

**University of Texas at El Paso**  
**EE 4342 Digital Systems Design II**  
**EE 5374 Advanced Digital Systems**  
**Spring 2022**

**Professor:** Hector Erives, Ph.D.

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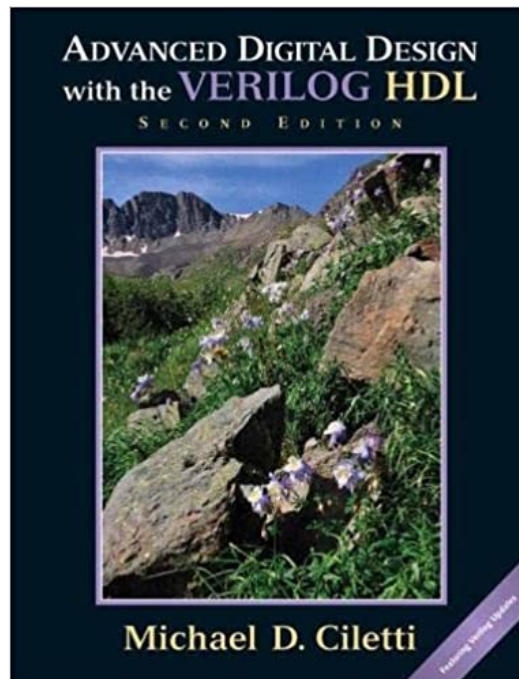
**Phone:** (915) 747-6778

**Office Hours:** T, F 9:00 – 10:00 am or by appointment

**Teacher Assistant:**

**Email:**

**Required Textbook:** Advanced Digital Design with the VERILOG HDL, 2<sup>nd</sup> Edition  
by Michael D. Ciletti.



**Course Objectives:**

In Digital Systems Design II/Advanced Digital Systems the student will learn about design techniques for complex digital systems, with emphasis on computer hardware design and computer-aided techniques, including hardware description languages (HDL) and hardware simulation packages. Algorithmic State Machine design is stressed for small systems. Emphasis on problem definition, design, and verification.

**Course grading:**

Two Partial Exams	30%
Homework	30%
Quizzes	10%
Final Project	10%
Comprehensive Final Exam	20%

You can find your grades on the left-hand navigation panel on "My Grades" of your Blackboard

**No make-up quizzes will be given**

**Late work WILL BE assessed a late penalty of 30%**

**Grading distribution:**

A = 90 - 100%
B = 80 - 90%
C = 70 - 80%
D = 60 - 69%
F = Below 60%

**Prerequisites:** EE 3376 with a grade of "C" or better. Prerequisite by Topic: (1) combinational and sequential digital design techniques (2) basic microprocessor architecture (3) assembly language programming (4) High-Level language programming.

**Corequisite:** EE 4142 must be taken concurrently with EE 4342.

**Students completing EE 4342/EE 5374 will be able to:**

1. Apply different design methods for digital circuitry from problem statement to physical implementation
2. Use good design techniques, especially top-down design such as the ASM method.
3. Recognize and apply typical hardware constructs for processing units
4. Recognize and apply typical hardware constructs for control units
5. Use computer aided tools to simulate and verify designs

**Attendance:** Attendance is key to your academic success. If you miss a class session, you are responsible for obtaining notes, handouts, and assignments and for meeting the same deadlines as the rest of the class. If you have an excessive amount of absences you may be dropped from the course at the instructor's discretion.

**Center for Accommodations and Support Services (CASS):** Students requiring unique accommodations must contact the CASS office and provide their instructor with the proper documentation at the beginning of the semester. CASS

office may be contacted at 747-5148, [cass@utep.edu](mailto:cass@utep.edu) or go to Room 106 Union East Building

**COVID-19 PRECAUTION STATEMENT:** Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to [covidaction@utep.edu](mailto:covidaction@utep.edu), so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](http://epstrong.org).