

TOOL AND DIE DESIGNER

precise

good with numbers

skilled

quality conscious

Tool and Die Designer

Associate Degree: 10-617-1

Campus: West Bend

Description

Moraine Park's Tool and Die Designer program provides students with the high-level manufacturing skills required in Wisconsin's evolving machine tool industry for the national and international customers it serves. Critical to the manufacturing workforce, tool and die designers design machine tools, parts, molds and stamping dies with the latest CADD (computer-aided design and drafting) software. While coursework emphasizes the computerized design aspect of tool and die making, students have combined classroom and shop instruction to experience hands-on machine operations to understand how to select appropriate materials and how their designs are applied on the shop floor. Students in the last semester have the opportunity to participate in an internship.

Tool and die designers need strong spatial aptitude, enjoy precision work and an interest in machines and mechanical processes.

Graduates are prepared to immediately enter the industry as designers working on new tooling projects. In addition, they can gain up to a full-year credit toward an optional tool and die design apprenticeship. Employers are looking for individuals who have the strong skill and knowledge base provided by this program.

For information on how **program credits transfer** to a four-year college, please visit us at www.morainepark.edu/academics/transfer.

Program Outcomes

- Design jigs and fixtures.
- Design mold dies.
- Design stamping dies.
- Develop detailed working drawings.
- Generate internal and external reports.
- Provide computer-aided design (CAD) geometry for conversion to numerical control machine language.
- Interpret part drawings.

Career Opportunities

- Tool and Die Designer/Apprentice
- Tool Designer/Apprentice
- Die Designer/Apprentice
- Mold Designer/Apprentice

Advancement opportunities with additional work experience or education:

- Journeyperson Tool and Die Designer
- Journeyperson Tool Designer
- Journeyperson Die Designer
- Journeyperson Mold Designer

Salary Range for Recent Graduates

\$9.46 - \$18.00 Per Hour

Admission Process

- Submit the college admission application.
- Submit the \$30 one-time fee.
- Submit high school/other college transcripts.
- Take the college placement assessment (ACCUPLACER, ACT or other).
- Meet with an admissions specialist.
- Check with Admissions if any additional steps are required.

Tool and Die Designer

2007-2008 Curriculum

Course Number	Course Title	Credits
Technical Studies Courses		
617-108	Orthographic Projection Concepts	3
617-114	CADD (Computer-Aided Design and Drafting), SolidWorks	3
617-115	Jig and Fixture Design	5
617-120	Die Making Processes	3
617-123	Advanced SolidWorks Assembly Modeling	3
617-125	Blanking and Compound Die Design	3
617-126	Progressive Bending and Draw Die Design	3
617-130	Mold Making Processes	3
617-135	Two- and Three-Plate Mold Design	3
617-136	Side-Action and Hot-Runner Mold Design	3
617-141	Computer-Aided Manufacturing	2
617-145	Basic Machining Techniques	3
617-150	Material Selection	2
617-160	Geometric Dimensioning and Tolerancing	3
General Studies Courses		
801-195	Written Communication	3
801-197	Technical Reporting	3
804-113	College Technical Math 1A	3
804-114	College Technical Math 1B	2
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology (or)	3
809-199	Psychology of Human Relations	3
Students must choose an additional three credits of electives.		<u>3</u>
Total		68

A Tool and Die Designer Exit Assessment (997-150) is a graduation requirement for this program.

Institutional Requirements

Student Success (890-125) - take **first** semester
 Computer Literacy (103-159)/Advanced Standing/Proficiency Exam Available - take **first** semester
 Career Development (890-130) - take **last** semester

For course descriptions, please visit our Web site at www.morainepark.edu.