

Course Syllabus

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Class Information

Course ID and name: EEL5764 – Computer Architecture

Meeting times: Tuesdays, period 1 (7:30am – 8:15am) and Thursdays, periods 1 & 2 skipping the break but ending early (7:30am – 8:50 am)

Meeting location: NEB 100

Description: This class discusses classic computer architecture topics and advances these topics to contemporary computer architecture design challenges. The topics covers are, but not limited to, core architecture, multicore design, memory hierarchy, cache memory optimization, and data parallelism. This class is intends to deliver the topics in a research oriented manner: challenges and tradeoffs.

Prerequisites:

Student enrolled in this class are expected to have background in computer organization and design, digital design, and microprocessors. Additionally, students must have basic experience in a programming language such as C/C++, debugging, Linux operating system, and shell scripting.

Suggested reading for programming: C++ how to Program (6th or 7th edition), ISBN-10: 0136117260 • ISBN-13: 9780136117261

Instructor Information

Ann Gordon-Ross

Office: Benton Hall 319

Office hours: Tuesdays and Thursdays before and after class, in the classroom, or by appointment

Teaching Assistants

Jiaqi Zhang

Office: TBA

Office hours: TBA

Huixiang Chen

Office: TBA

Office hours: TBA

Textbook(s)

Required textbook: Computer Architecture: A Quantitative Approach - 5th Edition, John L. Hennessy, David Patterson, ISBN: 978-0123838728, Publisher: Morgan Kaufmann Publishers, Pub. Date: 2012

Suggested reading: Computer Organization and Design, 3rd Ed., David A. Patterson, John L. Hennessy, ISBN: 1558606041, Pub. Date: 2004, Publisher: Morgan Kaufmann Publishers

Grade Breakdown

Research project (45%): The goal of this project is to allow student to implement theoretical concepts and apply design/research tradeoff. Students will select a computer architecture feature to investigate (learn, research, implement, modify, and analyze

results) throughout the semester. Student will work in small groups and will have to write a proposal for the topic of interest and submit it for approval.

Two midterms (25% each): Multiple choices and/or short essays

Homework assignments (5%)

Grading Policy

The course will use the following letter grading scheme:

A 100% to 93%

A- < 93% to 90%

B+ < 90% to 87%

B < 87% to 83%

B- < 83% to 80%

C+ < 80% to 77%

C < 77% to 73%

Late submissions: **All** late assignments receive **zero credits** no matter what the reason. This means students must plan to finish their work before deadline to avoid delays due to “technical difficulties.” Online assignments (on Canvas) will timeout at the deadline and cannot be made up. Canvas gets very busy around common due times, such as midnight, so all assignments will be due at 3 AM for this reason. Emailed assignment will have an arrival timestamp. All emails received after the deadline will be considered late submission. This strict policy helps student prepare for real life situations.

Makeups: No makeup midterms except for a medically documented sickness or family emergency

Regarding: all re-grading requests must be submitted within three days of original grading.

Honor Code: Every student is expected to read, acknowledge, and adhere to the University of Florida honor code located at: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

Any cheating or misconduct of a given assignment results in an F letter grade for the course and reporting to the honor court. All assignments must be done individually, not in groups, unless stated otherwise.

Communication

In order to provide the best experience to students in a very large class, there are a few expectations of students:

In-class: chatting and cell phone usage are not allowed. Please remember to turn your cellphone off during class.

Emails: emails are **strictly through Canvas**. Emailing through Canvas allows faster and more efficient responses. Makes sure to cc all teachers and TA's so that you will have a faster turnaround time.

Project questions: check the project page for more details on the research project.

Accommodations for students with disabilities














Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation






Counseling services at UF

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling
- SHCC Mental Health, Student Health Care Center, 392-1171, Personal and Career Counseling
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling

Course Summary:

Date	Details	
Wed Aug 30, 2017	 Introductory assignment (https://ufl.instructure.com/courses/342924/assignments/3346392)	due by 3am
Tue Sep 5, 2017	 Group members (https://ufl.instructure.com/courses/342924/assignments/3346391)	due by 3am
	 HW 1 (https://ufl.instructure.com/courses/342924/assignments/3346384)	due by 3am
Tue Sep 19, 2017	 HW 2 (https://ufl.instructure.com/courses/342924/assignments/3346385)	due by 3am
Fri Sep 29, 2017	 Proposal and SimpleScalar (https://ufl.instructure.com/courses/342924/assignments/3346401)	due by 3am
Fri Oct 6, 2017	 Log file 1 (https://ufl.instructure.com/courses/342924/assignments/3346393)	due by 3am
Tue Oct 10, 2017	 HW 3 (https://ufl.instructure.com/courses/342924/assignments/3346383)	due by 3am
Thu Oct 19, 2017	 Midterm 1 (https://ufl.instructure.com/courses/342924/assignments/3346398)	due by 11:59pm
Fri Oct 20, 2017	 Log file 2 (https://ufl.instructure.com/courses/342924/assignments/3346394)	due by 3am
Fri Oct 27, 2017	 Midterm Update (https://ufl.instructure.com/courses/342924/assignments/3346400)	due by 3am
Fri Nov 3, 2017	 Log file 3 (https://ufl.instructure.com/courses/342924/assignments/3346395)	due by 3am
Mon Nov 13, 2017	 HW 4 (https://ufl.instructure.com/courses/342924/assignments/3346382)	due by 3am
Fri Nov 17, 2017	 Log file 4 (https://ufl.instructure.com/courses/342924/assignments/3346396)	due by 3am

Date	Details
Fri Dec 1, 2017	 HW 5 (https://ufl.instructure.com/courses/342924/assignments/3346386) due by 3am
	 Log file 5 (https://ufl.instructure.com/courses/342924/assignments/3346397) due by 3am
Fri Dec 8, 2017	 Final log file (https://ufl.instructure.com/courses/342924/assignments/3346388) due by 3am
	 Final Report (https://ufl.instructure.com/courses/342924/assignments/3346389) due by 3am
	 Midterm 2 (https://ufl.instructure.com/courses/342924/assignments/3346399)

