

Digital Electronic Design

Instructor Information

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Course Description

The major focus of the Digital Electronic Design course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students will analyze, design, and build digital electronic circuits. While implementing these designs, students will continually hone their professional skills, creative abilities, and understanding of the circuit design process. Digital Electronic Design is a high school level course that is appropriate for 9th, 10th, or 11th grade students interested in exploring electronics. Other than their concurrent enrollment in college preparatory mathematics and science courses, this course assumes no previous knowledge.

Grading Scale/ Grading Information

Employability – 20%

Projects/Assessments – 80%

A+	100.1 & ↑	B+	89.9 – 88.0	C+	79.9 – 78.0	D+	69.9 – 68.0
A	100 – 93.0	B	87.9 – 83.0	C	77.9 – 73.0	D	67.9 – 63.0
A-	92.9 – 90.0	B-	82.9 – 80.0	C-	72.9 – 70.0	D-	62.9 – 60.0
						F	0 – 59.9

WORKPLACE BASIC SKILLS AND BEHAVIORS

Apply skills learned in class
Analyze information and make decisions
Communicate verbally and in writing
Work independently and as a team member in a diverse workplace
Work reliably, responsibly, and ethically

CAREER TECHNICAL SKILLS

Demonstrate occupational competencies
Use appropriate technology
Understand and practice occupational safety standards
Demonstrate an awareness of how a business or industry functions

JOB EMPLOYMENT SKILLS

Develop a plan to achieve career goals
Use effective job search strategies
Demonstrate an awareness of the importance of life-long learning

Classwork, Late Work and Projects

Most work will be done in class and in groups, which makes attendance extremely important. If you have an excused absence you will have as many days to make up the work as you were absent, and group work projects will have to be done on your own. Late assignments will only be considered for acceptance if an absence has been excused. It is recommended that you check the website or call a peer in the meantime so that you do not fall behind. Employability grades can be made up during lunch or after school and must be done in this classroom. Most projects must also be done in the classroom and cannot be taken home as homework. Work that is late but not excused will be marked down 10% per school day that it is late, regardless of whether or not we have class that day. Any assignment, test, quiz, project, or presentation that is more than 5 school days late will have a maximum possible score of 50%.

Classroom Expectations & Procedures

- Respect yourself, others, and the property around you at all times.
- All cell phones must be in your designated phone pocket from the time you enter the classroom until the time you leave at the end of the period. Phones must not make any noise that disturbs the class. Other personal electronic devices, such as smart watches must be in your bags, or in the pocket with your phone and must also not make any noise. Any violation of this rule will result in your phone and/or watch being confiscated for the rest of the school day, or for multiple school days if it becomes a problem.
- Follow all school rules and guidelines as defined in the student handbook. If you aren't sure what the rules are, please consult the handbook. Consequences for disorderly conduct in class are aligned to those in the student handbook.
- To leave the classroom, you must obtain permission and leave your phone in the classroom.
- No sleeping. If you have a medical issue, you may get a pass to go to the office.

Academic Honesty

- Do your own work.
- Plagiarism and cheating will not be tolerated and will be dealt with according to the school Academic Honesty Policy.
- Using AI is almost always considered cheating.
- Many projects will be done in groups. You are responsible for anything that is turned in with your name on it.

Safety

- Eating and drinking in class is allowed **if** the food is not messy or smelly, **and if** the beverage is in a bottle and has no possibility of bubbling over (no soda). No food or drink is allowed by the classroom computers, or when we are using equipment.
- Wear safety goggles, face masks, and other safety gear when appropriate
- Always ask permission before using equipment and NEVER use a tool that you have not been trained to use.
- Do not ever put any equipment in your mouth.
- Use tools appropriately, and only for the function for which they are designed.
- Before you use tools or equipment, ASK.
- No horseplay is permitted in the classroom.
- Never annoy or distract the attention of anyone working with equipment
- Keep your work area clean and uncluttered. Make sure everything is put away and back in its place by the end of the period. Points will be removed from your Employability grade if you do not clean up after yourself.

Using Tools and Equipment

- To use most classroom equipment, check it out on the appropriate clipboard.
 - When calipers are brought back from home I MUST CHECK THEM IN. If they are damaged, lost, or broken you are responsible for the replacement cost.
 - Equipment or tools that are taken to other classrooms must also be checked in by me.
- To use any other equipment or tools, ASK.
- NEVER use a tool that you have not been trained to use.

Clean Up - EACH DAY

- Tuck your chair in at your seat.
- Put everything away that you have been using.
- Check in all toolboxes, tools, and equipment.
- Clean up any messes that you have made.
- You will not be excused from being late to your next class because you have not left yourself enough time to clean up, and you will not be excused from the clean-up.

Strategies for getting an A

- Stay organized!
- Keep up to date with the class website
- Collaborate on ideas with peers; the real-world values results, which often comes from the efforts of a group rather than an individual
- When in doubt, ASK! Never assume you understand. There is nothing wrong with asking questions of your peers or of myself in or out of class.