Moberly Area Community College
Common Syllabus

AMT211 Computer Aided Design II
Current Term

Instructor:
Office number:
Office hours:
Response Time:  I typically respond to student emails within 24 hours, Monday through Friday.
Contact information:
Classroom number:
Class days and time:

Catalog Description: AMT211 Computer-Aided Design II (2-2-3)
A continuation of computerized drafting using CAD software. The course includes advanced features of software and an introduction to 3D drawings. Students will have extensive hands-on instruction using microcomputers, printers, plotters and CAD software.

Prerequisite/Co-requisite:
AMT112 Computer-Aided Design I

Text(s):
Tickoo, Solidworks 2022 for Designers, 20th Edition

Purpose of Course:
This course will build on knowledge gained in CAD I. The student will study advanced CAD capabilities.

Course Objectives:
Upon successful completion of this course, students will be able to:
• Control the screen environment through workspaces
• Gain knowledge of viewing 3D objects
• Create and modify special geometry and create drawing objects in different planes
• Understand drawing accurately in 3D space and modify user coordinate systems and create new coordinate systems
• Create solid objects and composite solid models through Boolean operations
• Demonstrate the use of 3D modeling aids and the system variables related to 3D objects
• Identify and modify sub-object entities
• Demonstrate the use of 3D grips
• Align 3D primitives into composite models and demonstrate slicing and sectioning of solid models
• Create 3D objects through hedge and face editing and from 2D surfaces
• Retrieve information from 3D solid models and understand various 3D model file types
• Demonstrate the various display options available for presenting 3D models
• Obtain and apply texture-mapped materials to 3D objects
• Create the various lighting elements for illuminating 3D model and photorealistic rendered images
• Create cameras for various purposes utilizing the controls available
• Work with 2D and 3D motion paths and create photorealistic rendered images that contain movement and record them as animation

**Course Content:**
Introduction: Getting Started
Chapter 1: AutoCAD 2D Isometric Drawings
Chapter 2: User Coordinate System and the Z-Axis
Chapter 3: 3D Wireframe Modeling
Chapter 4: UCS, Viewports and Wireframe Modeling
Chapter 5: 3D Surface Modeling
Chapter 6: Solid Modeling - Constructive Solid Geometry
Chapter 7: Regions, Extrude and Solid Modeling
Chapter 8: Multiview Drawings from 3D Models
Chapter 9: Symmetrical Features in Designs
Chapter 10: Advanced Modeling Tools & Techniques
Chapter 11: Conceptual Design Tools & Techniques
Chapter 12: Introduction to Photorealistic Rendering

**Connection with Career and Technical Education (CTE) Outcome Statement:**
In compliance with MACC’s CTE outcomes, the student who successfully completes this course will be able to:
• Students will think critically while systematically assessing problems, identifying issues and implementing solutions.
  ° Create pictorial and perspective drawings from 2D multiview drawings.
  ° Create 3D solid models from 2D multiview drawings.
  ° Make modifications to existing 3D solid models in order to demonstrate proper modification procedures.
  ° Develop a complete set of working drawings necessary to properly describe an object or design.
  ° Recognize and apply universal signs and symbols utilized in the production of technical drawings.
ASSESSMENT OF STUDENT LEARNING

Grade Scale:
- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 59 and below

Assessment:
(State the way learning outcomes will be measured. They may be measured through, but not limited to, the following: objective and essay questions, papers, quizzes, oral presentations, class participation, small group work, and/or projects.)

Description of Major Assignment(s)/Project(s):

INSTRUCTOR POLICIES:

Tardiness:
per instructor’s policy

Make-up and late work:
per instructor’s policy

Extra-credit work:
per instructor’s policy

Schedule of Student Assignments/Activities:
(Instructors will identify a Student Assignment/Activities schedule. Instructors have the prerogative to construct the schedule by class periods, weeks, or an overview of topics to be covered.)

Other:
List any other instructor policies.

COLLEGE POLICIES

Attendance:
Students are expected to attend all class sessions for which they are enrolled. The College reserves the right to drop or withdraw students from courses due to lack of attendance.

Students need to be aware that dropping/being dropped from a course and their last date of attendance in the course may impact their financial aid.
MACC faculty are required to track attendance and report lack of attendance. An instructor must complete the appropriate steps to drop a student within one week following the student’s violation of the attendance policy. Additionally, a student’s attendance rate will be calculated based upon the first day the academic session begins (not the student’s date of enrollment in the course). If a student does not attend a course as defined below, the student will be dropped as “Never Attended.”

**Term Length Drop Calculations**

**16-week:** Any student who misses two (2) consecutive weeks of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

**8-week:** Any student who misses one (1) consecutive week of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

**4-week:** Any student who misses two (2) consecutive days of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

**Intersession:** Any student who misses one (1) day of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Acceptable justification may include, but is not limited to, family emergencies, illness or injury, college-approved co-curricular and extra-curricular activities, and religious holidays.

**Definition of Course Attendance**

<table>
<thead>
<tr>
<th>In Seat Course</th>
<th>Physically attending scheduled, face-to-face, class meetings</th>
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<tbody>
<tr>
<td>Virtual Course</td>
<td>Being present, via appropriate platform, for scheduled class meetings/activities</td>
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**Hybrid Course**

Physically attending scheduled, face-to-face, class meetings and active participation in the online portion of the course which may include any or all of the following:

- Completion of quizzes or exams during class meetings and online
- Submission of assignments during class meetings and online
- Participation in discussions during class meetings and online

**Online Course**

Active participation in an online course includes the following:

- Completion of quizzes or exams
- Submission of assignments
- Participation in threaded discussions

Simply logging into the Learning Management System (Canvas) and/or accessing the course and course related material does not constitute active participation for the online component of hybrid courses or for online courses. (*Policy Handbook, G.040*)

**Academic Dishonesty:**

MACC board policy is as follows: “Academic dishonesty by students damages institutional credibility and unfairly jeopardizes honest students; therefore, it will not be tolerated in any form.” Forms of academic dishonesty include but are not limited to the following: violations of copyright law, plagiarism, fabrication, cheating, collusion, and other academic misconduct. Incidents of dishonesty regarding assignments, examinations, classroom/laboratory activities, and/or the submission of misleading or false information to the College will be treated seriously. The procedure for handling academic dishonesty is outlined in the Student Handbook (*Policy Handbook G.020*). In cases of alleged academic dishonesty, the burden of proof is on the student, not on the instructor.

**Recording Class Sessions Using Zoom:**

The privacy of students is a priority in live or virtual meetings. Recordings of lectures or class meetings that share student information constitute an educational record and are protected under FERPA. Instructors may share recordings within the course section where they were originally recorded and only with the students enrolled in the section. Documented consent from each student identified in the recording is required to distribute outside of the course where it was originally recorded, or student identity must be redacted.

**Student Email:**

MACC Mail is the official student email system at MACC. Official college communication is sent via this email system. Students are responsible for checking their MACC Mail account regularly. Students may also receive notifications and reminders from MACC through the online learning platform. However, students should remain aware that the online learning platform messaging system and MACC Mail (student email) system are two separate systems.
**ADA Statement:**
Students who have disabilities that qualify under the Americans with Disabilities Act may register for assistance through the Office of Access and ADA Services. Students are invited to contact the Access Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. For more information, please call either the Moberly office at (660) 263-4100 Ext. 11240 or the Columbia office at (573) 234-1067 Ext. 12120, or visit our web page at [http://www.macc.edu/index.php/services/access-office](http://www.macc.edu/index.php/services/access-office).

**Title IX Statement:**
MACC maintains a strict policy prohibiting sexual misconduct in any form, including sexual harassment, sexual discrimination, and sexual violence. All MACC employees, including faculty members, are considered mandated reporters of sexual misconduct and as such are expected to contact the Title IX Coordinator when they become aware, in conversation or in writing, of an incident of sexual misconduct. For more information on this policy or to learn about support resources, please see [http://www.macc.edu/sexual-misconduct-policy](http://www.macc.edu/sexual-misconduct-policy) or contact Cheryl Lybarger MACC’s Title IX Coordinator, at 660-263-4110, Ext. 11369 or CherylLybarger@macc.edu.