

CMPS 3233-201: Theory of Computation

Spring 2024

Instructor: Tina Johnson, Pierce 142, (940) 397-6201, tina.johnson@msutexas.edu

Course Prerequisite: CMPS 2433 with a grade of C or better

Text: Intro to Formal Languages & Automata (w/CD) Edition: 6th, Linz, ISBN 978-1284077247, Digital ISBN 978-1284077254

Software: [JFLAP](#), open-source.

Catalog Description: Study of the fundamental mathematical properties of hardware, software, and their applications. Emphasis is on the capabilities and limitation of computers, including finite automata, push-down automata, and Turing machines.

Course Grades

Exams (3)	60% (20% each)
Quizzes/Homework	40%

Tentative Agenda

Week	Date	Material Covered
1	Jan 16, 18	Course Information, Ch 1: Intro, Sets, Proofs
2	Jan 23, 25	Ch 1, Ch 2: Finite Automata
3	Jan 30, Feb 1	Ch 2
4	Feb 6, 8	Ch 3: Reg. Expressions/Grammars
5	Feb 13, 15	Ch 3, Review
6	Feb 20, 22	Test 1: Ch 1-3.2 , Ch 4: Reg. Languages
7	Feb 27, 29	Ch 3.3, Ch 4
8	Mar 5, 7	Ch 4
	March 10-16	Spring Break, No Classes, ENJOY!!
9	Mar 19, 21	Ch 4, Ch 5: CFL/Grammars (CFL/CFG)
10	Mar 26, 28	Ch 5, Holiday Break, No Classes Thurs, Mar 28
11	Apr 2, 4	Ch 6: Simplification of CFG, Normal Forms
12	Apr 9, 11	Review, Test 2: Ch 3.3-6
13	Apr 16, 18	Ch 7: Pushdown Automata
14	Apr 23, 25	Ch 7, Ch 9: Turing Machines
15	Apr 30, May 2	Ch 9, Review
	Thurs, May 9, 1-3pm	Test 3 (Final): Ch 7 & 9

Electronic Devices: The use of electronic devices is discouraged in this class. Students who intend to use a laptop or tablet should sit in the back row(s) of the class to avoid distracting other students.

Recording of Class Lectures: Permission must be requested in writing and obtained from the instructor before recording of class lectures. If permission is granted, the recording may only be used by the student making the recording. Recordings (or any class materials) may NOT be posted on any internet source without written permission of the instructor. Failure to adhere to the policy may result in removal from the course with a grade of F or other appropriate punishment.

Late Work: Late homework will be accepted with a penalty of 5 points per day late and will be accepted only until homework is returned (usually class after due date). Quizzes cannot be made up, but one quiz/homework grade will be dropped.

Academic Misconduct Policy & Procedures

Academic misconduct is cheating, collusion, and plagiarism: it is the act of using either published or unpublished source material of other students, persons, or generative AI (unless there are instructions that allow it), and must follow accepted techniques of crediting. The Department of Computer Science has adopted the following policy related to academic misconduct. The policy will be applied to all submission of work for credit as determined by the instructor of the course, e.g., assignments, quizzes and exams. (See below for link to MSU definitions.)

- 1st instance of cheating in the program: The student will be assigned a non-replaceable grade of zero for the assignment, project or exam. If the final grade in the course, does not result in a one letter grade reduction, the student will receive a one letter grade reduction in course.
- Further instances of cheating in any course within the program: The student will receive a grade of F in the course & be removed from the course.
- All instances of cheating will be reported to the Department Chair, the MCOSME Dean, the Dean of Graduate Students, if a graduate student, and the Office of Rights and Responsibilities, who may decide at their own discretion to impose a stiffer sanction based on knowledge of other instances of cheating at MSU Texas.

Note: Letting a student look at your work is collusion and is academic misconduct!

See Also: [MSU Student Handbook](#): Appendix E: Academic Misconduct Policy & Procedures
<https://msutexas.edu/student-life/assets/files/handbook.pdf>.

Disability Policy: In accordance with the law, MSU provides academic accommodations to students with documented disabilities. Students with disabilities must be registered with Disability Support Services before classroom accommodations can be provided. The DSS office is located in Clark Student Center, Room 168, phone 397-4140.

Policy on Concealed Handguns on Campus: Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage on [Campus Carry](#) at <https://msutexas.edu/police/policies-laws/index.php>. If you have questions or concerns, please contact the MSU Chief of Police at steven.callarman@msutexas.edu

Counseling Center: MSU offers personal, group, career, and academic counseling. Students are encouraged to take advantage of these **free** services by contacting the Counseling Center: Room 108 Clark Student Center, 397-4618, counseling@mwsu.edu.

Important Links: MSU Registrar's [Important Dates](#) Helpful information for students: [Student Resources](#).