

Bergen Community College
Division of Math, Science and Technology
Department of Industrial & Design Technology

Course Syllabus
DFT 209 Civil Engineering Methods

Semester and year:
Course Number:
Meeting Times and Locations:

Instructor:
Office Location:
Phone:
Office Hours:
Email Address:

COURSE DESCRIPTION:

DFT 209 Civil Engineering Methods builds on the skills obtained in Drafting I and Engineering Graphics I. This course will look at business applications of Computer Aided Drafting in the fields of Civil Engineering and Land Surveying. This course explores the preparation of Site Plans for Land development, Land Surveying and Civil Engineering documents used in construction. The course is designed to expose the student to the requirements and opportunities in Civil Engineering and Land Surveying.

2 lecture, 2 labs, 3 credits

Prerequisites: DFT-207, DFT-208

Co-requisites: None

STUDENT LEARNING OBJECTIVES:

As a result of meeting the requirements in this course, students will be able to:

Student performance on these objectives will be measured by:

1. Identify the fundamentals of Land Development including land surveying, zoning codes and requirements, plan preparation and required approvals.	Weekly assignments and exams.
2. Recognize the requirements of land surveying, techniques and equipment.	Weekly assignments and exams.
3. Develop basic skills needed to use AutoCAD in the Civil Engineering and Land Surveying industry.	CAD assignments, project drawings and exams.
4. Students will demonstrate advanced methods of scaling, measurement and accuracy using CAD software by producing printouts of the assignments.	CAD assignments, project drawings and exams.

COURSE CONTENT:

CHAPTER TOPIC

2	Zoning & site Plan Fundamentals
3	Schematic Plans & the Role of the Engineer
4	Surveying (boundary, topographical etc.)
6	Road & Parking Lot Design
7	Grading & Drainage
11	Underground Utilities (water, gas, electric)
12	Site features, walls, landscaping etc.
14	Cost Estimating
18	Construction (survey and procedures)

TEXTBOOK:

Land Development for Engineers, 2nd Edition T.R. Dion. Wiley Publishers

DRAWING REQUIREMENTS:

Drawings/assignments are due the class meeting after they are assigned. Drawings/assignments submitted after that date will be lowered one full letter grade per class meeting that they are late. Drawings will not be accepted after the final submission date listed in the calendar and will receive a failing grade after that last submission date.

STUDENT EVALUATION:

Your final grade will be calculated as follows:

CAD & Assignments	20%
Projects.	10%
Mid-Term Exam.	30%
Final Exam.	30%
Class Participation.	10%
	<u>100%</u>

SPECIAL NOTES:

A final grade cannot be assigned for the course until all drawings, projects and examinations for the course have been completed. Make-up examinations will be administered in accordance with the instructor's and division's policy.

ATTENDANCE POLICY:

Attendance will be taken twice during each class period. The first attendance for the lecture portion of the class will be at the beginning of each class. The second attendance, for the laboratory portion of the class will be taken at 11:30 a.m. for classes beginning in the morning, 5:15 p.m. for classes beginning early afternoon, and 9:45 p.m. for evening classes.

If a student is absent from the lecture portion of the class, it will be recorded as an absence for the entire class period. If a student is absent from the laboratory portion of the class, it will be recorded as an absence from that portion of the class only.

A letter grade will be deducted from the class participation portion of your final grade for each absence beyond three absences from either portion of a class period.

COURSE CALENDAR:

<u>Class Meeting</u>	<u>Date</u>	<u>Topic</u>	<u>Chapter</u>
1	_____	Introduction to Civil Engineering and Land Surveying	Review of Basic CAD Skills
2	_____	Development requirements, zoning codes, land use laws, environmental permitting	Chapter 2
3	_____	Preparation of schematic plans using base surveys	Chapter 3
4	_____	Grading and drainage & cut/fill	Chapter 7
5	_____	Roadway (plan, profile and cross section)	Chapter 6
6	_____	Other site plan elements: lighting, landscaping, turning	Chapter 12
7	_____	Underground utilities (water, gas, electric. Etc.)	Chapter 11
8	_____	Cost estimates & construction documents	Chapter 14
9	_____	Midterm exam 30%	-----
10	_____	Surveying: introduction and history	Chapter 4
11	_____	Mathematics, legal aspects & sub-division	Chapter 4
12	_____	Field measurements	-----
13	_____	Reduction of field measurements	-----
14	_____	Construction layout	Chapter 18
15	_____	Final exam 30%	-----

All BCC students enrolled in credit courses are entitled to a WebAdvisor account. With WebAdvisor, you may register online, check your schedule, room assignments, GPA, and find out what courses you need to take. To find out more about WebAdvisor or to sign up online, visit <http://go.bergen.edu>! While there, please make sure you give us your preferred email address. You'll find directions how to do this at <http://go.bergen.edu/email>.