

CSCE 611: Advanced Digital Design

Meeting times:	TTH 11:00-12:15
Locations:	Swearingen 1D39
Textbook:	Harris and Harris, <i>Digital Design and Computer Architecture</i> Morgan Kaufmann
Prerequisite:	Introduction to Computer Architecture (CSCE 212)
Instructor:	Dr. Jason D. Bakos
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Teaching Ass't:	Zheming Jin
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Office:	Swearingen 3D15 (left side, all the way in the back)
Grading structure:	
	Lab 1 (ALU test bench) 5%
	Lab 2 (ALU post place-and-route simulation) 5%
	Lab 3 (ALU FPGA verification) 10%
	Lab 3a (Multiplier and Divider) 5%
	Lab 4 (CPU design) 15%
	Lab 5 (CPU synthesis) 15%
	Lab 6 (Final project) 25%
	Final exam (practicum) 20%

Course Organization:

Introduction: HDL behavioral design, Mentor Graphics HDL Designer

2 weeks

ALU tutorials

2 weeks

ALU verification and test bench design

1 week

Synthesis and hardware verification

1 week

MIPS architecture and multi-cycle CPU Design

3 weeks of lab work

Synthesis of CPU

1 week

Interface design

2 weeks

Final project

3 weeks

Official Policy on Late Submissions

Late homework and lab assignments will be charged a 5% grade penalty for each weekday after the due date (limited to a maximum of 30%). Students that do not complete the final project by the end of the semester will not receive a passing grade except under special circumstances and with permission from the instructor.

Academic Honesty Policy

Students are encouraged to assist their colleagues for the purpose of overcoming technical challenges related to the use of the design tools. Also, students working on a group project must (by definition) perform joint work. However, any collaboration beyond these exceptions is prohibited and is subject to the university's guidelines, regulations, and policies regarding academic dishonesty.

Students Receiving Graduate Credit

University policy requires that students who wish to receive graduate credit for an undergraduate course must complete additional requirements beyond those who only wish to receive undergraduate credit. In order to receive graduate credit for this course, there will be additional required components and requirements for the final project design.

Group Work Policy

The final project in this course will require that students work in groups. Choose your group partner wisely. Each of the partners will receive the same grade for the final project.