West Virginia University
Department of Civil and Environmental Engineering
Syllabus CE 210 (CRN 82039 & 82075) - Fall 2018

Course Name:	CE 210 - Introductory Computer Aided Design and Drafting for Civil Engineers
Credit Hours:	2 Credit Hours
Contact Hours:	Monday/Wednesday 1:00 PM - 2:50 PM for CRN 82075 3:00 PM - 4:50 PM for CRN 82039 50 minutes: Lecture Session & 1 hour: In-Class Exercises/Quizzes/Assignments
Instructor:	Dr. Fei Dai, Rm. 535, Engineering Sciences Building Email: fei.dai@mail.wvu.edu Phone: (304) 293-9940
Office Hours:	Tuesday: 10:00 AM – 12:00 PM, Other time by appointment
Textbook:	No textbook required
Course Description:	This course teaches students to the basic skills for civil engineering drawing drafting in Computer-Aided Design and Drafting software.
Prerequisites:	CE 201 or Instructor(s) Consent
Course Format:	Lecture/Demonstration/Hands on CADD work on computer. Course topics may include works of real field examples.
Recommended Sources:	Students may download a FREE student version of *Autodesk AutoCAD 2016* or later version for use during the school year. Students are also encouraged to check the Autodesk AutoCAD website (http://knowledge.autodesk.com/support/autocad/) for more learning information.
Classroom:	Room ESB-G78B for CRN 82075 (1:00 PM - 2:50 PM) Room ESB-G3 for CRN 82039 (3:00 PM - 4:50 PM)
Category:	Required

Expected Learning Outcomes:

C	Be able to create a design file and make appropriate configuration settings for a variety of civil and environmental engineering projects
C, G	Be able to accurately place and modify geometric elements - lines, arcs, circles, polygons, and blocks- representing the components of civil and environmental engineering projects
C, G	Be able to create, dimension, and plot a plot/plan for representation and expression of civil and infrastructure engineering designs

C, K Be able to draft design/construction drawings including architectural drawings and structural drawings for civil engineering projects

C, K Be able to create three-dimensional (3D) geometric components of building and infrastructure elements

C, K Gain proficiency in AutoCAD software

ABET Program Learning Outcome Explanation:

C An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

G Communicate effectively in oral, written, and electronic format

K An ability to use the techniques, skills, and modern engineering tools necessary for civil engineering practice

Brief Topic List:

Software User Interface
Coordinates, Units, Limits, and Board & Title
Creating, Editing, and Plotting
Dimensioning, Hatching, Blocks
Orthographic Projection and Drawing
Architectural drawings for Civil Projects
Structural drawings for Civil Projects
3D Modeling for Civil Projects

Couse	*Criteria*	*Percent of Grade*
Evaluation:	Class Participation and Attendance	5%
	Assignments	30%
	Quizzes/Exercises	10%
	Midterm	20%
	Final Exam	35%
	Total	*100%*

Grading	*Percentage*	*Grade*
Scale:	100 - 90	A
	89 - 80	B
	79 - 70	C
	69 - 60	D
	59- 0	F

Grading Policy: Late assignments may not be accepted except by prior arrangement with the instructor. Grade will depend on your assignments/exercises, class attendance, lab work participation, quizzes, midterm, and final exam.

Homework/ Exercise/ Quiz: Homework assignments will be given approximately every two weeks or sooner. Exercises and quizzes will be conducted during in-class/lab hours, which may be not announced ahead of time.

Academic Integrity/ Honesty Policy: West Virginia University expects that every member of its academic community shares the historic and traditional commitment to honesty, integrity, and the search for truth. Students should act to prevent opportunities for academic dishonesty to occur, and in such a manner to discourage any type of academic dishonesty. Academic dishonesty includes plagiarism; cheating and dishonest practices in connection with examinations, papers, and projects; and forgery, misrepresentation, and fraud. Complete policy statements and definitions on academic integrity/dishonesty can be accessed at WVU student website.

Attendance Policy: Attendance is required. Consistent with WVU guidelines, students absent from regularly scheduled examinations because of authorized University activities will have the

opportunity to take them at an alternate time. Make-up exams for absences due to any other reason will be at the discretion of the instructor.

Social Justice Statement: "West Virginia University is committed to social justice. Instructor(s) concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and nondiscrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise the instructor(s) and make appropriate arrangement with Disability Services by contacting them at Phone: (304) 293-6700.

Tentative Class Schedule

Week	Lecture	Date	Topics	Homework
1	1	8/15	Introduction	
	2	8/20	Software User Interface	
2	3	8/22	Coordinates, Units, and Limits	
	4	8/27	Scale, Board & Title, and Plotting	Out: HW1
3	5	8/29	Placing and Editing Geometric Elements	
	-	9/03	Labor Day Recess	
4	6	9/05	Placing and Editing Geometric Elements	Due: HW1
	7	9/10	Placing and Editing Geometric Elements	Out: HW2
5	8	9/12	Placing and Editing Tables and Text	
	9	9/17	Layer and Line Settings	Due: HW2
6	10	9/19	Hatching	
	11	9/24	Dimensioning	Out: HW3
7	12	9/26	Dimensioning	
	13	10/01	Blocks	Due: HW3
8	14	10/03	Review & Discussion	
	15	10/08	Midterm Exam	
9	16	10/10	Fundamentals of Engineering Drawing	
	17	10/15	Fundamentals of Engineering Drawing	
10	18	10/17	Fundamentals of Engineering Drawing	Out: HW4
	19	10/22	Architectural Drawing	
11	20	10/24	Architectural Drawing	Due: HW4
	21	10/29	Architectural Drawing	Out: HW5
12	22	10/31	Land Survey and Site Plan	
	23	11/05	Land Survey and Site Plan	Due: HW5
13	24	11/07	Introduction to 3D Modeling	Out: HW6
	25	11/12	3D Modeling for Civil Projects	
14	26	11/14	3D Modeling for Civil Projects	Due: HW6
	-	11/19	Fall Recess	
15	-	11/21	Fall Recess	
	27	11/26	3D Modeling for Civil Projects	
16	28	11/28	Review & Discussion	
	29	12/03	Final Exam Review & Discussion	
17	30	12/05	Final Exam Review & Discussion	

Note:

- Topics and dates are not binding and modifications are expected. Speed of coverage is subject to class feedback.
- Lab sessions include tutorials, in-class quizzes/exercises, and homework. In-class quizzes/exercises may or may not be announced in advance.
- Final exam date will be scheduled as per University guidelines.