

9-2013

DDSN 114.02: Introduction to Computer Aided Design

Creg Dieziger

University of Montana - Missoula, cdieziger@gmail.com

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Recommended Citation

Dieziger, Creg, "DDSN 114.02: Introduction to Computer Aided Design" (2013). *Syllabi*. 244.
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The University Of Montana - Missoula
College Of Technology
Department of Applied Computing and Electronics
Course Syllabus

DDSN114.02-73814-Fall2013: Introduction to Computer Aided Design

Term: Autumn 2013

Credits: 3

Prerequisites: CAPP 120 or Demonstrated Computing Experience

Classroom Meetings: 5:10 pm to 6:30pm Tuesdays and Thursday

Room: HB04

Faculty Contact: Creg Dieziger - cdieziger@gmail.com

Course Description:

An introduction to computer aided design and drafting software for production of drawings and plans for architecture and engineering systems. Fundamentals of two-dimensional drafting and drawing management for professional design.

Course Outcomes:

Upon completion of this course, the student will:

1. Apply basic CAD commands to draw and edit 2D objects
2. Draw objects to various scales
3. Print CAD drawings to various scales
4. Place and manipulate CAD annotations and dimensions
5. Manipulate CAD symbols

Required Materials:

Introduction to AutoCAD 2013: A Modern Perspective; Paul F. Richard, Jim Fitzgerald, and Autodesk; Pearson 2013; ISBN-10: 0132954753 ISBN-13: 9780132954754

USB Storage Media (Pen Drive, Thumb Drive, Jump Drive) 4 GB or larger

Evaluation Procedures:

Grade Distribution:

Homework	20%
Labs	25%
Attendance	5%
Quizzes	25%
Final Exam	<u>25%</u>
	100%

<u>Letter</u>	<u>Average</u>
A	90+
B	80+
C	70+
D	60+
F	60-

Homework / Labs:

Homework and Labs; will be assigned for each Learning Unit from the book and/or through PDF handouts. Homework and Labs is evaluated on accuracy, neatness, thoroughness and timely submission. Homework and Labs will be completed on time. The due date will be assigned at the time of they are assigned. Reading is assigned for each Learning Unit from the textbook. Reading is to be completed prior to class discussions on that Learning Unit.

Quizzes:

There will be short quizzes given periodically during the semester and grade under the same criteria as homework. Quizzes will cover anything and everything that has been covered to that point in the semester. No makeup quizzes will be given.

Final:

A two part comprehensive final exam is given at the end of the semester. One part written and the second part drawing based.

Extra Credit:

Most homework, labs, quizzes and the final will have extra credit available. Extra credit is applied to the final score as long as it does not exceed the maximum score.

Due Dates:

Failure to meet due dates will result in reduction of your score for your homework or lab. There will be 10 points removed from the final score for each day it is late.

If you miss a quiz there will be no makeup allowed unless arrangements have been made ahead of time.

The Finals must be taken and turned in on the set date to receive any credit.

Course Outline:

Learning Unit 1 – An Introduction to AutoCAD

- **Introduction to AutoCAD**, introduces you to fundamental CAD concepts and the AutoCAD interface.
- **Quick Start Tutorial**, allows you to hit the ground running so that you learn the basics necessary to start a new drawing, create and modify some objects, add annotation features, and print out your work. All topics are then explained in detail in the subsequent units.

Learning Unit 2 – Drafting Skills: Drawing with AutoCAD

- **Controlling the Drawing Display**, shows you how to move around in a drawing by panning and zooming. It also introduces some different display performance settings.
- **Basic Drawing Commands**, provides an overview of the basic drawing commands such as **LINE** and **CIRCLE** so you can create a simple drawing.
- **Drawing Tools and Drafting Settings**, explains the different drawing tools and settings available to help you create and modify your work.
- **Managing Object Properties**, shows how to set up and apply different layer systems and manage other object properties.

Learning Unit 3 – Understanding Editing Techniques: Basics Through Advanced

- **Basic Editing Techniques**, explains how to select groups of AutoCAD objects that can be modified as a single unit. Grips are introduced to teach you how to modify objects directly by simply selecting them in your drawing.
- **Advanced Editing Techniques**, introduces some of the more advanced modify commands that allow you to perform complex operations.

Learning Unit 4 – Working with Complex Objects

- **Drawing and Editing Complex Objects**, looks at creating and editing complex polyline-based objects with multiple line segments.
- **Pattern Fills and Hatching**, provides information about incorporating different predefined pattern fills and hatch patterns into your drawings to create filled areas.

Learning Unit 5 – Annotating Drawings

- **Adding Text**, shows the different ways to manage and create text in a drawing.
- **Working with Tables**, explains how to insert and modify different types of tables in a drawing, including those linked to Microsoft Excel spreadsheets and those extracted from object information in a drawing.
- **Dimensioning Drawings**, outlines the different dimensioning tools and shows how to manage their appearance using dimension styles.

Learning Unit 6 – Outputting Your Work

- **Managing Paper Space Layouts**, shows you step by step how to set up paper space layouts for plotting using industry standard techniques, including multiple layouts and multiple scaled viewports.

- **Plotting and Publishing**, provides an overview of the different plotting tools and settings, including how to batch plot a group of drawings using the **PUBLISH** command.

Final Project

Attendance Policy:

Attendance is 5% of your grade. Each day is worth a portion of 100 points. If you are late for class, you will be given partial credit for the day.

Academic Integrity:

Using the Web to research materials and concepts is an integral part of learning in the twenty-first century. Studying with other students is a productive method of learning. A certain amount of collaborating on concepts with other students and using resources found on the Internet in an assignment is recommended. Copy and paste is not acceptable. It is expected that each student will input his/her assignment into the computer, and each student must be able to explain any assignment turned in. Collaboration on exams is strictly forbidden.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by The University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at

<http://www.umt.edu/SA/VPSA/index.cfm/page/1321>.

Dropping and Adding Courses or Changing Sections, Grading or Credit Status:

University Policy for dropping courses or requesting grading/credit status changes can be found in the catalog: <http://www.umt.edu/catalog/acad/acadpolicy/default.html> Students should become familiar with all academic policies

Disability Accommodations:

Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please contact me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disability Services website at <http://www.umt.edu/dss/> or call 406.243.2243 (voice/text).