Curriculum Committee Date

4/6/15

Department Chair Date

4/17/15

Chair, College Curriculum Committee Date

4/20/15

College Dean Date

Director, Calhoun Honors College Date

5/1/2015

Chair, Undergraduate Curriculum Committee Date

Chair, Graduate Curriculum Committee Date

Robert H Jones 7/14/15

Provost Date

President Date

000127

Change Undergraduate Course

Change a Course

Subject: ENGR-Engineering
Number: 1640
Effective Term: Summer 2015
Title: Engineering MATLAB Programming
Honors Course:
☐ Add Honors Course:
Last Term Course was taught:999999
Brief Statement of Change Based on Assessment Results:
Change existing prerequisites to make the prerequisites match the requirements of the course.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☑ Change Prerequisite(s) / Corequisite(s)

From Pre-requisite: ENGR 1520 or 1530 with a grade of C or higher. Pre-requisite or concurrent enrollment: MATH 1040 or 1060; Co-requisite: ENGR 1631.
To Preq: ENGR 1520 or ENGR 1530 with a grade of C or better. Co-requisite: ENGR 1641

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Exams: (3 @ 20% each) 60% Projects: (3 @ 10% each) 30%
Assignments: 10%

Syllabus

Upload File: ENGR 1640 Syllabus-20150406120955.pdf

Description: ABET Syllabus for ENGR 1640

Form

User ID:jminor **Name:** John Minor
Date: 04/06/2015**Number:**7173

00:128

4/6/15

Chair, Department Curriculum Committee Date

4/6/15

Department Chair Date

4/17/15

Chair, College Curriculum Committee Date

4/21/15

College Dean Date

Director, Calhoun Honors College Date

5/1/2015

Chair, Undergraduate Curriculum Committee Date

Chair, Graduate Curriculum Committee Date

Robert H Jones 7/14/15

Provost Date

President Date

000129

Add 4000/6000 Course

Course Attributes

Subject Abbreviation: IE-Industrial Engineering
Course Number: 4460 / 6460
Effective Term: Fall 2015
College: Engineering and Science
Department: Industrial Engineering
Additional Fee?

Catalog Title: Modeling and Analysis of Manufacturing Systems
Transcript Title: Model & Analyze Mfg Systemss
Cross-reference(s):
Grade Mode: Standard Letter

Justification
This course, an elective, will appeal to students to intend to pursue careers as industrial engineers in assembly and manufacturing settings.

Form

User ID: mkurz **Name:** Mary Kurz-Edsall
Date: 04/02/2015 **Number:** 7096

Syllabus

Upload File: IE 4640 6460 - modeling and analysis of mfg systems-20150402114323.docx

Description: syllabus

Hours

Fixed Credit Course

Credit Hrs	Contact Hrs
3	3

Variable Credit Course

Credit Hrs		Contact Hrs	
Min	Max	Min	Max

Rationale for Add Course

- [ ] Strengthen Program Requirement(s)
- [ ] Alignment of Student Learning Outcomes
- [ ] Alternative Delivery of Content
- [ ] Improve Time to Degree
- [x] Evolution of the Discipline
- [ ] Changing Prerequisites
- [ ] Address DWF Rates
- [ ] General Education Modifications
- [ ] Other (Please specify.)

Schedule Types

- ( ) Field Course
- ( ) Independent Study
- ( ) Internship
- ( ) Lab No Fee
- ( ) Lab With Fee
- (•) Lecture
- ( ) Other
- ( ) Seminar
- ( ) Studio
- ( ) Tutorial

Projected Enrollment

Year 1: 40
Year 2: 0
Year 3: 40
Year 4: 0

000130

Evaluation

4000
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
Homework 25% Implementation Project 25% Midterm Exam 30% Final Exam 20%
6000
A 90 - 100
B 80 - 89
C 70 - 79
F < 70
Homework 5% Implementation Project 25% Case Study 20% Midterm Exam 30% Final Exam 20%

Catalog Description
The course promotes competence in developing and applying quantitative models to improve the design and operation of manufacturing and assembly systems. We emphasize underlying principles and analytical models for guiding how resources (humans, machines, tools, information) should be utilized to facilitate the flow of production jobs through a facility.

Prerequisite(s) **Corequisite(s)**
IE 4460: IE 2800, IE 3810, IE 4400 IE 6460: IE 8030, programming competence

Statement of need and justification based on assessment of student learning outcomes
These course topics, while included in the IE Fundamentals of Engineering exam, are not currently included in any required or elective IE course. WIth an increase in teaching capacity, we can offer this course at this time.

Textbook(s)
Askin and Standridge, Modeling and Analysis of Manufacturing Systems, Wiley, (1993).

Learning Objectives
Students who are successful in this course will demonstrate: 1. Understanding of the basic physical and social laws that affect mfg. system performance. 2. Ability to design an assembly system for one or more products. 3. Ability to evaluate and exploit value of manufacturing flexibility. 4. Understanding of the impact of WIP level and buffer capacity on system performance. 5. Understanding of the basics of push and pull production control. 6. Ability to design and evaluate mfg. layouts and material handling systems. 7. Ability to apply stochastic models to analyze a proposed open or closed mfg. system. 8. Understanding of the impact of variability on production rate and cycle time. 9. Ability to develop an appropriate model and solution algorithm for manufacturing system design or operational control.

Topical Outline
Manufacturing Models. (1 week) Assembly Lines: Reliable Serial Systems. (2 weeks) Transfer Lines and General Serial Systems. (2 week) Shop Scheduling with Many Products. (2 weeks) Flexible Manufacturing Systems. (2 weeks) Group Technology. (2 weeks) General Manufacturing Systems: Analytic Queueing Models. (2 weeks) Case Studies (1 week) Exams (1 week)

Add course requirements for 6000-level courses
Graduate students will complete a case study in which they design and analyze a manufacturing system.

Chair, Department Curriculum Committee — Date 4/2/15

Department Chair — Date 4/7/15

Chair, College Curriculum Committee — Date 4/17/15

College Dean — Date 4/21/15

Director, Calhoun Honors College — Date 5/1/2015

Chair, Undergraduate Curriculum Committee — Date

Chair, Graduate Curriculum Committee — Date

Robert H Jones — 7/14/15

Provost — Date

President — Date

000132

Change 4000/6000 Course

Change a Course

Subject: IE-Industrial Engineering
Number: 4810/6810
Effective Term: Fall 2015
Title:
Honors Course:
☐ Add Honors Course:
Last Term Course was taught: 198901
Brief Statement of Change Based on Assessment Results:
A draft description was included initially, as well as a typo in the preqs for IE 4810 and an error in the preqs for 6810.

Rationale for Changing a Course

- ☐ **Strengthen Program Requirement(s)**
- ☐ **Alignment of Student Learning Outcomes**
- ☐ **Alternative Delivery of Content**
- ☐ **Improve Time to Degree**
- ☐ **Evolution of the Discipline**
- ☑ **Changing Prerequisites**
- ☐ **Address DWF Rates**
- ☐ **General Education Modifications**
- ☐ **Other (Please specify.)**

☐ Change Catalog Description

From This second probabilistic operations course builds upon material presented in IE 3810 with a broader, more applied range of topics. Topics may include decision making; utility theory; portfolio risk; optimization and hedging; inventory models for perishable products; revenue management; risk analysis; and static simulation.

To This is a second probabilistic operations research course, but with a broader, more applied range of topics than the first (IE 3810 or IE 8030). Potential topics include decision making; utility theory; portfolio risk, optimization and hedging; inventory models for perishable products; revenue management; risk analysis; and static simulation

☑ Change Prerequisite(s) / Corequisite(s)

From 4810: IE 2800, 3600, 3810, 3840 6810: IE 8030, 8090, 8840

To 4810: IE 2800, 3600, 3610, 3840 6810: IE 8030, 8090

Learning Objectives

To construct probabilistic models to describe real-world systems.
To use probabilistic methods to support decision making.

Topical Outline

decision making; 3 weeks utility theory; 2 weeks portfolio risk, optimization and hedging; 2 weeks inventory models for perishable products; 2 weeks revenue management; 2 weeks risk analysis; 2 weeks static simulation 2 weeks

Add course requirements for 6000-level courses
Exams (30%) Homework (10%) Quizzes (20%) Research Project (20%)

Evaluation

4000

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

Exams (40%) Homework (15%) Quizzes (20%) Final Exam (25%)

6000

A	90	-	100
B	80	-	89
C	70	-	79
F	<		70

Exams (30%) Homework (10%) Quizzes (20%) Research Project (20%) Final Exam (20%)

000133

Syllabus

Description: syllabus

Form

User ID: mkurz **Name:** Mary Kurz-Edsall
Date: 03/31/2015 **Number:** 6967

Chair, Department Curriculum Committee — Date: 3/31/15

Department Chair — Date: 4/1/15

Chair, College Curriculum Committee — Date: 4/17/15

College Dean — Date: 4/20/15

Director, Calhoun Honors College — Date

Chair, Undergraduate Curriculum Committee — Date: 5/1/2015

Chair, Graduate Curriculum Committee — Date

Provost — Date: 7/14/15

President — Date

Change Undergraduate Course

Change a Course

Subject: STAT-Statistics
Number: 4020
Effective Term: Fall 2015
Title: Intro to Statistical Computing
Honors Course:
☐ Add Honors Course:
Last Term Course was taught:201408
Brief Statement of Change Based on Assessment Results:
Currently the prerequisite for this course is STAT 2300. The Mathematical Sciences department would like to amend the prerequisites to include MATH 3020 (our math major undergraduate Statistics course) and MGT 3100 (the second semester of a two semester Business Statistics course). Both MATH 3020 and MGT 3100 students would have covered similar material to STAT 2300.

☑ Change Prerequisite(s) / Corequisite(s)

From STAT 2300
To MATH 3020 or STAT 2300 or MGT 3100 or IE 3610

Evaluation

Undergraduate
A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F < 60
3 In-class projects - 20% each Projects - 40% each

Syllabus

Description: Spring 2015 Current Syllabus for STAT 4020

Form

User ID:ehepfer **Name:** Ellen Breazel
Date: 04/17/2015**Number:**7499

Rationale for Changing a Course

- ☐ Strengthen Program Requirement(s)
- ☐ Alignment of Student Learning Outcomes
- ☐ Alternative Delivery of Content
- ☐ Improve Time to Degree
- ☐ Evolution of the Discipline
- ☑ Changing Prerequisites
- ☐ Address DWF Rates
- ☐ General Education Modifications
- ☐ Other (Please specify.)

Chair, Department Curriculum Committee — Date

Department Chair — Date

Chair, College Curriculum Committee — 4/17/15 Date

College Dean — 4/20/15 Date

Director, Calhoun Honors College — Date

Chair, Undergraduate Curriculum Committee — 5/1/2015 Date

Chair, Graduate Curriculum Committee — Date

Provost — 7/14/15 Date

President — Date

000136

CLEMSON UNIVERSITY **Curriculum and Course Change System - Print Change/Delete Course Form**

X **Change a Course - Abbrev & Number: ME- 4000**
Corresponding Lab Course: --
Corresponding Honors course: --
.. **Add Honors course:** --
Corresponding Graduate course: --
.. **Add Graduate course:** --
Course Title: Senior Seminar

Brief Statement of Change:
Prerequisite definition due to change to iROAR

PSV

Last Term taught: 201408	.. **Change Abbrev to:**
Effective Term: 05/2015	.. **Change Number to:**
.. **Change Catalog Title:**	.. **Change Transcript Title:**
from:	from: Senior Seminar
to:	to:

.. **Change of Credit**	From: Fixed Credit: 1 (1,0) Variable Credit: - (-), (-)	To: Fixed Credit: (,) Variable Credit: - (-),(-)

.. **Add cross-listing with the following child course(s):**
.. **Delete cross-listing with the following child course(s):**
.. **Reverse Parent/Child relationship with:**

.. **Change Method of Instruction**		.. **Change Course Modifier**		.. **Change General Education Designation**	
from:	to:	from:	to:	from:	to:
X A-Lecture Only	..	.. Pass/Fail Only	..	.. Creative Inquiry	..
.. B-Lab (w/fee)	..	X Graded	..	.. English Composition	..
.. D-Seminar	..	.. Variable Title	..	.. Oral Communication	..
.. E-Independent Study	..	.. Creative Inquiry	..	.. Mathematics	..
.. F-Tutorial (w/fee)	..	.. Repeatable	..	.. Natural Science w/Lab	..
.. G-Studio	..	maximum credits		.. Natural Science w/Lab	..
.. H-Field course	..	from:		.. Math or Science	..
.. I-Study Abroad	..	to:		.. A&H (Literature)	..
.. L-Lab (no/fee)	..			.. A&H (Non-Literature)	..
.. N/B-Lecture/Lab(w/fee)	..			.. Social Science	..
.. N/L-Lecture/Lab(no fee)	..			.. CCA	..
				.. STS	..

.. **Change Catalog Description:**
from:
to:

X **Change Prerequisite(s):**
from: All 3000 level ME courses
to: Prereq ME 4010 with a C or better or Concurrent enrollment

Learning Objectives:

Topical Outline:

Evaluation:

Form Originator: JANEEN, Putman,Janeen Marie **Date Form Created:** 4/8/2015
Form Last Updated by: JANEEN, Putman,Janeen Marie **Date Form Last Updated:** 4/8/2015
Form Number: 8164

Approval

Chair, Department Curriculum Committee	4-9-15 Date	Chair, Undergraduate Curriculum Committee	5/1/2015 Date
Department Chair	4-9-15 Date	Chair, Graduate Curriculum Committee	Date
Chair, College Curriculum Committee	4/17/15 Date	Provost	7/14/15 Date
College Dean	4/16/15 Date	President	Date
Director, Calhoun Honors College	Date		