



ECE 2010-400

Logic and Computing Devices

Summer II – 2024

3 Credits

Online

Wednesday, June 27<sup>th</sup> – Monday, August 5<sup>th</sup>

Instructor – Dr. William J. (Bill) Reid III

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Required Materials –

- *Digital Design with An Introduction to the Verilog HDL, VHDL, and SystemVerilog, 6<sup>th</sup> Ed.*, by Mano & Ciletti, Pearson, 2018.
- *Lecture Slides* and *Homework* found on Clemson’s *Canvas*: <https://www.clemson.edu/canvas/>
- *Laptop Computer* – All or part of your tests and final exam will be taken on your laptop computer. *Therefore, your laptop battery should be capable of lasting several hours.*
- *Respondus Lockdown Browser* – The first week of class you must install the and test this browser on your laptop: <https://www.clemson.edu/online/tools/responduslockdown.html>

Topics Covered –

Number Systems	Don’t Care Conditions	Multiplexers
Octal & Hex Codes	Quine McCluskey Algorithm	Sequential Circuits
Signed Number Systems	Special Forms	Latches & Flip-Flops
Binary Codes	XOR Operator	Sequential Analysis
Boolean Algebra	Multi-Level Optimization	State Reduction
Boolean Functions	Combinational Logic	Sequential Design
Canonical Forms	Design Procedures	Registers & Counters
Operations, Gates, & ICs	Adders & Subtractors	Memory & PLDs
Tri-State Gates & More	Multipliers & Encoders	
Karnaugh Maps	Decoders & Encoders	

Grading Policy – Your final grade for this course will be determined by the following:

<b>Tests (3)</b>	<b>≈ 50 %</b>
<b>Homework</b>	<b>≈ 15 %</b>
<b>Final Examination</b>	<b>≈ 35 %</b>

A = 90 – 100, B = 80 – 89, C = 70 – 79, D = 60 – 69, F = 0 – 59

Prerequisites –Sophomore Standing.

Co Requisites – None

Tests – Tests will be taken online, and a test password will be e-mailed to your proctor the day before the scheduled test. Please refer to the **ProctorInfo.pdf** file in the course information on *Canvas*. All work on tests is to be entirely the student’s with no aid from *any* other source unless specifically stated.

Homework – You will receive one point per each homework problem found on Canvas unless otherwise stated. All work on homework is to be entirely the student’s with no aid from any other source unless specifically stated. All homework is due by the final exam unless otherwise stated.

**Accessibility Statement** – Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to a class should let the instructor know and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848 or by emailing [studentaccess@lists.clemson.edu](mailto:studentaccess@lists.clemson.edu). Students who receive Academic Access Letters are strongly encouraged to request, obtain, and present these to their instructors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

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**Modification Statement** – Any portion of this syllabus may be changed during the semester when necessary. Notice will be given in class and by e-mail.