The world of Aerospace is one place where you get to live your dreams. Aerospace engineers design advanced satellites that provide data on environmental damage to our planet, and offer solutions to our problems by studying the health of other planets like Mars. They design robotic air vehicles that monitor crops and help predict the onset of forest fires and hurricanes. They engineer completely new aircraft concepts like the 787, which is made out of carbon fiber and plastic instead of aluminum. They conceive new engines as quiet as a whisper and so efficient they only use a small fraction of the fuel of older aircraft.

As a student in aerospace engineering, you get to take classes from world-renowned faculty in subject areas such as: computational fluid dynamics; experimental aerodynamics; spacecraft guidance and control; and nano materials. But Aerospace Engineering is a team sport, and you will learn to work with others to develop the innovation, technical knowledge, and communication skills needed to solve critical problems.

Becoming an Aerospace Engineer is about becoming a member of a community in which you will live for the rest of your career.

The demand for Aerospace Engineers is strong and continues to grow. Iowa State University career fairs are among the largest in the nation, and hundreds of companies regularly recruit our students for internships and full-time employment. The Wall Street Journal rated us as one of the best places that companies shop for engineers. Even in a tough economy, Aerospace Engineers are in demand. Just last semester, over 90% of our graduates who held internships, co-ops, or summer jobs with companies had already been offered jobs at the time of graduation.

So it’s a great time to consider Aerospace Engineering if your future goals include excitement, opportunity, and a real chance to make a difference in the world.

Richard Wlezien  
Professor and Vance and Arlene Coffman Endowed  
Department Chair in Aerospace Engineering  
Iowa State University

Why Read?
This newsletter will give you insight into what it’s like being an aerospace engineering student at Iowa State University. Iowa State University focuses not only on formal classroom education, but also hands on experience. As a student you will get to participate in projects you enjoy. Engineering after all is about creating something new. It truly is the merging of logic and imagination.
### Freshman

**Classes**
Freshman year focuses developing the problem solving techniques that are essential to your career at Iowa State. You will be absorbed into Physics, Calculus, and Numerical Methods.

**Projects+Labs**
Freshman will also learn to build a remote-controlled airplane out of foam and complete some demanding computer programing!

---

### Sophomore

**Classes**
Sophomore year offers your first experience in aerospace engineering classes. You will learn the basics of how an airplane flies and the implications of airflow and loading on and around the airplane.

**Projects+Labs**
As a sophomore you will also get your first experience using the various wind tunnels in Howe Hall.

---

### Junior

**Classes**
The junior year of your education is by far the hardest out of the four years. It is here where you really become emersed in the concepts that help students design aircraft and space systems.

**Projects+Labs**
As a junior you will also experience the most extensive labs. They will put to the test everything you have learned in class.

---

### Senior

**Classes**
The senior year of classes is focused on design. Everything you have learned in your classes will be put to the test in a final design project of your choice.

**Projects+Labs**
Many seniors also use their last year to compete in national design competitions across the country (although you can choose to do this at any point in your education).

---

### Student Summer Experiences

"I have a summer internship with Spirit Aerosystems in Tulsa, Oklahoma as a Structural Design Engineering Intern working on the G250 Business Jet."

–Fouad Khairallah (senior)

"I’m going to spend my summer researching as an undergraduate at RWTH Aachen University, a leading engineering school in Germany! ISU’s Engineering International Programs office did a great job helping me acquire and prepare for this position. For my research project, I’ll develop and validate aerospace analysis tools used to design wings for large commercial aircraft."

–Alexander Zimmerman (senior)

"I am working with Boeing in NDE (Non Destructive Evaluation) for the summer. The CNDE (Center for Non Destructive Evaluation) on campus help was awesome, from giving me the names of people I needed to talk to and giving a top notch education in both lab time and theory. Their contributions helped me land this job."

–Thomas Maeder (senior)

"I’m working with Boeing in NDE (Non Destructive Evaluation) for the summer. The CNDE (Center for Non Destructive Evaluation) on campus help was awesome, from giving me the names of people I needed to talk to and giving a top notch education in both lab time and theory. Their contributions helped me land this job."

–Alexander Zimmerman (senior)

"I’m working at the Boeing Co. in St. Louis. I will be testing the thermal properties of materials in high temperature atmospheres and designing and manufacturing a test fixture capable of also withstanding the materials we are going to be testing. Thanks to the professors, students, and mentors who prepared me thus far. I was blessed with the opportunity."

–Meng Lo (senior)

"I moved to the DC area to study systems engineering at the George Washington University while also informally studying science and technology policy (particularly space policy). While studying here I have interned with the Space Studies Board of the National Research Council (operating arm of the National Academy of Sciences), a private company called SpaceWorks Engineering Inc. (SEI) and currently with the American Association for the Advancement of Science (AAAS). There are lots of opportunities here for people with an aerospace background and an interest in systems engineering and technology policy."

–Andreas Frick (alumnus)