# Suggested Course Plan for a UC Riverside Major in Mechanical Engineering

## Catalog Year: 2015

### Fall Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 001A</td>
<td>4</td>
</tr>
<tr>
<td>MATH 009A</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 001C or Alternate*</td>
<td>4</td>
</tr>
<tr>
<td>ME 002</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 040A</td>
<td>5</td>
</tr>
</tbody>
</table>

**Beginning Composition**

**Intermediate Composition**

**Applied Intermediate Composition**

**First Year Calculus**

**Intro to Mechanical Engineering**

**Physics (Mechanics)**

### Winter Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>ENGL 001B</td>
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<tr>
<td>MATH 009B</td>
<td>4</td>
</tr>
<tr>
<td>MATH 009C</td>
<td>4</td>
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<tr>
<td>ME 009</td>
<td>4</td>
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<tr>
<td>PHYS 040B</td>
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</tbody>
</table>

**First Year Calculus**

**Engineering Graphics & Design**

**Physics (Heat/Waves/Sound)**

### Spring Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 001C or Alternate*</td>
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</tr>
<tr>
<td>MATH 009C</td>
<td>4</td>
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<tr>
<td>ME 009</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 040B</td>
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</tbody>
</table>

**First Year Calculus**

**Physics (Mechanics)**

**Humanities/Social Sciences**

## Total Units: 186

### Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 001A &amp; CHEM 01LA</td>
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<tr>
<td>MATH 046</td>
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<tr>
<td>ME 018</td>
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</tr>
<tr>
<td>PHYS 040C</td>
<td>5</td>
</tr>
</tbody>
</table>

**General Chemistry & Lab**

**Cell & Molecular Biology & Lab**

**Intro to Engineering Computations**

**Physics (Electricity/Magnetism)**

### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 100A</td>
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</tr>
<tr>
<td>ME 103</td>
<td>4</td>
</tr>
<tr>
<td>ME 114</td>
<td>4</td>
</tr>
<tr>
<td>ME 100A</td>
<td>4</td>
</tr>
<tr>
<td>ME 110</td>
<td>4</td>
</tr>
<tr>
<td>ME 111</td>
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</tr>
<tr>
<td>ME 118</td>
<td>4</td>
</tr>
<tr>
<td>ME 120</td>
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</tr>
</tbody>
</table>

**Thermodynamics**

**Mechanics of Materials**

**Fluid Mechanics**

**Mechanical Engr. Modeling & Analysis**

**Linear Systems and Control**

### Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 135 or ME175B²</td>
<td>4</td>
</tr>
<tr>
<td>ME 170B</td>
<td>4</td>
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<tr>
<td>ME 175A³</td>
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<tr>
<td>ME 170B</td>
<td>4</td>
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<tr>
<td>ME 175B or 175C</td>
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<tr>
<td>ME 175A or ME135²</td>
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</tr>
<tr>
<td>Technical Elective**</td>
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</tr>
<tr>
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</tr>
</tbody>
</table>

**Transport Phenomena**

**Mechanical Engineering Design**

**Experimental Techniques**

**Mechanical Engineering Design**

**Technical Elective**

**Technical Elective**

**Technical Elective**

**Technical Elective**

**Humanities/Social Sciences**

**Humanities/Social Sciences**

**Humanities/Social Sciences**

### Total Units: 186

### Maximum Units: 223

## ENGLISH COMPOSITION*

A C or better is required in all English Composition courses to satisfy the graduation requirement. Please consult with your Academic Advisor for ENGL 1C alternatives.

## BREADTH REQUIREMENTS

For an approved list of Breadth courses, go to http://student.engr.ucr.edu/policies/requirements/breadth.html.

### Humanities: (3 courses)

A. World History: __________

B. Fine Arts, Lit., Phil. or Rlst: __________

C. Human Persp. on Science: __________

Social Sciences: (3 courses)

A. Econ. or Posc.: __________

B. Anth., Psyc, or Soc.: __________

C. General Social Science: __________

### Ethnicity: (1 course)

1. __________

### Upper Division: (2 courses)

1. __________

2. __________

## TECHNICAL ELECTIVES **

Please note that Technical Electives may be offered throughout the Academic Year. Consult with your Academic Advisor about potential offerings. See approved technical electives on back.

Course Plan is subject to change.

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* You must take ME175B if not enrolled in ME135 and/or ME170B

² You may be taken concurrently with ME175B

³ You may take ME175A concurrently with ME175B
You must complete 4 courses (at least 16 units) of Technical Elective coursework from one Focus Area. Units are listed in ( ) Select from the list below:

### General Mechanical Engineering
- ME 100B: Thermodynamics (4)
- ME 116B: Heat Transfer (4)
- ME 121: Feedback Control (4)
- ME 122: Vibrations (4)
- ME 130: Kinematic and Dynamic Analysis of Mechanisms (4)
- ME 131: Design of Mechanisms (4)
- ME 133: Introduction to Mechatronics (4)
- ME 137: Environmental Fluid Mechanics (4)
- ME 138: Transport Phenomena in Living Systems (4)
- ME 153: Finite Element Methods (4)
- ME 156: Mechanical Behavior of Materials (4)
- ME 176: Sustainable Product Design (4)
- ME 180: Optics and Lasers in Engineering (4)
- *ME 197: Research for Undergraduates

### Energy and Environment
- ME 100B: Thermodynamics (4)
- ME 116B: Heat Transfer (4)
- ME 137: Environmental Fluid Mechanics (4)
- ME 138: Transport Phenomena in Living Systems (4)
- ME 133: Introduction to Mechatronics (4)
- ME 197: Research for Undergraduates

### Design and Manufacturing
- ME 121: Feedback Control (4)
- ME 122: Vibrations (4)
- ME 130: Kinematic and Dynamic Analysis of Mechanisms (4)
- ME 131: Design of Mechanisms (4)
- ME 133: Introduction to Mechatronics (4)
- ME 140: Ship Theory (4)
- ME 145: Robotics Planning and Kinematics (4)
- ME 153: Finite Element Methods (4)
- ME 156: Mechanical Behavior of Materials (4)
- ME 176: Sustainable Product Design (4)
- ME 180: Optics and Lasers in Engineering (4)
- *ME 197: Research for Undergraduates

### Materials and Structures
- ME 100B: Thermodynamics (4)
- ME 1168: Heat Transfer (4)
- ME 121: Feedback Control (4)
- ME 122: Vibrations (4)
- ME 153: Finite Element Methods (4)
- ME 156: Mechanical Behavior of Materials (4)
- ME 180: Optics and Lasers in Engineering (4)
- *ME 197: Research for Undergraduates

*To enroll in and earn Technical Elective credit for ME 197, students must complete a project abstract using a standard template. The abstract must be signed by the project faculty advisor and submitted to the Undergraduate Program Committee chair at least one week prior to the start of the quarter of enrollment. A final project report is required. For format details, please go to: [http://www.me.ucr.edu/undergrad/opportunities.html](http://www.me.ucr.edu/undergrad/opportunities.html).