

# Industrial Engineering Guidelines for Honors Students

The Industrial Engineering Program in the School of Computing, Informatics, and Decision Systems Engineering (CIDSE) and the Barrett Honors College work together to provide our students academic advising, research and internship opportunities, scholarship information and access to distinguished lectures and other special events. In this document, you will find the information you need to complete your Honors degree.

## Contact Information:

CIDSE Advising Center:

Phone: (480) 965-3199

Email: [cidse.advising@asu.edu](mailto:cidse.advising@asu.edu)

Address:

Arizona State University

School of Computing, Informatics, and Decision Systems Engineering

Brickyard Building Suite 208

699 South Mill Avenue

Tempe, AZ 85281

Industrial Engineering Honors Faculty Advisor:

Professor Esma Gel

Email: [esma.gel@asu.edu](mailto:esma.gel@asu.edu)

Phone: (480) 965-2906

## Honors Courses:

There are three different ways to take Honors courses:

1. HON prefix courses have a maximum enrollment of 19 students, are conducted in seminar format, are interdisciplinary in content and approach, and have a significant writing component. These courses are taught primarily by the faculty in Barrett Honors College.
2. Honors-only courses carry the prefix of the department offering the course. They are designed to challenge students in a small class format.
3. Regular courses through Honors Contracts: Most courses carrying the prefix of the department may be turned into an Honors course through an Honors Contract between the faculty and the student. You should talk to the faculty instructor for the course that you are interested in and see if the instructor would like to offer an Honors Contract. The Contract should be explicit and fully detail the expectations for the quantity and quality of coursework. You will submit the Honors Contract online which is available each semester up until the deadline for contract submissions. The following courses commonly provide

Honors Contracts; however, students must still request the contract from the course faculty.

|         |         |         |         |
|---------|---------|---------|---------|
| IEE 300 | IEE 305 | IEE 369 | IEE 376 |
| IEE 380 | IEE 381 | IEE 385 | IEE 412 |
| IEE 421 | IEE 431 | IEE 437 | IEE 454 |
| IEE 456 | IEE 458 | IEE 461 | IEE 470 |
| IEE 474 | IEE 475 | IEE 477 |         |

More information about Honors Contracts can be found at:

<http://barretthonors.asu.edu/academics/honors-courses-and-contracts/honors-enrichment-contracts/>

### **Honors Thesis:**

One of the signature components of the Honors experience is the Honors thesis or creative project. This project represents the culmination of your entire honors experience and undergraduate education. You can start thinking of thesis topics as early as your freshman and sophomore years. You should definitely have a clear plan of the thesis topics or research by your junior year.

To identify a topic that you are interested in, you are encouraged to browse the Industrial Engineering faculty in the CIDSE website:

<http://cidse.engineering.asu.edu/facultyandresearch/director/faculty/>

You can also talk to the faculty who you have taken classes, and attend research seminars that are posted on the CIDSE or other engineering school websites.

Recommended steps for completing the Honors Thesis in Industrial Engineering:

1. Think about a research topic or area:  
Think about what you like and identify specific areas of interest. Consider engineering topics that you have not studied in depth and explore research areas through various journal articles. Visit with faculty members, the Director of Undergraduate Programs, or your academic advisor for ideas on possible research topics.
2. Select your faculty committee:  
First select a committee director by visiting with a faculty member in Industrial Engineering who is currently studying a research topic that interests you, and is someone with whom you feel comfortable with working. You can work with your committee director to determine another committee member from the faculty. Note that in certain cases, your second committee member can be an industry practitioner, rather than a faculty member at ASU. Once you select a faculty committee, you can expect to spend a great deal of time working on your thesis. So, you need to be committed to your research topic and to working with your faculty committee on a regular basis. If you still need help identifying a thesis faculty director, please discuss your options with the Director of Undergraduate

Programs or your academic advisor. They can give you an overview of faculty research interests and make suggestions based on your research interests.

3. Select report contents:

You and your faculty advisor should agree on the form and depth of the report and other deliverables. Based on the specific topic of the thesis, different report outlines may be appropriate. Note: Students must adhere to the style guide provided by the Honors College.

4. Agree on research scope:

You and your faculty advisor will need to discuss and agree on the scope of the research/design problem. This may change over the course of the project, but the discussion provides a starting point for both you and your faculty advisor. It is a good idea to document agreements made between you and your faculty advisor to eliminate any miscommunication.

5. Enroll in IEE 492 Honors Directed Study and IEE 493 Honors Thesis:

If you decide to complete a three (3) credit hour thesis, you will need to enroll in IEE 493 (Honors Thesis). However, most thesis research projects expand beyond three hours and typically include IEE 492 (Honors Directed Study). Between IEE 492 and IEE 493, students will earn six (6) credit hours toward their thesis. IEE 492 can be used as a 3-hour technical elective for the Industrial Engineering curriculum and is generally taken one semester prior to taking IEE 493. While enrolled in IEE 492, you will develop a solid literature review and research proposal, and initiate the research. While enrolled in IEE 493, you will complete your research, complete writing your honors thesis, and defend your thesis.

6. Make a schedule:

It is important for you to create a “working thesis” schedule with your faculty advisor that identifies deadlines for your research and deadlines identified by the Honors College. The Honors College has specific dates for receiving a thesis prospectus, performing the oral defense (e.g., November 16, 20XX or April 14, 20XX), and submitting the final document (e.g., December 2, 20XX, or April 28, 20XX). Ideally, you should create a Gantt chart identifying all project milestones and tasks.

7. Progress through your research:

Start your research and meet with your advisor on a regular basis (preferably once a week). Start early and finish early so that you can produce a good thesis and have time for revisions. You can expect to revise your thesis several times.

8. Finish the process:

The thesis process culminates with an oral defense. The oral defense is your opportunity to meet with your selected committee, and present your research project. You will explain your study and answer questions from the committee members. After the defense, some revisions to your report may be required before the final document is submitted to the Honors College.

More information about honors thesis can be found at:

<http://barretthonors.asu.edu/home/category/students/thesiscreative-project/>

### **Capstone Experience:**

ABET requires that the accredited engineering degree program include a capstone design project for all graduating seniors. Because this is a team project and the honors thesis is an individual effort, they cannot be combined. Most of our capstone projects are real industry projects with local industry sponsors. It is a very valuable experience that prepares new engineers for their careers after graduation. Accomplishing major projects is a requirement for all engineers.

### **Internships:**

There are vast opportunities for internships for engineering students at ASU. Internships are encouraged for all Industrial Engineering students. Technical elective credit can be granted for many student internships; please talk to the advising office if interested.

The Fulton School of Engineering's Career Center offers guidance to students seeking these opportunities. The various engineering society student clubs and organizations introduce students to industry representatives seeking interns. Emails are also sent to engineering students from the Career Center, Advising Office, and faculty regarding specific internship opportunities. More information about internships through the FSE Career Center can be found at:

<http://more.engineering.asu.edu/career/internships/>