

CADD/CAM/ PRE-ENGINEERING



This program teaches the basic skills and concepts for design, manufacturing, and decision making related to engineering processes. Some of the skills covered are basic drafting conventions and techniques, 3D parametric modeling, and a study of materials and processes for modern manufacturing, material science, and testing. If college level work is attained, student may earn up to 10 LCC credits.

Program Location:

LCC West Campus

Session Offered: AM

Average Lecture Days/Week: 2-3 days

Average Lab Days/Week: 2-3 days

Homework: Weekly

Required reading:

College level textbooks

Less than 25 pages/week

LCC Credits Available: 10

(If college level work is attained)

Student learning outcomes include but are not limited to:

- Identify and demonstrate proper Orthographic Projection
- Freehand sketching, primary auxiliary views and dimensioning
- Identify and demonstrate appropriate section views
- Identify and demonstrate appropriate use of screws, fasteners and springs
- Identify and demonstrate assembly drawings
- Drafting standards.
- 3-D CAD and drafting practices
- Check parts for fit and function
- Interpret depth, height, and roundness
- Measurement

HIGH SCHOOL/COLLEGE CREDIT

The primary focus of the Eaton Intermediate School District Career Preparation Center is to enhance a student's high school curriculum by providing an opportunity to learn a technical trade and/or to obtain a head start on a post-secondary education.

All students completing an Eaton Intermediate School District's Career Center program at Lansing Community College **have the opportunity** to earn either direct or articulated college credit while completing their high school program if specific criteria are met.

LCC credit is awarded to a student who: a) completes the high school career and technical education course with a minimum of a "C" average; b) meets the performance objectives for a specific Lansing Community College course; and, c) passes the college course final examinations, if one is required. These credits are shown as numerical grades on the student's LCC transcript. Transcripts may be requested through Lansing Community College Enrollment Services Department by August following course completion.

The courses listed below show the possible LCC college credits that may be available to high school students taking an EISD Career Preparation Program.

CADD/CAM/PRE-ENGINEERING

METD 100 Basic Mechanical Drafting

3 LCC Credits

This course teaches the fundamental concepts of drafting and design, using sketches and manual drafting skills. The student will learn the basics of orthographic projection, lettering, sketching, dimensioning techniques, and much more.

METD 110 Mechanical CAD Drafting I

4 LCC Credits

This is an introductory course in mechanical drafting and computer aided drafting using AutoCAD software. Instruction includes orthographic projection, auxiliary views, secondary auxiliary view projections, sections, dimensioning techniques, and printing. Students will complete a series of drawings on the computer to demonstrate understanding of the concepts presented.

METM 100 Manufacturing Processes

3 LCC Credits

This course provides students with a comprehensive study of the materials, concepts, and processes used in modern manufacturing which is augmented by field trips to local manufacturing plants. This course is designed for those who are pursuing careers in manufacturing design, engineering, and supervision.