Mechanical Engineering
B.S.M.E.

Degree Requirements: 132 Credit Hours
See Core Curriculum for required courses in Area A1 through Area E.

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Area A1</td>
<td>6</td>
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<tr>
<td>Area A2</td>
<td>3</td>
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<tr>
<td>Area B</td>
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<td>Area C</td>
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<tr>
<td>Area D</td>
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<td>Area E</td>
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<td>Area F</td>
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<td>Health and Physical Education Activities</td>
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<td>Orientation</td>
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<td>Specific Requirements</td>
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<td>Major Requirements</td>
<td>40</td>
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<tr>
<td>Total Credit Hours</td>
<td>132</td>
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### Major Requirements (40 Credit Hours)
- MENG 2119: Numerical Methods in Engineering
- MENG 3130: Mechanism Design
- MENG 3135: Machine Design
- MENG 3233: Heat Transfer
- MENG 3331: Materials Science Studio
- MENG 3333: Materials Processing Studio
- MENG 3521: Mechatronics Studio Laboratory
- MENG 4210: Energy Science Laboratory
- MENG 4430: Engineering Quality Control and Project Management
- MENG 4612: Mechanical Engineering Senior Seminar
- MENG 5136: Introduction to Finite Element Analysis
- MENG 5137: Mechanical System Design
- MENG 5138: Composites Materials: Manufacturing, Analysis, and Design
- MENG 5233: Wind Energy
- MENG 5234: Heating, Ventilating, and Air Conditioning
- MENG 5237: Applied Combustion
- MENG 5238: Engine Development and Performance
- MENG 5239: Biofuels Testing
- MENG 5313: Automation and Computer Integrated Manufacturing Systems
- MENG 5333: Robot Dynamics, Design and Analysis
- MENG 5431: Compressible Flow
- MENG 5432: Applied Computational Fluid Dynamics
- MENG 5536: Mechanical Controls
- MENG 5901: Special Problems in Mechanical Engineering
- MENG 6311: Biofuels Testing
- MENG 6321: Renewable Energy

**Free Elective (3 Credit Hours)**
Select 3 credit hours of Free Electives

**Total Credit Hours**: 132

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1. While Calculus I (MATH 1441) is 4 credit hours, only 3 credit hours will count toward fulfilling Area A2. The remaining credit hour will be applied toward Specific Requirements.
2. The listed courses are recommended in Area D.
3. College credits can be given for high school pre-engineering program Project Lead The Way’s (PLTW’s) Introduction to Engineering Design (IED) course as a possible substitution for Engineering Graphics (ENGR 1133), if the following three conditions are satisfied:
   1. student scores 80% or above overall in the course and
   2. an approval of the PLTW affiliate director faculty member at Georgia Southern.

### Other Program Requirements
- At least 30 credit hours of approved Engineering courses must be taken at Georgia Southern.
- The listed courses are recommended in Area D.
- Proficiency examinations will not be accepted in the substitution for any upper-division or laboratory-based courses.
Honors In Mechanical Engineering

To graduate with Honors in Mechanical Engineering a student must:

• Be admitted to the University Honors Program
• Complete all University Honors Program Requirements
• Complete Mechanical Engineering Honors Program Curriculum Requirements
  MATH 1441H Calculus I
  ENGR 1133H Engineering Graphics
  ENGR 1731H Computing for Engineers

  A Core Honors Course of their choosing:

• Complete College/Department Honors Program Requirements
  ENGR 3521H - Honors Mechatronics Studio Laboratory (2hr)
  ENGR 2110H - Honors Solid Modeling and Analysis (1 hr)
  MENG 5136H - Honors Introduction to Finite Element Analysis (3hr) or equivalent contract course (3hr)
  MENG 5891H- Honors Special Topics in ME (3 hrs)
• Complete a capstone project with thesis
• Maintain a 3.3 overall grade point average, including a minimum GPA in all major courses applied toward graduation.

Advisement

CEIT Office of Student Services, Room 1208, Allen E. Paulson College of Engineering and Information Technology, Telephone: (912) 478-4877.