

University of California, Santa Barbara

CMPSC 138 SUMMER 2018

Department of Computer Science

1. **COURSE** : Automata and Formal Languages
Lecture : TWR 12:30-1:50, PHELPS 2510
Discussion : W 2:00-3:20, PHELPS 2510
2. **INSTRUCTOR** : Ömer Egecioglu, omer@cs.ucsb.edu
2115 HFH, x-3529, Office hours : T,R 3:00-4:00pm, W 10:00-11:00am or by appointment.
3. **TEACHING ASSISTANT** : Mohammad Amiri, amiri@cs.ucsb.edu
1108 HFH, Office hours: M 12:00-2:00pm, T,F 11:00-12:00am or by appointment.
4. **REQUIRED TEXT** : Peter Linz, *An Introduction to Formal Languages and Automata (Sixth Ed.)*, Jones and Bartlett, 2017.

There are two copies of the textbook available for 2 hour checkout at the Davidson library.

5. **SOME REFERENCE MATERIAL FOR CS 138**

- (a) *Introduction to Automata Theory, Languages and Computation*, J. Hopcroft and J. Ullman, Addison-Wesley, 1979 ISBN 0-201-02988-X,
 - (b) *Introduction to Computer Theory*, (Second Edition), Daniel I. A. Cohen, John Wiley & Sons, 1997, ISBN 0-471-13772-3.
 - (c) *Introduction to Languages and the Theory of Computation*, J. Martin, McGraw-Hill, 1991 ISBN 0-07-040659-6.
6. **COURSE OUTLINE** : Topics to be covered include: introduction to formal languages, finite automata and regular expressions, properties of regular languages, non-determinism, context-free grammars, properties of context-free languages, machine models, pushdown automata, introduction to Turing Machines, decidability.

Please check the course homepage

www.cs.ucsb.edu/~cs138

daily for homeworks, solutions, announcements, the outlines of the lectures, schedule adjustments, etc.

We are going to use Piazza for discussions, Q&A about this class. Please sign up here:

piazza.com/ucsb/summer2018/cs138

7. **ASSIGNMENTS** : There will be 6 written homework assignments. All completed homework assignments are to be turned in during the discussion session on Wednesday as indicated below.

Homework 1 is posted Monday August 6, due Wednesday August 8

Homework 2 is posted Thursday August 9, due Wednesday August 15

Homework 3 is posted Thursday August 16, due Wednesday August 22

Homework 4 is posted Thursday August 23, due Wednesday August 29

Homework 5 is posted Thursday August 30, due Wednesday September 5

Homework 6 is posted Thursday September 6, due Wednesday September 12

8. **QUIZZES and EXAMS** : There will be six 30 minute quizzes. These are every Thursday, last 30 minutes of the lecture time. The quizzes are based on the material covered during lectures and the discussion section of that week. You will not need bluebooks for the quizzes.

The final exam for the course is on **Friday September 14, 4:00-7:00pm**.

All quizzes/final exam are closed book.

Please note that there will be no makeup quizzes/exams.

9. **GRADING POLICY** :

Assignments: 10/100, Quizzes: 60/100, Final exam: 30/100.

10. **IMPORTANT UCSB POLICY** : You are required to work on the homework assignments on your own. Please check the policies for expected student conduct of the UCSB catalogue. Note that in particular "It is expected that students attending the University of California understand and subscribe to the ideal of academic integrity, and are willing to bear individual responsibility for their work. Any work (written or otherwise) submitted to fulfill an academic requirement must represent a student's original work. Any act of academic dishonesty such as cheating or plagiarism, will subject a person to University disciplinary action. Using or attempting to use materials, information, study aids, or commercial "research" services not authorized by the instructor of the course constitutes cheating. Representing the words, ideas, or concepts of another person without appropriate attribution is plagiarism. Whenever another person's written work is utilized, whether it be single phrase or longer, quotation marks must be used and sources cited. Paraphrasing another's work, i.e., borrowing the ideas or concepts and putting them into one's "own" words, must also be acknowledged. Although a person's state of mind and intention will be considered in determining the University response to an act of academic dishonesty, this in no way lessens the responsibility of the student."