



# FSE 100: Introduction to Engineering

## Overview

Do you ever think: “There has to be a better way!” Then engineering is for you! Engineering is for anyone with a passion for problem solving. This course actively introduces you to skills and tools that engineers use to solve problems while teaching you to think like an engineer. You will learn to identify opportunities, imagine new solutions to problems, model your creations, make data-driven decisions, build prototypes, and showcase your ideas that will impact the world. Taught by engineering professors and highlighting industry engineers in action, this course will equip you, as an engineer-in-training, with the skills necessary to compete in today’s world of innovation.

## What You’ll Learn

- Apply the steps of the engineering design process based on the analysis of customer needs to design, build, and test a physical prototype
- Use and select appropriate tools and technical skills to collect and analyze data from a variety of sources, to describe and predict the behavior of designs, and to justify design decisions based on appropriate models
- Apply project management skills to create and implement project plans and maintain and evaluate schedules and budgets for an engineering design
- Be able to identify your motivations, strengths, and contributions within the field of engineering and critique your own skills and understanding through self-reflection

## How to Succeed

To be successful in this course, we recommend English language fluency and computer literacy. We also encourage you to make sure your laptop or desktop computer meets the [technical requirements](#).

## Earn College Credit

This course appears on your transcript identically to how it appears on the transcript of an enrolled ASU student.

This course satisfies 2 credit hours at Arizona State University. It is strongly encouraged that you consult with your institution of choice to determine how these credits will be applied.

In order to receive academic credit for this course, you must earn a grade of “C” or better. You have one year to add the course to your transcript.

## Exams and Grading

**60%**

Projects

**5%**

Content Mastery

**25%**

ePortfolio

**10%**

Final Exam

# FSE 100: Continued

## Time Commitment

This is an asynchronous, online course. This means, while you will have deadlines, you do not need to be at your computer at specific times or participate in live activities.

To be successful in this class, you must view all course pages and complete all graded work by the deadlines indicated. Also, keep in mind that "attendance" in an online course means logging into the platform on a regular basis, checking for course announcements, and visiting and participating in the discussion forums.

This 2 credit, 16 week course requires about 90 hours of work. Therefore, expect to spend approximately 8-10 hours per week preparing for and engaging in this course.

## Materials

This course makes use of open educational resources (OERs) provided within the course, **no purchase necessary**.

## Graded Assignments

Graded assignments are required and count towards your final grade. Students must submit all assignments via the course site unless otherwise instructed.

**DeVILS Project (15%)** (Developing Value and Innovating Limitless Solutions): Two assignments; in this five week project, you will be identifying a problem to solve and creating a conceptual design which solves this problem. You will be completing an initial problem definition memo and a final proposal of your design in a presentation of slides.

**Disaster Relief Project (45%)**: Eight assignments; in this 10 week project, you will work through all the stages of the engineering design process to develop an innovative solution to a customer-defined problem. You will be completing weekly project memos which will document your progress as well as a final design report.

**ePortfolio (25%)**: 10 assignments; engineers need a professional ePortfolio to showcase their projects and communicate their diverse skills. You will be creating your ePortfolio using the Weebly platform. Throughout this course you will be applying concepts covered to develop samples of your work.

**Content Mastery (5%)**: 14 assignments; you must reach level 0.1 on each interactive exercise to receive credit.

**Final Exam (10%)**: The final exam covers content from weeks 1-14. It is a **proctored** exam.

## Assignment Deadlines

Your instructional team will provide all content and learning activities on or through your course site. It is your responsibility to review all content, fulfill all assignments on time, and ask any questions you have in the designated discussion area. It is also your responsibility to determine the due dates and times for all course assignments according to your time zone. Due to the large-scale format of Universal Learner Courses, late assignments will not be accepted at any point during the course, and we cannot make exceptions.

## Course Communication

All communication will take place via the discussion forums and course announcement page. There will be a discussion forum where you can post general questions, comments, and direct inquiries for the instructor and course team. Please use these forums to ensure a timely response. Your instructor will not be able to respond to email.

## Additional Information

If you have questions about Universal Learner Courses and how they work, please visit [ea.asu.edu](http://ea.asu.edu) or contact our support team at [ulcourses@asu.edu](mailto:ulcourses@asu.edu).