CAD 1203 – 350 Spring 2023

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Course Meetings and Location: Mondays, 4:00 pm – 5:40 pm, Oglesby Campus, CTC 119. Instructional materials and assignments will be posted in the course Blackboard weekly. Students are expected to review instructional materials and come to the class prepared to ask questions, review content, and complete lab assignments.

Required Resources: There is no required textbook for this course. Students will be provided instructional content in the course Blackboard.

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

IVCC Institutional Learning Outcomes:

Inquiry: To apply critical, logical, creative, aesthetic, or quantitative analytical reasoning to formulate a judgment or conclusion

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. Students must wear face masks and maintain social distancing within the classroom.

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	10	200 points
Final Exam	125	1	125 points

Grading Scale:

Grade	Point Earned
A	>558
B	>495
C	>434
D	>372
F	<372

Late Work: 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 Thursday, 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 IVCC's Accessibility and Neurodiversity 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	Lab Assignment
January 9th	Overview of Electronics drafting, Single Line Diagrams and Block Diagrams	Single Line Diagram
January 16th	Martin Luther King Day/ Campus Closed	
January 23th	Flow Charts	Flow Chart drawing
January 30th	Electronic symbols	Component Handout 1
February 6th	Electronics symbols, components, and references	Component Handout 2
February 13th	Test One	

February 20th	Schematics	Schematic handout #1
February 27th	Schematics	Schematic handout #2
March 6th	Spring Break Campus Closed	
March 13th	Schematic & logic diagrams	Logic handout #3
March 20th	Wiring diagrams	Highway Wiring Diagram
March 27th	Wiring diagrams	Single Line Diagram
April 3rd	Test Two	
April 10th	Printed circuit boards	Printed circuit board handout #1
April 17th	Printed circuit boards	Printed circuit board handout #2
April 24th	Enclosures	T.B.A.
May 1st	Test Three	
May 8th	Final Exam	