To be adopted:

Proposed Changes to Mechanical Engineering Major

PRESENT:

College Requirements

See The Marlan and Rosemary Bourns College of Engineering, Colleges and Programs section.

The Mechanical Engineering major uses the following major requirements to satisfy the college’s Natural Sciences and Mathematics breadth requirement.

1. BIOL 005A, BIOL 05LA
2. MATH 008B or MATH 009A
3. PHYS 040A, PHYS 040B, PHYS 040C

PROPOSED:

College Requirements

See The Marlan and Rosemary Bourns College of Engineering, Colleges and Programs section.

The Mechanical Engineering major uses the following major requirements to satisfy the college’s Natural Sciences and Mathematics breadth requirement.

1. MATH 009A
2. PHYS 040A, PHYS 040B, PHYS 040C

Major Requirements

1. Lower-division requirements (75 units)
   a) BIOL 005A, BIOL 05LA
   b) CHEM 001A, CHEM 001B, CHEM 01LA, CHEM 01LB
   c) EE 001A, EE 01LA
   d) MATH 008B or MATH 009A, MATH 009B, MATH 009C, MATH 010A, MATH 010B, MATH 046
   e) ME 002, ME 009, ME 010, ME 018A, ME 018B

Major Requirements

1. Lower-division requirements (78 units)
   a) CHEM 001A, CHEM 001B, CHEM 01LA, CHEM 01LB
   b) EE 005
   c) MATH 009A, MATH 009B, MATH 009C, MATH 010A, MATH 010B, MATH 046
   d) ME 002, ME 009, ME 010, ME 018A, ME 018B
PHYS 040A, PHYS 040B, PHYS 040C

2. Upper-division requirements (72 units)
a) ME 100A, ME 103, ME 110, ME 113, ME 114, ME 116A, ME 118, ME 120, ME 135, ME 170A, ME 170B, ME 174, ME 175A, ME 175B, ME 175C

b) STAT 100A

e) Choose one Focus Area:

(1) Materials and Structures
Sixteen (16) units of technical electives chosen from ME100B, ME116B, ME121, ME122, ME134/MSE134, ME153, ME156, ME157/MSE143, ME158/MSE148, ME180, ME197

(2) Energy and Environment
Sixteen (16) units of technical electives chosen from ME 100B, ME 116B, ME 117, ME 136, ME 137, ME 138, ME 197

(3) Design and Manufacturing
Sixteen (16) units of technical electives chosen from ME 121, ME 122, ME 130, ME 131, ME 133, ME 140, ME 144/EE 144, ME 145, ME 153, ME 144/EE 144, ME 145, ME 153,
ME 156, ME 175D, ME 176, ME 180, ME 197

(4) General Mechanical Engineering

Sixteen (16) units of technical electives chosen from the following list, in consultation with an advisor: ME 100B, ME 116B, ME 117, ME 121, ME 122, ME 130, ME 131, ME 133, ME 134/MSE 134, ME 136, ME 137, ME 138, ME 140, ME 144/EE 144, ME 145, ME 153, ME 156, ME 157/MSE 143, MSE 158/MSE 148, ME 180, ME 175D, ME 176, ME 180, ME 197

Justification:
The Department of Electrical and Computer Engineering is renumbering and updating EE 001A and EE 01LA to EE 030A and EE 030LA. EE 005 has also been updated to now include material needed for ME program requirements. The appropriate replacement for EE001A is now EE 005. BIOL 005A and BIOL 05LA have been removed because these courses are not needed in the curriculum. This allows flexibility for students to take any biology course approved by the College of Engineering to satisfy the biological science requirement. STAT100A has been renumbered by the Department of Statistics to be STAT 010. MATH008B has also been removed as the course is no longer being offered. The program is being modified to reflect these changes.

Approvals:
Approved by the faculty of the Department of Mechanical Engineering: January 13, 2021
Approved by the Executive Committee of the College of Engineering: January 28, 2021
Approved by the Committee on Educational Policy: April 22, 2021