Electrical Drafting (DFTG 1358)

Credit: 3 semester credit hours (2 hours lecture, 4 hours lab)

Pre-requisite/Co-requisite: DFTG 1305, 1309

Course Description
Electrical and electronic drawings stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams.

Required textbook and materials
1. *Electrical Motor Controls,* 4th ed., American Tech. Publishers
   a. ISBN number is 978-0-8269-1217-6
2. Flash Drive – 1GB minimum
3. Access to computer with AutoCAD
4. Notebook

Course Objectives
Upon completion of this course, the student will be able to:
1. Utilize components and symbols, both electronic and electrical
2. Apply basic math and theory of electricity
3. Demonstrate component identification
4. Schematics, blocks wiring and logic
5. Perform diagram construction and drafting

Course outline
1. Introduction
   a. Introduction of faculty and staff
   b. Review syllabus
   c. Review class policies
2. Electrical basics
   a. Electrical symbols
   b. Test
3. Electrical diagrams
   a. Electrical diagrams
   b. Wiring diagrams
   c. Schematic diagrams
4. Electrical plans
   a. Location plans
   b. Grouping plans
   c. Lighting plans
5. Miscellaneous electrical drawings
   a. Electrical details
   b. Electrical panel drawings
   c. Electrical wiring charts

DFTG 1358
Course Syllabus

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

Course Evaluation
Final grades will be calculated according to the following criteria:

Activity	Percentage
Assignments	25%
Quizzes	25%
Projects	20%
Final	20%
Notebook and participation	10%
Total	**100%**

Late penalties will be assessed on all work turned in late, 5 points per day

Course requirements
1. Teach principles of electrical and electronic drawings
2. Stress modern representation for block diagrams
3. Teach schematic, logic and wiring diagrams
4. Teach printed circuit board layouts
5. Teach motor control diagrams
6. Teach power distribution diagrams
7. Teach electrical one-line diagrams
8. Teach schematic, logic and wiring diagrams
9. Teach power distribution

Attendance Policy (all work during absence must be made up)
1. 5 absences allowed – 4 tardies are equivalent to 1 absence
2. 2 points per absence off final grade after 5 initial absences

Course Policies
1. No food, drinks or use of tobacco products in class.
2. No foul or harsh language will be tolerated.
3. Turn off all cell phones during lectures.
4. Do not bring children to class.

5. No cheating of any kind will be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result in expulsion from LIT.

6. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course you will earn   an "F" in the course.

7. Back-ups - It is the student's responsibility to make back-up copies of their work. Do not rely on the server to be there 100% of the time. I cannot help you if you lose your work. Remember that in order for your work to be graded it must be turned in.

8. Internet usage
   a. Classroom computers have access to the internet.
   b. Student usage of the internet will be monitored.
   c. Proper usage of the internet will be allowed for classroom research.
   d. Any unauthorized use of the internet will not be tolerated.
   e. Improper usage of the internet, such as profanity, pornography, gambling, etc. will result in disciplinary action not limited to expulsion from LIT.

Disabilities Statement
The Americans with Disabilities Act of 1992 and section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services in the Cecil Beeson Building.

Student Code of Conduct Statement
It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the LIT Catalog and Student Handbook. The LIT Catalog and Student Handbook may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office.

Course Schedule

Week	Topic	Reference
1	Course introduction and policies 1. Lecture 2. Lab: standard drawing set-up	Handouts
2	Proto-type drawing 1. Lecture 2. Lab: create electrical symbols	Chapters 1 & 3
3/4	Electrical safety 1. Lecture 2. Lab: create electrical symbols 3. Project: as assigned	Chapters 1 & 3

5/6	Electrical symbols and diagrams 1. Lecture 2. Lab: chapter exercises 3. Project: as assigned	Chapters 4 & 5
7/8	Electrical diagrams 1. Lecture 2. Lab: chapter exercises 3. Project: as assigned	Chapters 4 & 5
9/10	Control logic 1. Lecture 2. Lab: chapter exercises 3. Project: as assigned	Chapters 4 & 5
11/12	Solenoids, DC motors, AC motors 1. Lecture 2. Lab: chapter exercises 3. Project: as assigned	Chapters 6, 7 & 8
13	Control devices 1. Lecture 2. Lab: as assigned	Chapters 1 thru 8
14/15/16	Final project 1. Lecture 2. Lab: as assigned	

Contact information

Contact info varies per instructor
Refer to Calendar for important dates and course schedules!