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Course Information

Course Title:	Introduction to Engineering Design with Inventor
Course Number:	MET 1201
Credit Hours:	2
Lab Hours:	
Prerequisite(s):	MAT 101
Course Description:	An introductory course in design skills and tools utilizing 3D parametric tools (Inventor) in the creation of design projects. Development of skills in Parametric Part creation, assembly modeling, and documenation of designs; additional topics in sketching, design for production, presentations, and marketing.
Required Text:	none Optional Textbook: Parametric Modeling with Inventor 20xx - match the book version to the current software version
Required Materials:	Autodesk Inventor Professional software - this is a free download for students, you can get the software at Autodesk
Technical Requirements:	See the page "Computer Requirements and Tools Needed for this Course" located in the First Day Folder for system requirements for this course, as well as additional supplies and tools requires. For additional information go to the Technical Help Page under **Resources** tab.

Faculty Information

Instructor:	Tom Singer
Department:	Engineering
Course Email:	Please use ANGEL e-mail.
Emergency Email:	thomas.singer@sinclair.edu
Phone:	512-2838
Office Location:	Building 11, Room 429
Office Hours (campus):	By appointment
Office Hours (online):	By appointment

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Course Outcomes

General Education Outcomes:

- Oral Communication Competency
  - Compose and deliver oral messages appropriate to an intended audience
- Critical Thinking/Problem Solving Competency
  - Articulate ideas or problems
  - Use appropriate problem solving methods
  - Organize observable data into useful formats
  - Construct measures to evaluate appropriateness, truthfulness, usefulness or validity of an idea or argument
- Information Literacy Competency
  - Organize information systematically and appropriately
  - Analyze information
  - Identify appropriate investigative methods
- Values/Citizenship/Community Competency
  - Take responsibility for actions
  - Display behavior consistent with the ethical standards within a discipline or profession
- Computer Literacy Competency
  - Utilize operating system software and data management skills

Course Outcomes:

- Apply the design process in the development of a problem solution or product design.
- Creating part assembly and detail drawings to communicate effectively.
- Apply time management skills and teaming to complete projects.
- Use proper judgment and apply ethical design practices on projects.

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Course Requirements

Outline:

WEEK	TOPICS	CHAPTERS
1	Design Theory	None - there is no required textbook for this course
2	Details, Details	None
3	Sketching - Ortho, Isometric - Puzzle Cube	None
4	Inventor Basics - Creating Parts	None

5	Creating Basic Assemblies - Creating Drawing Sheet Sets	None
6	Drawing Features - Work Features	None
7	Section and Auxiliary Views	None
8	Arbor Press Assembly Project - Part 1	None
9	Arbor Press Assembly Project - Part 2	None
10	Making Assemblies Move - Arbor Press Movements	None
11	Finite Elements Analysis Basics	None
12	Rendering Images - Inventor Studio Animation	None
13	Reverse Engineering	None
14	Final Design Project - Candy Dispenser	None
15	Final Design Project - Candy Dispenser (continued)	None
16	Final Design Project - Candy Dispenser (continued) - Due this week	None

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Grading Information

Grading Policy:

ASSIGNMENT	POINTS
Homework Assignments	220
Final Design Project	100
Discussion Forum	5
Total Points	325

GRADING SCALE	PERCENTAGE
A	92 - 100%
B	82 - 91%
C	72 - 81%
D	62 - 71%
F	0 - 61%

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Course Policies

Attendance/Participation Policy:

Online courses are considered to begin on the first day of the semester. In order to show attendance/participation in this course, students are expected to login to the course every week and complete each week's activities by Sunday, 11:59 pm ET.

Other Policies:

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Testing Information

It is very important that every Distance Learning student plan for the testing required in each of his or her Distance Learning courses. How tests are given will vary by course and will vary depending on whether the student lives within a 60-mile radius from campus or beyond a 60-mile radius from campus.

Many courses do not require on-campus, or "proctored" testing, while others do. It is the responsibility of the student to make the appropriate arrangements for completing the testing as required for each of his or her courses. Click each link below to obtain information about testing for Distance Learning courses.

Distance Learning Testing Overview

Distance Learning Testing Within or Beyond a 60-Mile Radius

Testing Center Information

PDF file about Proctor Information

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Sinclair Policies

Sinclair Academic Policies:
Click the link below to view policies such as dropping a course, withdrawing from college, late registrations, change of schedule, administrative withdrawal, grades, student behavior guidelines, safety and security, academic and other counseling. Understanding these policies is the responsibility of every student.

Important Sinclair Policies

Sinclair Semester Dates:
Click the link below to view important semester dates such as registration deadlines, payment deadlines, start and end dates for the semester as well as the last day to withdraw with a refund and the last day that withdrawal is allowed.

Sinclair Semester Dates

Sinclair Honor Code and Academic Integrity Policy:

Sinclair Honor Code and Academic Integrity Policy

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