CAD 1203 – 300 Spring 2020

Instructor: Mary Smith
Office: E321
Phone: (815) 224 - 0520
Email: Mary_smith@ivcc.edu

Course Meetings and Location: Mondays, 4:00 pm – 6:40 pm, Oglesby Campus, CTC 119

Required Resources: Electronics Drafting,4th Edition, Frostad, Goodheart-Wilcox ISBN 1-60525-348-0

Course Description: A course in techniques and general drafting with major emphasis on pictorial drawing, device symbol production drawings, flow and schematic diagrams, printed circuits, miniaturization, industrial controls, and graphic representation. Lecture, one hour per week; lab, two hours per week.

Prerequisites: CAD 1200 or DFT 1200

General Education Outcomes:

- To apply analytical and problem-solving skills to personal, social and professional issues and situations.
- To communicate orally and in writing, socially and interpersonally.
- To understand and use contemporary technology effectively and to understand its impact on the individual and society.
- To work and study effectively both individually and in collaboration with others.
- To understand what it means to act ethically and responsibly as an individual in one's career and as a member of society.
- To appreciate the ongoing values of learning, self - improvement, and career planning.

Expected Learning Outcomes and Competencies:

Upon completion of the course, the student will be able to:

Using basic technical drawing principles employed in industry, the student will:

1. Learn the basics in lettering, sketching, and the alphabet of lines used in drafting.
2. Learn electronic symbols used in drafting and how to apply them to different electronic drafting diagrams, including schematics, single line wiring diagrams and logic diagrams.
3. Learn the principles behind printed circuit board design and the routing of pcb component location and circuitry.
4. Learn to create printed circuit board layout, drill and trim, and assembly drawings from engineering specifications
5. Learn computer graphic principles as they apply to the latest release of AutoCAD.

Instructional Methods:

Lecture
Lab
Group Projects

Student Requirements and Methods of Evaluation:

Completion of assigned drawing problems. Periodic tests.
Group Projects
Problem Based Learning

Class Policies

Students are expected to respect others and the classroom setting. Please refer to the Student Code of Conduct as outlined in the Student Handbook

Attendance is Required: Attendance will be taken at each class meeting and will count towards the final grade as shown in the chart below.

Assessment: Students will be assessed with three tests and a final on their understanding of the vocabulary and standards for the industry. Lab assignments, consisting primarily of drawing activities, will be used to assess the students understanding of the industry standards that pertain to electronic drafting. The final grade of the student will be calculated as shown below.

Course Grade Calculation

Grading Components	Score	Quantity	Subtotal
Unit Tests	100 pts	3	300 points
Drawing Projects / Lab Assignments	20	12	240 points
Final Exam	125	1	125 points
Attendance and Participation	2/ class	15	30 points

Grading Scale:

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

Late Work: Lab assignments should be completed during the time allocated for lab work each week and are due at the start of class on the following week. Late assignments will be accepted, but may receive a 10% reduction in grade

Drop Policy: Students have the ability to initiate a withdrawal from classes. By completing the form in the Records Office or through the form located within WebAdvisor, the student is authorizing IVCC to remove him/her from the course. Entering the student ID number serves as the student's electronic signature. IVCC has the right to rescind a withdrawal in cases of academic dishonesty or at the instructor's discretion. Students should be aware of the impact of a withdrawal on full-time status for insurance purposes and for financial aid. It is highly recommended that students meet with their instructor or with a counselor before withdrawing from a class to discuss if a withdrawal is the best course of action for that particular student.

The instructor will not drop a student without being asked to do so by the student. At the semester end, if a student has not dropped and has not completed the course requirements; a grade of F will be given. Final drop date is Tuesday, April 7th.

Support Services: If you are a student with a documented cognitive (learning disability), physical or psychiatric disability (anxiety, depression, bipolar disorder, AD/HD, post-traumatic stress, and others) you may be eligible for academic support services such as extended test time, texts in audio format, note taking services, etc... If you are interested in learning if you can receive these academic support services, please contact Tina Hardy (tina_hardy@ivcc.edu, or 224-0284), or stop by the Disability Services Office in C211. My hope is to create an equitable learning environment for all students. If you want to discuss your learning experience, please talk to me as early in the term as possible. If you know you have, or suspect you have a disability (learning disability, physical disability, or psychiatric disability such as anxiety, depression, AD/HD, post-traumatic stress, or others) for which you may need accommodations, please contact the Disability Services to determine if you are eligible for support.

YOU@IVCC is a web portal that fosters student success in three domains: Succeed (academics/career); Thrive (physical/mental health); and Matter (purpose/community/social connections). The portal serves up relevant information and campus resources, and the content becomes personalized when a student completes brief assessments, fills out a profile, or searches for something specific. Student activity within the portal is completely anonymous and available 24/7/365. Simply type in you.ivcc.edu, fill out the sign up information, and get started

Schedule of Assignments Note: This schedule is tentative, and may be modified during the course of the semester at the discretion of the Instructor

Date	Topic	Reading Assignment	Lab Assignment
January 13th	Overview of Electronics drafting, Single Line Diagrams and Block Diagrams	Pages 1 - 24	Page 29, Chapter 2, Activity 2 and Activity 4 on page 31
January 20th	Martin Luther King Day College Closed		
January 27th	Flow Diagrams	Pages 25 -41	Flow Diagram Handout
February 3rd	Electronic symbols	Pages 41 - 60	Chapter 3, Activity 3

February 10th	Electronics symbols, components, and references	Pages 41 – 60	Components Handout
February 17th	President's Day – College Closed		
February 24th	**Test # 1 / Open Lab**		
March 2nd	Schematic & logic diagrams	Pages 70 -82	Schematic handout
March 9th	Schematic & logic diagrams	Pages 70 -82	Schematic handout
March 16th	Spring Break – College Closed		
March 23rd	Wiring diagrams	Pages 83 -99	Chapter 5, Activity 1
March 30th	**Test # 2 / Open lab**		
April 6th	Printed Circuitry	Pages 103 - 130	Printed circuit board handout
April 13th	Printed circuit boards	Pages 131 - 142	T.B.A.
April 20th	Enclosures	Pages 143 - 168	T.B.A.
April 27th	**Test # 3 / Open lab**		
May 4th	**Final Exam**		