



Masters of Design: Engineering in Iowa

What does the design process look like for different engineering paths? Join this session to learn about different engineering careers in Iowa while connecting to understanding engineering design in applied science, technology, engineering and manufacturing standards 4.2 & 4.3.

Event Date & Time:

April 27, 2021

10:00 AM - 10:30 AM

Partners: Society of Women Engineers; Society of Hispanic Professional Engineers (Dubuque area chapters)

Event Components:

Meet a variety of Iowa engineers through a virtual discussion

Questions:

- What is engineering? Why did you select this career field?
- Tell us about your branch of engineering. What makes it unique? Are there other types of engineering that you considered?
- What does the outlook for this career look like currently and in the future?
- What classes are required to obtain a degree in this field? How many years of study are required?
- What classes should students take now to prepare them for studies in this field?
- Are there emerging areas in engineering that students should consider?

Service Area:

Applied Sciences

Audience:

- High School ASTEM courses in engineering, technical and manufacturing
- Middle School ASTEM exploratory courses
- Students in grades 5-14 interested in careers in engineering

State Standards Covered:

Applied Science, Technology, Engineering, Manufacturing

Industrial Technology (General Course): 4.2 Analyze education and skill requirements for engineering and technology and related professions.

Industrial Technology (General Course): 4.3 Report the outlook, demand, and projected wages for engineering, technology, ASTEM, and trade and industry career

Supplementary Content:

Mechanical Engineer: <https://www.youtube.com/watch?v=HsYQxQL4meU>

Systems Engineer: <https://www.youtube.com/watch?v=62JHMPImI4Q>

Pilot: <https://www.youtube.com/watch?v=4XaV8PbHun8>

Systems Engineer: <https://www.youtube.com/watch?v=RKtGli1PWhk>

Certification Engineer: <https://www.youtube.com/watch?v=5w1Z0GkIDd8>

Quality Inspector: <https://www.youtube.com/watch?v=YfqrHBxlow8>

Example Assessments:

[Explore Careers in Engineering](#) - Additional Videos

Career Exploration Assignment

Date: _____

Student Name: _____

Instructions: Using O*Net OnLine to complete your research, select two engineering specialities for an in-depth exploration.

Speciality 1: _____ Speciality 2: _____

Compare *How are these specialities similar?	Contrast *How are these specialities different?

In the workplace, **soft skills** are how we interact with and get along with others. A few examples of soft skills are working well in teams, getting tasks done on time, showing up to work on time, and communicating clearly with others. List 2-3 soft skills needed for each career and why each is important to the workplace?

What education and/or training is required for each career?

Describe the working environment for each career.

What classes should you take in high school that will be helpful in each career?