

EEL 5764 Computer Architecture

Fall 2020

Course Syllabus

Instructor: Dr. Tao Li

Class Meeting Time: Tue. Period 4 (10:40 am – 11:30 am); Thur. Period 4-5 (10:40 am – 12:35 pm)

Location: On-line

Instructor's contact information

Email: taoli@ece.ufl.edu

Teaching Assistant Assignment

Teaching Assistant	E-mail Address	Office Hours	Location	Phone
Yao Sun	yao.sun@ufl.edu	Tue. 1:30pm-2:30pm Fri. 1:30pm-2:30pm	On-line	3528715281

Pease contact TA/instructor through Canvas. We may not be able to respond to emails sent to our individual email addresses.

Required Textbook

Computer Architecture: A Quantitative Approach - 6th Edition, John L. Hennessy, David Patterson, ISBN-13: 978-0128119051 (ISBN-10: 0128119055), Publisher: Morgan Kaufmann Publishers, Pub. Date: December 7, 2017

Prerequisites

You are expected to know introductory computer architecture concepts, such as those covered in EEL 4713C Digital Computer Architecture or equivalent (Computer Organization and Design, see Recommended Reading section).

Basic Linux programming skill using C, C++ and shell scripts.

Class Website

Class material and information will be available via UFL e-learning system: <https://elearning.ufl.edu>

Recommended Reading

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

Modern Processor Design: Fundamentals of Superscalar Processors, John Paul Shen, Mikko H. Lipasti, ISBN 0-07-057064-7, Publisher: McGraw-Hill Publishers, 2005

Course Objectives

This course teaches students fundamental knowledge in Computer and System Architecture. It is an entry-level graduate course and best suitable for the first year Ph.D. or Master students who are interested in computer architecture, compilers, operating systems, programming languages, VLSI designs, application specific architectures. Many exciting topics will be covered:

- Fundamentals of Computer Design
- Instruction Level Parallelism (ILP) and Its Exploitation
- Memory Hierarchy Design
- Data-Level Parallelism and Vector Processing
- Multiprocessors and Thread-Level Parallelism
- The Warehouse-Scale Computer and Data Center
- Interconnect Networks

Course Grade Determination

Homework (5~7)	30%
Midterm Exam #1 & #2	35% (date, time and format: TBA)
Course Project	35%

Grading Policy:

Letter grades will be assigned as follows: A is $\geq 90\%$; B is $\geq 80\%$; C is $\geq 70\%$; D is $\geq 60\%$; F is $< 60\%$.

No makeup exams will be given except for a medically documented incapability or family emergency.

All homework will be submitted electronically via e-learning system. Note that the homework submission deadline is automatically controlled by the system. Late homework will not be accepted. Arrange your homework submission ahead of deadline will prevent such situation.

All homework assignments are individual. You can discuss the general area with other students, but not the solution to the specific problem. The final submission must be your own work.

Requests for re-grading must be submitted via email within one week since the graded assignment is returned.

Academic Honesty

UF students are bound by The Honor Pledge, which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Cheating

Cheating will not be tolerated. If you are caught, you will fail the course and get reported to the honor court. There are no excuses and no exceptions. You may talk to other students about homework and project, but the final work must be your own. If you are caught cheating on any assignment, exam and project, the smallest penalty possible is failure of the course.

Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter, which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Campus Resources

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352-392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>.