

Welcome

I'm delighted that you've expressed an interest in pursuing educational opportunities at Ivy Tech Community College-Bloomington. The Design Technology program represents an exciting field of study that I believe you will find both challenging and rewarding. The Design Technology curriculum provides the opportunity for graduates to be productive immediately upon graduation. Potential employers encompass a wide variety of disciplines including architectural and engineering, civil engineering, consumer products, medical products, durable goods, government and education, and many others. Graduates most often fill positions as Computer Aided Design (CAD) Technicians and Drafters, Design Drafters, Facilities Management Technicians, Mechanical or Architectural Drafters, Engineering Technical Assistants, and Product Designers. The Design Technology curriculum stresses technical rigor to allow the graduate to keep abreast of emerging technologies and applications in the field. The ultimate goal is to prepare the graduate to effectively compete and advance professionally in the engineering technology and design disciplines.

I look forward to meeting and assisting you with your educational goals as you advance your college education in preparation for a rewarding technical career. Please contact me should you wish further information about the School of Technology or the Design Technology program.

Ivy Tech Community College - Bloomington

Admissions:

888-IVY-LINE

(888-489-5463)

www.ivytech.edu

Design Technology Curriculum and Course Descriptions

Curriculum for Design Technology varies based on the degree or certificate and is subject to change.

Go to www.ivytech.edu and click on **Academics** to find recommended course curriculum and course descriptions.



SCHOOL OF TECHNOLOGY

DESIGN TECHNOLOGY

IVY TECH COMMUNITY COLLEGE
BLOOMINGTON

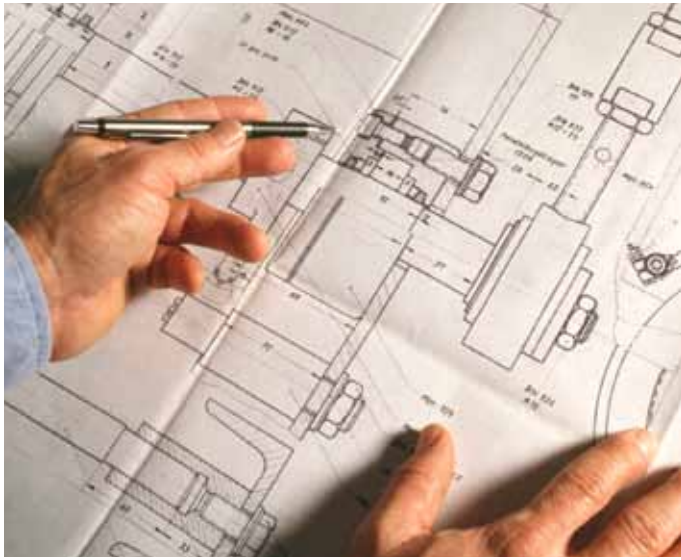


Ivy Tech Community College
200 Daniels Way
Bloomington, IN 47404

888-IVY-LINE
(888-489-5463)

www.ivytech.edu





Overview

The Design Technology program prepares students for challenging professions in the design disciplines. In conjunction with their academic advisor, students can select elective courses from many areas to focus their program of study such as, Mechanical Design, Architectural Design, Computer Aided Design/ Computer Aided Manufacturing (CAD/CAM), Biomechanics and Quality. Students in the Design Technology program have access to the most current hardware and software used in the disciplines.

Lab facilities are equipped with high capacity workstations and the latest in design and modeling software including AutoCAD, SolidWorks, and SolidCAM.

Overall program emphasis is on technical rigor and foundation development. Graduates have the skills and knowledge required to respond to future employment challenges or continue their education at other colleges or universities.

Accreditation



The Design Technology program is accredited by The Association of Technology, Management, and Applied Engineering (ATMAE).

Design Technology Degrees

ASSOCIATE OF APPLIED SCIENCE (AAS) DEGREE

Two-year Associate of Applied Science degree programs prepare students for careers, career changes and career advancement. AAS programs may also prepare students for transfer to four-year institutions. The program content, which is approximately 30 percent general education, provides depth and breadth in conceptual and professional/technical skills. Professional/technical courses equip students with the skills to obtain employment and to advance in the workforce.

Elective Focus Areas

- Architecture
- Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) CAD/CAM
- Mechanical Technology
- Biomechanics
- Quality

Elective Focus Areas

Architecture

This focus area provides students with the skills to work in the areas of architectural drafting, detailing and presentation, simple structural design, planning, estimating, inspection, materials testing, and sales. The curriculum is not intended to prepare students for registration as professional architects. Emphasis is on fundamentals of architectural design, architectural history, basic engineering principles, residential and commercial construction drawings, construction materials and their applications.

Computer Aided Design and Computer Aided Manufacturing (CAD/CAM)

The CAD/CAM focus area teaches students to design and document a product as well as to control the automated manufacturing process. The interface between

CAD and CAM software tools and processes is explored in depth. Students will be prepared for entry level design positions utilizing computer-aided design and manufacturing software and systems. Students will learn 3D parametric solid part modeling. Emphasis is also placed on the generation of tool path data for control of sophisticated Computer Numerically Controlled (CNC) machine tools. Instruction includes both manual programming methods and leveraged techniques using modern CAM software. Students will program and operate a 3-axis vertical CNC machining center as well as a CNC turning center.

Mechanical Technology

This focus area prepares students to begin careers in engineering design support. Areas of study include design and manufacturing documentation, 3D parametric solid modeling, kinematic analysis, and manufacturing processes. Students will learn wireframe, surface, solid and parametric solid 3D modeling, as well as industrial graphics standards.

Biomechanics

This focus area prepares students for entry level positions in the medical device and pharmaceutical companies, universities, hospitals and government agencies. Graduates typically work with teams of physicians, scientists, and engineers to monitor, restore, and improve the function of the human body. Graduates will use 3D parametric solid modeling, and kinematic analysis to develop computer models that will allow doctors to interpret results of medical tests, and make better diagnostic decision, or help design artificial organs, joints, blood vessels, or dental implants.

Quality

This elective focus area prepares students for positions that support quality engineers and supervisors, which analyzes and solves quality problems, analyzes quality costs and other quality data, and applies fundamental statistical methods for process control. Students will use precision measurement and test equipment (M&TE) tools for various tasks and how to assess tool accuracy and precision and understand the concept of standards traceability for M&TE.