

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Three Dimensional CAD for the Trades

Submitted By: Travis Maniekee and Tom Baldwin

Semester Course Prefix and Number: DRFT2246

Approval Date:

Old Quarter Course Prefix and Number: None

Revision Date:

Number of Credits: 3

Number of Lecture Credits: 3

Semester(s) Offered: Fall

Number of Lab Credits: 0

Number of Lab Hours: 0

Class Size: 24

Number of Studio/Demonstration/Internship Credits: 0

Negotiated by AASC on: (date)

Course Purpose Code:

- 0 - Developmental Courses
1 - Non-transferable
X 2 - Technical course related to career programs
3 - College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
4 - Other college course not considered a part of MNTC (e.g. computer science, health, physical education)
5 - Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.
9 - Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:

This course covers the basic areas of Computer Aided Design using SolidWorks three-dimensional design software. Students will design and draw components and assemblies of mechanical and industrial products in animation. Students will also use this program to create detailed blueprints of the components and assemblies designed in this class. Three dimensional CAD design is becoming widely used in the industrial trades.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): Concurrent enrolment in Weld 2242 Advanced Blueprint Reading or with permission of Instructor.

Career Programs and Transfer Majors Accessing this Course:

None

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:

(Notes: No more than two goals may be met by any one course. Curriculum Committee review and the Chief Academic Officer's approval are required.)

- 0. X None
1. Communications
2. Critical Thinking
3. Natural Sciences
4. Mathematical/Logical Reasoning
6. The Humanities and Fine Arts
7. Human Diversity
8. Global Perspectives
9. Ethical and Civic Responsibility
10. People and the Environment

5. \_\_\_\_\_ History and the Social and Behavioral Sciences

**Learning Outcomes:** (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

Students will:

- Learn to design parts in three dimensional CAD;
- Create three dimensional assemblies;
- Create detailed drawings/blueprints of parts and assemblies;
- Gain perspective on conceptual design and fabrication.

**Student Assessment Methods:**

By rubric, observation, assignments and projects.

**Use of Instructional Technology:** (includes software, interactive video and other instructional technologies):

SolidWorks Three dimensional CAD Design software, computers, and printers.

**Additional Special Information:** (special fees, directives on hazardous materials, etc.)

None

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.)

**None**

**Course Outline Revision History:**

**None**

**Approvals:**

Body	Representative Signatures	Date
Curriculum Committee		
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

**Distribution:** Original – Instructional Services  
**Copies:** Transfer Specialist, Originating Faculty Member, Records  
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