



AEROSPACE ENGINEERING

C A R E E R P R O F I L E

Overview

Aerospace Engineers are involved in all phases of research, development, integration, and production of aerospace systems and have chief responsibility for the design and performance of air and spacecrafts and their propulsion systems. Aerospace Engineers have also applied their knowledge to related fields, such as engines, defense and security, automotive, and manufacturing.

Average Starting Salary (Bachelor's Degree): **UIUC- \$61,990** **NACE- \$65,500**

Skills and Interests Important to Aerospace Engineers

- Technical and computer expertise
- Written and oral communication skills
- Research skills
- Problem-solving skills

Sample Job Titles

- Aerospace Engineer
- Aerospace Stress Engineer
- Avionics Engineer
- Component Engineer
- Design Engineer
- Flight Systems Test Engineer
- Project Manager
- Propulsion Engineer
- Research Engineer
- Systems Engineer

Sample Organizations Recruiting Aerospace Engineers

- Boeing
- Bain
- General Electric
- Gulfstream
- Hamilton Sundstrand
- Honeywell
- John Deere
- Lockheed Martin
- NASA
- Naval Air Warfare Center
- Northrop Grumman
- Raytheon
- Rolls Royce
- Saab Group
- United States Air Force
- UTC Aerospace Systems

Getting Involved

Campus Organizations:

- American Institute of Aeronautics and Astronautics <http://www.ae.illinois.edu/aiaa/>
- CubeSat, <http://cubesat.ae.illinois.edu/>
- Illinois Robotics in Space, <http://iris.ae.illinois.edu/>
- Illinois Space Society, <http://www.ae.illinois.edu/iss/>

National Organizations: **AIAA** <http://www.aiaa.org>

NASA <http://www.nasa.gov/>

REBECCA J. SMITH

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EDUCATION: **UNIVERSITY OF ILLINOIS** Urbana-Champaign, IL
 B.S. in Aerospace Engineering, May 2016 GPA: 3.3/4.0

Related Coursework:

Aerospace Dynamics	Incompressible & Compressible Flow
Aerospace Structures I & II	Aerodynamic and Propulsion Lab
Aerospace Control Systems	Aerospace Propulsion

EXPERIENCE: **BOEING COMMERCIAL AIRPLANES** Everett, WA
 Aerospace Engineering Intern Summer 2015

- Researched loading and stress data for the optimal placement of displacement and force sensors for 787 test flights
- Analyzed material and structural data to calculate the effects of thermal strain on displacement sensors
- Proposed revised design requirements for 787 pedal housing which led to a 20% reduction in cost and a 10% reduction in weight

UNITED STATES AIR FORCE Bedford, MA
Summer Intern Summer 2014

- Developed and implemented IDL programs for Defense Meteorological Satellite Program (DMSP) which expanded the ability to monitor, analyze, and predict weather patterns
- Bridged technological and compatibility gaps between old and new satellites in the DMSP constellation by acquiring and interpreting prior data
- Created tools to provide visual summaries of the detection of spikes and anomalies from the spacecraft's instrumentation

DEPARTMENT OF AEROSPACE ENGINEERING, UIUC Champaign, IL
Undergraduate Research Assistant September 2014 – Present

- Assist graduate students with research focused on aerodynamics and propulsion
- Created sketches and models of 5 concepts and submitted design proposals
- Performed cost analysis which demonstrated an ability to reduce project cost by \$2,000

SKILLS: **Computer Skills:** C/C++, Fortran, Java, ProEngineer, Unigraphics, Patran, ANSYS, AutoCAD, Autodesk Inventor, LabVIEW, Matlab, Mathematica, Windows, Unix/Linux

Language Skills: Fluent in Spanish, Intermediate in Italian

ACTIVITIES & HONORS: Society of Women Engineers, 2012 – Present
 Engineering Open House Project Chair, Fall 2014
 Women in Aerospace, 2012 - 2014
 Tau Beta Pi Engineering Honor Society, May 2014 – Present
 American Institute of Aeronautics and Astronautics – Illinois Chapter, 2012– Present