

CET246 – Electronic Design Automation
FALL 2023
SYLLABUS

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Basic Course Information

Prerequisites: CET 236 or CET 233

Recommended Textbook:

1. R.S. Khandpur, *Printed Circuit Boards*
2. Peter Dalmaris, *KiCad Like a Pro 2nd Edition*

Class Time: MW 7:30pm - 9:10pm

Class Room: AIH 409

Office Hours: TR 12:30p-2:30p, W 2:30p-3:30

Grade

Your grade for the course will be comprised of the following parts

- Homework and Quizzes (25%)
- Laboratory Experiments (25%)
- Exams (25%)
- Final Project (25%)

Homework

I will assign homework throughout the semester. Assignments will be due as indicated on each assignment. Most assignments will be completed using WebWork

(<https://webwork.davidbroderick.com/webwork2>)

Late Work

All students are required to submit all assigned work on time. Work is late if submitted after the class convenes. Later work is subject to penalty ranging from 0 to 100%.

Academic Honesty

Your academic and professional success depends on your honesty. You must be honest with yourself regarding your own abilities and honest with your peers regarding your achievements. Given the importance of this characteristic, I will not hesitate to report all violations of academic honesty as outlined here: <https://www.ccsu.edu/academicintegrity/policy.html>

Special Needs

If you are a student with a documented disability, and would like to request academic accommodations, you are encouraged to contact Student Disability Services (SDS) at 860-832-1952, or email disabilityservices@ccsu.edu. Please visit the SDS website at <http://www.ccsu.edu/sds/> to download an Intake form and documentation requirements. Temporary impairments may also qualify for accommodations. Central Connecticut State University provides reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act for students with documented disabilities on an individualized basis.

Topics Covered

1. History of Fabrication
2. Printed Circuit Board Fundamentals
3. Manufacturing Processes
4. Standards
5. Components & Connectors
6. Test Procedures
7. Temperature Effects on Components
8. Technical Drawings
9. Mechanical, Electrical, and Thermal Effects on PCB
10. Layout Procedures
11. Design Rules
12. High Frequency Design
13. High Power Design
14. Assembly, Soldering, and Rework Methods
15. Quality and Reliability
16. Testing and Acceptance