

**CS 3823**  
**THEORY OF COMPUTATION**  
**Spring 2022**

**Instructor:** Dr. C. Kim, [ckim@ou.edu](mailto:ckim@ou.edu)

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

**Office Hours:** TR 12PM – 1:30PM, On-line Zoom ID: 975 3748 2112, Passcode: 27972559

**Teaching Assistant:** Zuyuan Zhang, E-mail: [Zuyuan.Zhang-1@ou.edu](mailto:Zuyuan.Zhang-1@ou.edu), Office hours: MW 3PM – 5PM, Zoom ID 918 1933 5518, Passcode 02103711

**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 1 (T) and April 5 (T)
- Final Exam (30 %): May 10 (T), 4:30PM – 6:30PM

**Remarks:**

- **For the first two weeks of the Spring 2022 semester (through January 31) masking will be required in all classroom settings.** Beginning February 1, the Norman campus will revert to the Fall 2021 masking guidance that encourages masking in the classroom and requires masking for a two-week quarantine period when a confirmed positive COVID-19 case in the class is identified. Individuals in need of a health accommodation should contact the Accessibility and Disability Resource Center by emailing [adrc@ou.edu](mailto:adrc@ou.edu). For all COVID protocol answers, please visit this provost website: <https://www.ou.edu/together/campus-protocols/spring-2022>.
- 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](mailto:smo@ou.edu).