Accelerated Undergraduate-Graduate Programs

Mechanical Engineering - Accelerated Undergraduate-Graduate Program (B.S.M.E. / M.S.M.E., M.S.M.S.E. or M.S.A.E.)

College of Engineering and Computer Science
Department of Mechanical and Aerospace Engineering, Engineering, Room: 381
http://www.mae.ucf.edu

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Admission Requirements
- See Common Program Prerequisites.
- Qualified students may apply after completion of a minimum of 64 credit hours.
- Completion of no more than 96 credit hours.
- Admission to the Accelerated Program does not guarantee formal admission to the MSME, MSMSE, or MSAE program.
- Admission is not automatic. Interested students may need to be interviewed.

Degree Requirements
- None

1. UCF General Education Program (GEP) (38 hrs)
- See Mechanical Engineering major in the Catalog for track specific GEP requirements

A: Communication Foundations (9 hrs)
B: Cultural & Historical Foundations (9 hrs)
C: Mathematical Foundations (7 hrs)
D: Social Foundations (6 hrs)
E: Science Foundations (7 hrs)

2. Common Program Prerequisites (CPP) (19 hrs)
- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.
- See Mechanical Engineering major in the Catalog for CPP requirements.

3. Core Requirements: Basic Level (2 hrs)
- EGS 1005C Introduction to the Engineering Profession 1 hr
- EGN 1007C Engineering Concepts and Methods 1 hr

4. Core Requirements: Advanced Level (63 hrs)
- EGN 3310 Engineering Analysis-Statics 3 hrs
- EGN 3343 Thermodynamics 3 hrs
- EGN 3365 Structure and Properties of Materials 3 hrs
- EGN 3373 Principles of Electrical Engineering 3 hrs
- STA 3032 Probability and Statistics for Engineers 3 hrs
- EML 3043A/3043C Modeling Methods in Mechanical and Aerospace Engineering 3 hrs
- EML 3303C Mechanical Engineering Measurements 3 hrs
- EGM 3601 Solid Mechanics 3 hrs
- EML 3701 Fluid Mechanics I 3 hrs
- EML 4142 Heat Transfer 3 hrs
- EML 3217 Engineering Mechanics - Dynamics 3 hrs
- EML 4225 Introduction to Vibrations and Controls 3 hrs
- EML 3500 Design and Analysis of Machine Components 3 hrs
- EML 4502C Engineering Design II 3 hrs

Select 2 of the Following: (6 hrs)
- EML 3101 Thermodynamics of Mechanical Systems or 3 hrs
- EML 4143 Heat Transfer II 3 hrs
- EML 4313 Intermediate System Dynamics and Controls or 3 hrs
- EML 4703 Fluid Mechanics II or 3 hrs
- EML 4504 Design & Analysis of Machine Components II 3 hrs

Select 1 of the Following: (3 hrs)
- EML 4301C Mechanical Systems Lab or 3 hrs
- EML 4306C Energy Systems Lab or 3 hrs
- EML 4502C Engineering Design II 3 hrs

5. Restricted Electives
- Approved Electives 18 hrs
  - Technical electives should be taken at the 5000 level and are available in the BSME program to address specific student interests in a variety of technical areas.
  - Restricted electives are intended to ensure that all students have a significant design experience in both mechanical and thermofluids systems. Students should consult with their Department for a list of the approved restricted and technical electives and the terms when specific courses of this type are to be offered

6. Capstone Requirements (6 hrs)
- These courses are a capstone experience to your engineering program and should be completed in your last 2 major semesters of study.
- CECS encourages all engineering students to take the Fundamentals Exam during their senior year.
- EML 4501C Engineering Design I 3 hrs
- EML 4502C Engineering Design II 3 hrs

7. Foreign Language Requirements

Admissions
- Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

Graduation
- None

8. Electives
- None

9. Additional Requirements
- None

10. Required Minors
- None

11. Departmental Exit Requirements (6 hrs)
- None

12. University Minimum Exit Requirements
- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF.
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

Total Undergraduate Hours Required
- 128

Total Combined Hours Required
- 146

Honors In Major
- None

Related Programs
- None

Certificates
- None

Related Minors
- None

Advising Notes
- The following will be waived for this joint degree program:
  - The limit of nine hours to be shared between undergraduate and graduate programs.
  - Undergraduate students taking graduate courses must be within nine hours of graduation.
  - Undergraduate students taking graduate courses must not register for more than a total of twelve hours in that semester.
  - Undergraduate students are not eligible to take 6000-level courses.
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Career and Academic Advising
- The department requires all students in the program meet with a faculty member for advising on career and academic issues. These courses must be taken in sequence during the 3rd and 4th year.
  - EML 3990  Mechanical Career and Academic Faculty Advising I  0 hrs
  - EML 4991  Mechanical Career and Academic Faculty Advising II  0 hrs

Transfer Notes
- None

Acceptable Substitutes for Transfer Courses
- None

Shared Courses
- Shared B.S.M.E./M.S.M.E., M.S.M.S.E., or M.S.A.E. Up to 12 credit hours of approved 5000 and 6000 level courses with grades of “B” (3.0) or better may be counted towards the B.S. and Masters degrees. These 12 credit hours will meet either technical elective or course requirements for the major. Contact the Graduate Coordinator in the Mechanical and Aerospace Engineering department for a list of acceptable courses.

Graduate Courses Link
- [http://www.graduatecatalog.ucf.edu/content/Courses.aspx](http://www.graduatecatalog.ucf.edu/content/Courses.aspx)

Program Academic Learning Compacts
- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: [http://www.oies.ucf.edu/academiclearningcompacts.html](http://www.oies.ucf.edu/academiclearningcompacts.html)

Equipment Fees
- Part-Time Student: $45 per term
- Full-Time Student: $90 per term