Segment One - General Education Requirements

60 Credit Hours - Each course is 6 credit hours

The general education requirements provide a broad foundation in the basic academic disciplines and offer students the opportunity to explore the breadth of the liberal arts and sciences. The following courses offered by Madison University meet the general education requirements for undergraduate students:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL – EEC 101</td>
<td>Biology</td>
</tr>
<tr>
<td>COMM – EEC 101</td>
<td>Introduction to Communication</td>
</tr>
<tr>
<td>ENGL – EEC 101</td>
<td>English Composition I</td>
</tr>
<tr>
<td>ENGL – EEC 102</td>
<td>English Composition II</td>
</tr>
<tr>
<td>GEO – EEC 101</td>
<td>Introduction to Geography</td>
</tr>
<tr>
<td>HIS – EEC 101</td>
<td>Introduction to American History</td>
</tr>
<tr>
<td>HIS – EEC 102</td>
<td>Introduction to World History</td>
</tr>
<tr>
<td>MATH – EEC 101</td>
<td>Basic Principle of Mathematics</td>
</tr>
<tr>
<td>PHIL – EEC 101</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>SOC – EEC 101</td>
<td>Introduction to Sociology</td>
</tr>
</tbody>
</table>

Segment Two - Concentration Requirements

60 Credit Hours - Each course is 6 credit hours

**AERO 30301 Principles of Flight**

This course provides a comprehensive study of methods and practices of flight.

**Textbook:** Aircraft Flight: A Description of the Physical Principles of Aircraft Flight, 2nd edition

**ISBN#:** 0-582-23656-8

**AERO 30302 Aerodynamics**

This course provides a comprehensive study of theoretical and practical applications of aerodynamics, as it relates to aircraft design and flight.

**Textbook:** Fundamentals of Aerodynamics

**ISBN#:** 0-07-001679-8

**AERO 40401 Power Plants and Systems**

**Textbook:** Aircraft Powerplants, 7th edition

**ISBN#:** 0-02-801874-5

**AERO 40402 Air Regulations**

This course provides the basic information on airborne equipment, ground-based but aviation related equipment, and aerospace systems needed to design, maintain, and repair aviation electronics.

**Textbook:** Introduction to Avionics, 1st edition

**ISBN#:** 0-13-227489-2
## ENGR 30202 Introduction to Dynamics
This course provides an overview of the subject of dynamics, including kinematics, mass distribution, motion and more.

**Textbook:** Engineering Mechanics: Dynamics, 9th edition  
**ISBN:** 0-130-20004-2

## ENGR 30203 Manufacturing Process
Manufacturing system dynamics and controls of mechanical systems; robotics systems and their applications; numerical machine program generation from geometrical images.

**Textbook:** Introduction to Manufacturing Process, 3rd edition  
**ISBN:** 0-07-031136-6

## ENGR 30211 Mechanics/Strengths of Materials
This course teaches the fundamental concepts of mechanics of materials with an emphasis on practical applications.

**Textbook:** Statics and Strength of Materials, 4th edition  
**ISBN:** 0-07-004023-0

## ELEC 30101 Circuit Analysis/Electronics
Introduction to basic electrical circuit analysis. Includes the characteristics of modern solid-state non-linear and active devices, representative circuit models and the analysis and design of typical circuits using these devices.

**Textbook:** Basic Engineering Circuit Analysis, 7th edition  
**ISBN:** 0-471-40740-2

## BS 400 Bachelor's Final
The Bachelor's Final Paper or Project.