Aerospace Engineers concentrate mainly on four areas of technology: aerodynamics, structures and materials, propulsion and flight mechanics which allows them to develop extraordinary machines. They design, develop and test aircraft, spacecraft, and missiles, and supervise the manufacturing of these products. They develop new technologies for use in aviation, defense systems, and space exploration, and can specialize in a particular type of aerospace product, such as commercial aircraft, military fighter jets, spacecraft, or missiles and rockets.

**Highlights**

- Huntsville, Alabama has the #1 concentration of Aerospace engineering jobs in the United States.
- Also known as the “Rocket City,” Huntsville is deeply rooted in our nation’s aerospace industry.
- Students co-op with Boeing, GE, NASA, and many more.
- Average median salary in 2012: $103,720.

"The work I have done at NASA is exciting and challenging. This experience has inspired me to pursue a career supporting space exploration, and also allows me to work on interesting projects like the Hexacopter in this photo."

Adam Dzuibanek // Decatur, Alabama
Senior, Aerospace ENGINEERING
# Aerospace Engineering

## 2015/2016 (128 Hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Prerequisites, Corequisites and/or Prerequisites with Concurrency</th>
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<tbody>
<tr>
<td><strong>English - 6 hours</strong></td>
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<tr>
<td>EH 101 3 Freshman Composition I</td>
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<td>EH 102 3 Freshman Composition II</td>
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<tr>
<td><strong>Mathematics - 18 hours</strong></td>
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<tr>
<td>MA 171 4 Calculus A</td>
<td>MA 113 or MA 115 or Level III Placement</td>
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<td>MA 172 4 Calculus B</td>
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<tr>
<td>MA 201 4 Calculus C</td>
<td>MA 172</td>
</tr>
<tr>
<td>MA 238 3 Applied Differential Equations</td>
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<tr>
<td>MA 244 3 Introduction to Linear Algebra</td>
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<tr>
<td><strong>Chemistry - 4 hours</strong></td>
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<tr>
<td>CH 121 3 General Chemistry I</td>
<td>Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125</td>
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<td>CH 125 1 General Chemistry Lab I</td>
<td>Coreq: CH 121</td>
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<td><strong>Physics - 6 hours</strong></td>
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<tr>
<td>Ph 111 3 General Physics w/Calculus I</td>
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<tr>
<td>Ph 114 1 General Physics Lab I</td>
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<tr>
<td>Ph 112 3 General Physics w/Calculus II</td>
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<td>Ph 115 1 General Physics Lab II</td>
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<td><strong>Science Elective - 3 or 4 hours</strong></td>
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<td><strong>History, Social &amp; Behavioral Sciences, Humanities &amp; Fine Arts - 18 hours</strong></td>
<td>For more information on HSBS/HFA Requirements: <a href="http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements_05202014.pdf">http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements_05202014.pdf</a></td>
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<td><strong>First-Year Engineering - 4 hours</strong></td>
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<td>ENG 101 3 Computing for Engineers</td>
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<td><strong>Aerospace Engineering Option - 61 hours</strong></td>
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<tr>
<td>MAE 200 3 Principles of Aeronautics &amp; Astronautics</td>
<td>ENG 101, MA 172, PH 111, Prereq w/Con MAE 211</td>
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<td>MAE 213 2 Introduction to Computer Aided Design</td>
<td>ENG 101, MA 171</td>
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<tr>
<td>EE 213 3 Electrical Circuit Analysis I</td>
<td>Prereq w/Con: PH 112, MA 201</td>
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<td>MAE 271 3 Statics</td>
<td>ENG 101, PH 111, Prereq w/Con: MA 201</td>
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<td>MAE 272 3 Dynamics</td>
<td>MA 201, MAE/CE 271</td>
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<td>MA 244, MAE 211, Prereq w/Con: MA 238 &amp; Coreq: MAE 284L</td>
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<td>MAE 311 3 Principles of Measurement &amp; Instrumentation</td>
<td>EE 213, MAE 284, Coreq MAE 311L</td>
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<tr>
<td>ISE 321 3 Engineering Economy</td>
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<td>MAE 330 4 Fundamentals of Aerodynamics</td>
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<td>MAE 341 3 Thermodynamics I</td>
<td>MA 201, CH 121, CH 125, PH 112</td>
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<td>MAE 343 3 Compressible Aerodynamics</td>
<td>MAE 200, MA 238, MAE 341</td>
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<td>MAE 370 4 Mechanics of Materials</td>
<td>MAE/CE 271, MA 244 &amp; (MAE 211 or CE 111), Coreq: MAE 370L</td>
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<td>MAE 371 3 Aerospace Structures</td>
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<td>MAE 440 3 Rocket Propulsion I</td>
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<td>MAE 441 3 Airbreathing Propulsion</td>
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<td>MAE 468 3 Elements of Spacecraft Design</td>
<td>MAE/CE 272, MA 371</td>
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<td>MAE 471 3 Advanced Aero Stucture &amp; Materials</td>
<td>MAE 311, MA 371</td>
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<td>MAE 480 3 Aircraft Stability &amp; Control</td>
<td>MAE 330, MA 488</td>
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<td>MAE 488 3 Analysis of Engineering Systems</td>
<td>EE 213, MAE/CE 272, MAE 284</td>
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<td>MAE 490 3 Intro to Engineering Design</td>
<td>ISE 321 &amp; MA 311, 341 &amp; (MAE 310, 364, &amp; 378) or (MAE 330, 343, &amp; 371)</td>
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<td>MAE 491 3 Product Realization</td>
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<td>MAE 492 3 Mission Design &amp; Development</td>
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<td>MAE 494 3 Aircraft Design</td>
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## Technical Elective - 6 hours

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<th>Course Title</th>
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<tr>
<td>3</td>
<td>300+ Level Science or Engineering course</td>
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* These courses are offered in alternating summers. Please consult the MAE 5 year plan. All prerequisite classes must be completed with a "C-" or higher grade. The Catalog is the final authority for all degree requirements.

Updated: 5/7/2015
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<th>Course Code</th>
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**Legend**

- **Y**: Course will be offered in designated term.
- **E**: Course will likely be offered in designated term, but availability will be determined by faculty availability and budget.
- **N**: Course will not be offered in designated term.
- **D**: Course may be made available given appropriate demand or interest.

* UAH College of Engineering will make every effort to adhere to the class plan schedule, but it reserves the right to make necessary adjustments based on budget and faculty availability.

** Course has a required lab section.