

Mechanical Design Technology



Figure 1 A Mechanical Design Technology class discussing sketches, engineering drawings, and fabricated parts related to a design project.

Associate of Applied Science 2-year degree

The Mechanical Design Technology AAS-T degree prepares students for careers as Technicians, Drafters, Designers, and Assistant Engineers with mechanical engineering firms (e.g.: aeronautics, aerospace, medical, industrial manufacturing, consumer products, etc.). Part of the School of Engineering, Science and Math.

Through hands on individual and collaborative projects, students receive a solid foundation in designing for manufacturability, quality, and function. Classes are small with significant individual attention.

Students will create complete, complex, and accurate fabrication drawings and digital models, per industry standards, using the latest in Computer Aided Design (CAD) software such as AutoCAD, SolidWorks and other design software. Students will also develop skills using rapid prototyping / digital fabrication software and tools (such as 3D printers) to create designs for classes and for prototyping their own ideas.

Connect to Careers

Industry Advisors:
Boeing

Pentz Cast Solutions

CRANE Aerospace

Philips

Panasonic Avionics

And others!

Student

Employment:
Astronics

Panasonic Avionics

CRANE Aerospace

Boeing

Dynon Avionics

Synsor

Systema Technology

Boston Scientific/EKOS

And others!

**Find Out
More!**



Contact us today!

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Mechanical Design Technology graduates will:

- Be industry ready for a range of entry level positions in the mechanical engineering field.
- Design for Manufacturability, Quality, and Function by applying elements and principles of mechanical design.
- Apply knowledge of manufacturing methods such as machining, sheet metal, injection molding, casting, and FDM to create cost effective designs.
- Create fabrication drawings that are complex, accurate, and complete, per industry standard drafting practices.
- Apply geometric dimensioning and tolerancing to ensure functional design and interchangeability of mating parts (ASME Y14.5-2009)
- Enjoy small class sizes, with hands-on training and individual attention, geared for the work environment.
- Build physical parts using 3D printers, laser cutters, and other rapid prototyping technology.
- Translate engineering designs and requirements into digital product definition.
- Work independently and self-directed.
- Collaborate on integrated product design teams.
- Demonstrate industry ready skills and basic drafting fundamentals, concepts and techniques.
- Apply critical thinking, teamwork, communication, intercultural appreciation, and information literacy skills.



Figure 2 Discussing concepts of mechanical design using a SolidWorks digital model in class. Designing for function and manufacturability is emphasized.



Figure 3 A student explains her Capstone mechanical design project to the class. The design is intricate and involves several types of mechanical motion.

Program includes:

- Guest speakers from local engineering and manufacturing companies
- Industry examples of engineering drawings
- Company field trips
- Industry examples of machined, sheet metal, cast, and molded parts



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