Wharton County Junior College

Administrative - Master Syllabus
COVER SHEET

***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 - - DFTG 1493
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

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

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 – DFTG 1405 & DFTG 1409 or ENGR 1304 for Construction Management Majors.

Prepared by Jo Ann Shimek ***Date*** 06/12/13

Reviewed by Department Head Jo Ann Shimek ***Date*** 06/12/13

Accuracy Verified by Division Chair David Kucera ***Date*** 09/18/13

Approved by Dean or Vice President of Instruction Amy LaPan ***Date*** 2-24-2014

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

Learning Outcomes **Upon successful completion of this course, students will:**	**Methods of Assessment**
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	Daily Drawings/Lab Work/Daily Quizzes Three to Four Major Exams or Drawings Civil Project Structural Project (All drawings evaluated in terms of accuracy of drawing views, use of line types, line quality, dimensioning accuracy and placement and drawing organization.)

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

Required: A text covering the technical material covered in this course. An example would be Civil Drafting Technology by Madsen, Shumaker, Madsen

A flash drive is required for archiving data files

Note book to store notes and drawings.

IV. Suggested Course Maximum - 20

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

Computer work stations, 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

Daily Drawings/Lab Work/Daily Quizzes to assure comprehension of drafting skills 40%
Three to Four Major Exams or Drawings covering individual topics 30%
Civil Project 15%
Structural Project 15%

Based on the above breakdown, grades will be awarded as prescribed by Wharton County Junior College Standards.

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

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.