

CAD Drafting and Tool Design Technology

Required Courses

Why Choose CAD Drafting and Tool Design Technology?

The Computer Aided Design (CAD) Drafting and Tool Design program concentrates on the use of CAD in product drawing, dies (metal stamping), molds (plastic processes) and jig, fixture and gauge design. Students are involved with computers throughout the program to familiarize them with CAD software applications such as detailing, GD & T, general tolerancing, wire frame, surfacing, solid modeling with parametric technology and Rapid Prototyping. Computer-aided engineering software for mold design and mechanical applications are also used. Student solid models are processed and created on our Rapid Prototyping equipment.

Tool design is critical to the manufacturing industry. Tooling is the foundation for product design and the mechanical and manufacturing industries. Students learn to design and detail basic tooling requirements for the manufacture of products. Students also gain an understanding of the related areas of mathematics, materials and machining.

Career Opportunities

Converting an abstract idea into a working design is the job of the tool designer. Designers are a part of the manufacturing cycle from the initial stages of product development all the way through production of the finished product. The designer may be involved in drawing one of many parts of a complete assembly, then designing the tooling-jigs, fixtures, gauges, dies, injection molds and special machines-to produce one or all of those parts.

For the tool designer, creativity and attention to detail are essential in production of such diverse products as automotive and aircraft components, consumer products, medical products, electronics, food processing and special machinery. Students are given opportunities to express their creative abilities in various projects.

Graduates of the program find immediate employment as computer-aided tool detailers, product drafters, entry-level tool designers, CAD operators and other technical-related positions. Many students choose to continue into B.S. programs such as Product Design Engineering Technology, Manufacturing Engineering Technology, Plastics Engineering Technology, Business Management or Occupational (Teacher) Education.

Admission Requirements

Admission to the College of Engineering Technology is open to high school graduates who demonstrate academic preparedness, maturity and seriousness of purpose with backgrounds appropriate to their chosen program of studies. Among first-time students in our technical

programs, the average high school GPA is 2.75, and the average ACT composite score is 18 (Total SAT16 of 950).

Students entering the CAD Drafting and Tool Design Technology program should have a background in CAD and a desire to develop tool design skills. Admission is open to high school graduates with a 2.75 cumulative GPA along with an 18 ACT composite and a math sub-score of 19 or 950 SAT16 Total and a SAT16 math sub-score of 500. Students close to the requirements are encouraged to apply and will be reviewed on an individual basis.

General Education Requirements

All University General Education requirements for an Associate's degree is here

Please consult this link for a complete listing of General Education Electives.

Consult the Required Course above or program advisor for program specific General Education requirements.

Graduation Requirements

The CAD Drafting and Tool Design Technology program at Ferris leads to an associate in applied science degree. Graduation requires a minimum 2.0 FSU GPA. A minimum of 60 credit hours required. At least 15 credits in residency and students must complete all general education requirements as outlined on the General Education website.

More Information

College of Engineering Technology
Ferris State University
919 Campus Drive, NEC 211
Big Rapids, MI 49307-2280
Phone: 231-591-2640
or visit www.ferris.edu/cdtd

ADA compliant check sheets are being developed for the 2019-2020 Catalog. If you would like to request an ADA compliant check sheet before the 19-20 catalog is published, please send your request to: FSUCurriculum@ferris.edu