

Administrative Master Syllabus

Course Information

Course Title	Electrical Drafting
Course Prefix, Num. and Title	DFTG2407: Electrical Drafting
Division	Technology and Business
Department	Engineering Design
Course Type	WECM Course
Course Catalog Description	A study of area lighting, control systems and power layouts, electrical and safety codes, load factors and distribution requirements.
Pre-Requisites	DFTG2319 and MATH1316
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours: Lab/Other Hours	4:3:3
Equated Pay Hours	4.5
Lab/Other Hours Breakdown: Lab Hours	3
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Division Chair:	David Kucera, Technology & Business Division Chair	08-01-2023

Additional Course Information

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

Drawing Conventions
Basic Electricity and Magnetism Concepts (AC & DC)
Common Electrical Equipment
Simple Connection Diagrams
One Line Diagrams
Introduction to the NEC
Basic Motor Controls
Sizing Conductors and Conduits
Riser Diagrams
Equipment Grounding and Lightening Protection
Circuit Protection Devices
Study of Classified Hazardous Areas

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

Create electrical details and diagrams; and utilize current standards to size conductors, conduit, controllers and calculate load factors and distribution requirements.

Create fundamental electrical drawings, using standardized symbology:

- One-Line Diagrams
- Riser Diagrams
- Ladder Diagrams
- Raceway Layouts

Demonstrates the ability to use the National Electrical Code to properly select or calculate appropriate electrical specifications for working drawings.

Methods of Assessment:

Daily Drawings/Lab Work/Daily Quizzes

Four to Five Major Exams or Drawings

(All drawings evaluated in terms of accuracy of drawing views, use of line types, line quality, dimensioning accuracy and placement and drawing organization.)

Required text(s), optional text(s) and/or materials to be supplied by the student:

Required: A text covering the technical material for the course such a Modern Commercial Wiring by Holzman and/or a text on Revit for Electrical drafting.

A flash drive is required for archiving data files

Notebook to store notes and drawings.

Suggested Course Maximum:

20

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

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

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..... 50%

Four to Five Major Exams or Drawings including the Final Project 50%

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

Note: A letter grade of "C" or above average must be achieved in all degree specific classes to attain graduation.

Curriculum Checklist:

Administrative General Education Course (from ACGM, but not in WCJC Core) – No additional documents needed.

Administrative WCJC Core Course. Attach the Core Curriculum Review Forms

Critical Thinking

Communication

Empirical & Quantitative Skills

Teamwork

Social Responsibility

Personal Responsibility

WECM Course -If needed, revise the Program SCANS Matrix and Competencies Checklist