

CS 3823
THEORY OF COMPUTATION
Spring 2023

Instructor: Dr. C. Kim, ckim@ou.edu

Class Meetings: TR 3PM – 4:15PM, SEC N202

Office Hours: TR 12PM – 1:30PM, On-line Zoom ID: 915 7022 3626, Passcode: 27972559

Teaching Assistant: Zuyuan Zhang, E-mail: Zuyuan.Zhang-1@ou.edu, Office hours: MF 9:30AM – 11AM, Zoom ID: 948 5831 0731, Passcode: 43801678

Prerequisites: CS 2413 and CS 2813

Textbook: Peter Linz, An Introduction to Formal Languages and Automata, 6th Edition (2016), Jones and Bartlett

Course Content: The course covers fundamentals of abstract machine theory, formal language theory, and computability and complexity theory. Specific topics include Turing machines and their restrictions such as finite/pushdown automata, deterministic versus nondeterministic computations, Chomskian grammars such as regular/context-free grammars, and mathematical properties of these systems such as their relations, closure properties, and decision properties.

Student Activities:

- Homework Assignments (30 %): One at the end of each Chapter
- Two Midterm Exams (20 % each): March 2 (R) and April 13 (R)
- Final Exam (30 %): May 9 (T), 4:30PM – 6:30PM

Remarks:

- Students are required to attend all class meetings. This means that a student missing a class meeting will take full responsibility for making up the lecture materials.
- Assignments must be submitted on or before the due dates; there will be 20% penalty per calendar day for late submissions. All student activities are individual and cheating of any form will result in a formal academic misconduct charge.
- Any student who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.
- Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as soon as possible.
- It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty.
- For any concerns regarding gender-based discrimination, sexual harassment, sexual assault, dating/domestic violence, or stalking, the University offers a variety of resources. To learn more or to report an incident, please contact the Sexual Misconduct Office at 405/325-2215 (8 to 5, M-F) or smo@ou.edu.