



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Special Topics in Civil Drafting and Civil Engineering CAD/CADD

Course Prefix and Number - DFTG1493

Department - Engineering Design

Division - Technology & Business

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours # **4:3:3**

Equated Pay hours for course - $(3 + (3 * .5)) = 4.5$

Course Catalog Description - Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

Prerequisites/Co requisites - DFTG1405 & DFTG1409

List Lab/ Other Hours
Lab Hours 3
Clinical Hours
Practicum Hours
Other (list)

Prepared by Jo Ann Lurker

Date 10-20-11

Reviewed by department head Jo Ann Lurker

Date 10-20-11

Accuracy verified by Division Chair David Kucera

Date 10-28-11

Approved by Dean of Vocational Instruction or Vice President of Instruction Lac

Date 11-9-12



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

Map Symbols

Contours

Plats

Azimuths and Bearings

Curve Data

Survey Basics

Civil Terminology

Map Scales

Plans and Profile

Drainage

Range and Townships

Land Development

Easements

Structural Materials

Framed Beam Details Welded Connections

Beam Detailing

Engineering Drawings

Rebar Schedules

Basic Trigonometry Calculations

Fabrication Process

Seated Connections

Section Drawings

Concrete Foundations

Bills of Materials

Structural Wood

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
<p>Identify Map Scales; convert R/F scales and graphic scales Identify map symbols Layout traverses using bearings, deflection angles, distances and coordinates, Layout existing and gradeline contours Layout contours, create plan and profile drawings, curve data calculations. Identify and use legal land descriptions Using property deed (written description), to draw a plat using computer techniques Identify terms used in civil work. Compute land area by using the computer (CAD) Make detail drawings of structural steel members using typical bolted and welded connections Make drawings of structural framing plans, elevations, and sections to selected scales. Select the appropriate detailing tables in the AISC Manual for drawing and calculation purposes Identify weld symbols Identify structural steel shapes Convert inches into decimals of a foot, inches to fractions and English units to metrics Locate foundations and steel members using the Cartesian coordinate system Make concrete engineering drawings and detailed placement drawings Calculate reinforcing steel and concrete quantities Make structural drawing, on the computer, and plot to selected scales</p>	<p>A semester project will be assessed using the departmental rubric. Eighty percent of the students will earn a minimum of 70% of the points defined by the rubric.</p>

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

A text covering the technical material covered in this course. An example would be Civil Drafting Technology by Madsen, Shumaker, Madsen
A flash drive for archiving data files.

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Computer workstations, plotters/printers, data projection system and appropriate software

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

90% to 100%	= A
80% to 89%	= B
70% to 79%	= C
60% to 69%	= D
Below 60%	= F

The grade is based on the average of : written examinations, drawing projects and daily work as specified in the course syllabus.

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives

- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.