Revision Of Undergraduate And Graduate Programs

Format For Review By University Curriculum Committee (UCC) and Graduate Council.

1. Proposing College / School: Samuel Ginn College of Engineering
   Department: Mechanical Engineering

2. Title of Affected Program: Bachelor of Mechanical Engineering

3. CIP Code of Affected Program: 14.1901

4. Proposed Implementation Date: Fall 2014

5. Justification:
   (Include a concise, yet adequate rationale for the revision of the program, citing accreditation, assessments (faculty, graduate, and/or external) where applicable.)

   The Provost has requested that all undergraduate programs strive to limit curricula to less than 124 hours unless otherwise required by accreditation standards. The request from the Provost mandated an absolute maximum of 128 hours. In responding to this request, the College of Engineering worked with the Associate Provost for Undergraduate Studies. It was agreed that the best approach to balancing accreditation requirements and reduced credit hours was the core exception implemented by the other Colleges of Engineering in the state. This exception permits a reduction in the number of core hours required in engineering programs. The proposed modification adopts this exception in order to achieve the desired credit hour reduction.

6. Current Degree Requirements (Including All Formal Options):
   (Provide the current curriculum model for the program, as well as for each formal option.)

   Attached

7. Proposed Degree Requirements (Including All Formal Options):
   (Provide the proposed curriculum model for the program, as well as for each formal option.)

   Attached

8. New Courses Required:
   (Indicate which courses -- if any -- are part of the curriculum that are not currently offered.)

8. Relationship of Proposed Program to Other Auburn University Programs:
   (If the proposed program revision affects any other unit and/or covers material offered by another college/school, attach correspondence with relevant unit.)

   Will the program revision affect other program(s) and/or units at Auburn University?
   ☒ Yes  ☐ No

   Will the program revision replace any existing program(s), or specializations / options / concentrations within existing program(s) at Auburn University?
   ☒ Yes  ☐ No
10. **New or Additional Resources / Resource Shifting Required:**

(If "yes" for any item, please provide explanation in the space provided below.)

- Will additional faculty lines be required?  
  - Yes  
  - No
- Will new or additional space (e.g.: laboratory or classroom) be required?  
  - Yes  
  - No
- Will additional library resources be required?  
  - Yes  
  - No
- Will additional GTA support be required?  
  - Yes  
  - No

Explanation of or provision for new or additional resources / explanation of program’s support or replacement of other programs:


11. **Distance Education:**

(If Distance Education will be incorporated in the delivery of the proposed program, provide details of implementation, scope, etc.)


Approvals

Jeffrey C. Suhling

Department Chair / Head

College / School Curriculum Committee

College / School Dean

Dean of the Graduate School (for Graduate Programs)

Assoc. Provost for Undergraduate Studies (for Undergraduate Programs)

Date

3/18/2014

Date

3/18/2014

Date

Date

Contact Person: Roy W. Knight

E-Mail Address: roy.w.knight@auburn.edu

Telephone: 334-844-3300

Fax:
# Bachelor of Mechanical Engineering

## Curriculum Model - Current, July 2013

### Freshman Fall
- ENGR1100 Engineering Orientation 0
- COMP1200 Introduction to Computing for E & S 2
- CHIM1030 Fundamentals of Chemistry I 3
- CHEM1031 Fundamentals of Chemistry I Lab 1
- MATH1610 Calculus I 4
- ENGL1100 English Composition I 3
- Core History1 (HIST1010 or HIST1210) 3
- Total: 16

### Freshman Spring
- ENGR1110 Introduction to Engineering 2
- PHYS1600 Engineering Physics I 4
- MATH1620 Calculus II 4
- ENGL1120 English Composition II 3
- Core History 3 (HIST1020 or HIST1220) 3
- OR Core Social Science2 3
- Total: 16

### Sophomore Fall
- MECH2110 Statics and Dynamics 4
- PHYS1610 Engineering Physics II 4
- MATH2630 Calculus III 4
- MATH2650 Linear Differential Equations 3
- Total: 15

### Sophomore Spring
- MECH2120 Kinematics & Dynamics of Machines 4
- MECH2220 Computer Aided Engineering 3
- ENGR2010 Thermodynamics I 3
- MATH2100 Introduction to Materials Science 3
- MATH2660 Topics in Linear Algebra 3
- MECH22A0 Mech. Engr. Progress Assessment I 0
- Total: 16

### Junior Fall
- MECH3020 Thermodynamics II 3
- MECH3030 Fluid Mechanics 3
- MECH3130 Mechanics of Materials 4
- MECH3200 Concepts in Design & Manufacturing 2
- MECH3210 Design & Manufacturing Lab 1
- ELEC3810 Fundamentals of Electrical Engineering 3
- Total: 16

### Junior Spring
- MECH3040 Heat Transfer 3
- MECH3050 Measurement and Instrumentation 3
- MECH3140 System Dynamics and Controls 3
- MECH3230 Machine Design 3
- INSY3600 Engineering Economics 3
- MECH32A0 Mech. Engr. Progress Assessment II 0
- Total: 15

### Senior Fall
- MECH4240 Comprehensive Design I 2
- Technical Elective 3
- Technical Elective 3
- ENGL2200 World Literature I 3
- Core Social Science2 3
- Core Ethics (PHIL1020 or PHIL1040) 3
- Total: 17

### Senior Spring
- MECH4250 Comprehensive Design II 2
- Technical Elective 3
- Free Elective or ROTC 3
- ENGL2210 World Literature II or Core Humanities2 3
- Core Social Science2 3
- Core Fine Arts 3
- Total: 17

Total: 128 semester hours

Students must take:
- Two course Core History sequence and ENGL 2200, OR One Core History course and both ENGL 2200 and ENGL 2210.

Notes:
1. Must take at least one Core History.
2. If Core History taken is HIST 1210 and/or HIST 1220, must take GEOG 1010 or PSYC 2010 or SOCY 1000 or UNIV 2720 for at least one Core Social Science or UNIV 2710 for Core Humanities (SLO 9)
3. If only one Core History is taken, must take ENGL 2210
4. If HIST 1010 and HIST 1020 taken, can take any Core Humanities

Revised September 27, 2007 - MECH2@@0 and MECH3@@0 re-numbered to MECH2AA0 and MECH3AA0, MECH2210 changed to MECH3200 and MECH3210, MECH3220 changed to MECH2220

Revised March 25, 2004 - Great Books changed to World Literature

Revised, August 19, 2002 - MECH2000 and MECH3000 re-numbered to MECH2@@0 and MECH3@@0

Revised August 16, 2001 - MECH2000, ME Progress Assessment I, and MECH3000, ME Progress Assessment II added
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Total 122 semester hours

The AU Bulletin lists the University Core Curriculum requirements for students in the College of Engineering.

1. Students must complete a sequence in either Literature or History. In order to complete the degree in 122 credits, because of the Mechanical Engineering specific requirements for the Humanities and Fine Arts courses, it is recommended that a two course History sequence (HIST 1010-1020, 1017-1027, 1210-1220 or 1217-1227) be completed in the Social Sciences.

2. Core Literature: ENGL 2200, 2207, 2210, 2217, 2230, 2240, 2250 or 2260

Social Sciences include: HIST, ANTH, ECON, GEOG, POLI, PSYC, SOCY. See AU Bulletin for specific core classes.

Fine Arts include: ARCH, ARTS, MUSI, RTVF, THEA. See AU Bulletin for specific core classes.