

Area of Study: Science and Engineering
Pathway: Engineering Technology: Design
Type: Certificate
Curriculum Code: ENT.DSN.CERT (C348B)

(Total Program Credits: 25)

The Engineering Technology Design certificate curriculum provides the student with the fundamental courses applicable for an entry-level position working with design professionals within engineering departments, plant maintenance, production departments and technical sales and support. Designed to jump-start an education in engineering technology with first discussions on the concepts of Lean principles in the design process and knowledge in working with the various measurement devices used in determining quality assurance of prototypes and finished goods. Contains coursework within the Engineering Technology AAS degree, a degree that gives graduates the education needed to fill technical positions in product design and development and transfers to four-year technology-related programs, including (but not limited to) the Illinois Institute of Technology, Illinois State University, Northern Illinois University and Purdue University/Calumet. These four-year programs further prepare you to move into leadership roles, such as industrial supervision, machine and tool designer, technical buyers, production expeditors and cost estimators.

PROGRAM LEARNING OUTCOMES:

At the successful completion of the Engineering Technology/Design Certificate, the graduate will be able to:

- measure product using inches and metric system of measurement;
- use electrical wiring diagrams and symbols to design a product;
- demonstrate safety practices in the design process;
- analyze a piece-part drawing and make an appropriate listing of operations to build the product; and
- present as part of a design team the ethics that should be practiced in designing a product.

Placement Measures MAT, RHT, and COL sequence placement will be determined by an Academic Advisor.

Contact your Academic Advisor or Transfer Specialist (if transferring), before registering for courses.

Developmental education courses do not transfer. They assist students in the path towards college credit.

Program Map for Full-Time Students

Semester One: Fall	Category	Stackable Certificate	Stackable Degree	Next Steps
ENT 104 ◊ Electricity Basic Fundamental (3)	<i>Required</i>			Meet with your Academic Advisor to create an academic plan.
ENT 110 ◊ Engineering Design Graphics/CAD (4)	<i>Required</i>			
ENT 111 ◊ Metrology with Geometric Dimensioning and Tolerancing (3)	<i>Required</i>			Explore stackable certificate(s)/degree(s)
ENT 252 ◊# Introduction to Mechanical AutoCAD (3)	<i>Required</i>			

13 Credit hours

Semester Two: Spring	Category	Stackable Certificate	Stackable Degree	Next Steps
ENT 115 ◊ Fluid Power (3)	<i>Required</i>			Meet with your Academic Advisor to finalize your academic plan for graduation and register for stackable certificate/degree (option). Submit graduation petition by deadline (check for the specific date in catalog or syllabus.)
ENT 232 ◊# Descriptive Geometry (3)	<i>Required</i>			
ENT 260 ◊# Jig & Fixture Design (3)	<i>Required</i>			
ENT 255 ◊# Autodesk Inventor Design & Rendering (3) OR ENT 280 ◊# Solidworks Design & Rendering (3)	<i>Required</i>			

12 Credit hours

See ENT course descriptions (p. **Error! Bookmark not defined.**).

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