

CAD & Design Technology

***Completion of certain courses within Drafting/CAD may allow students to earn postsecondary credits at Mid Michigan College and/or Central Michigan University. See instructor for further information.**

Courses Offered	9	10	11	12
Introductory Drafting & CAD	•	•	•	•
Engineering CAD I		•	•	•
Engineering CAD II			•	•
Architectural Drafting I		•	•	•
Architectural Drafting II			•	•
Interior Drafting & Design I		•	•	•
Interior Drafting & Design II			•	•
CAD & Design Tech I (CCRESA)			•	•
CAD & Design Tech II (CCRESA)				•

Architectural Drafting I

Grades 10, 11,12

3 Trimesters | 1.5 credits

Prerequisite: Introductory Drafting recommended but not required or written teacher approval.

Architectural Drafting is a one-year course designed for the individual interested in residential house construction and design. This course will provide the students the opportunity to prepare a set of presentation drawings using traditional drawing techniques. The student will then complete a full set of working drawings using AutoCAD software.

Architectural Drafting II

Grades 11,12

3 Trimesters | 1.5 credits

Prerequisite: Architectural Drafting I

This course is designed for the student who is interested in careers related to architecture, construction, and interior design. College bound students pursuing a career in those areas should take this class using various CAD programs. Students will be introduced to architectural presentation drawings and photo-realistic renderings using CAD and 3D parametric solid modeling programs. Students will also be introduced to model construction of planned buildings.

Engineering CAD I

Grades 10, 11,12

3 Trimesters | 1.5 credits

Prerequisite: Introductory Drafting & CAD

This class is designed to help prepare a student for a career in CAD or engineering. Using CAD software, students will be introduced to engineering drawing & design fundamentals, as well as blueprint reading and industrial related math. Schools of engineering rely on the high schools to give students an introduction to this important area of study. Areas covered will include advanced detailing and dimensioning, geometric dimensioning and tolerancing, auxiliary views, revolutions, threads and fasteners, detail/assembly drawings, developments, cams & gears, welding drafting and an introduction to 3D CAD.

Engineering CAD II

Grades 11 ,12

3 Trimesters | 1.5 credits

Prerequisite: Engineering CAD I or written Teacher approval

This course is a continuation of Engineering CAD I designed for the student who is serious about a career in CAD, engineering, manufacturing, product design, or other related CAD design careers. This course is designed to introduce the student to advanced CAD techniques using various CAD software programs. Students will focus on completing 3D assembly and detail drawings using parametric solid modeling programs such as SolidWorks. Students will also be introduced to solid model presentations, rendering and animation techniques. Students will also have the opportunity to design and print designs using the 3D rapid prototype printer.

Interior Drafting & Design I

Grades 10, 11,12

2 Trimesters | 1 credit

Prerequisite: Introductory Drafting is recommended but not required

This course is designed to give the seriously interested interior design student skills in the interior design profession. Many students have chosen a career goal of interior design: this course gives background in drafting skills to help that student achieve higher levels in his/her chosen interior areas. Students will learn to use drafting equipment, draft and design floor plans, wall and room elevations, perspective room illustrations, design decorating schemes and develop presentation packages. Students will also be introduced to Computer-aided drafting (CAD) techniques using AutoCAD as they apply to interior design.

Interior Drafting & Design II

Grades 10, 11,12

3 Trimesters | 1.5 credits

Prerequisite: Interior Drafting and Design I or written Teacher approval

This course is designed to give the seriously interested interior design student skills in the interior design profession. All areas of instruction lead to a college bound career and portfolio in Interior Design. Study focuses on advanced elements and principles of design, advanced spatial planning of furniture and floor plan arrangements, color theory, surface materials presentation boards and portfolio building. This course also introduces the student to advanced CAD techniques using AutoDesk Revit and SketchUp software in the creation of interior drawings and presentations.

Introductory Drafting & CAD

Grades 9, 10, 11 ,12

2 Trimesters | 1 credit

Introductory Drafting is a two-trimester class that provides each student with the fundamentals of drafting and prepares them for future courses in the CAD & Design curriculum. It is also a recommended class for other technology programs, engineering bound students and various other related career opportunities. The first trimester of this class will cover care and use of drafting equipment, sketching skills, lettering, single views, multi-view projection, dimensioning, geometric drafting, pictorial drafting and floor plan development. The second trimester students will learn to use AutoCAD to complete single views, multi-views, sections, and architectural floor plans with elevations.