INTRODUCTION TO AUTOMATA AND THEORY OF COMPUTATION

Dr. Raj Singh

COURSE TIME & LOCATION

TU 6:00P – 8:00P

Virtual: Teams

Teams Meeting:
Link in BB.

INSTRUCTOR CONTACT

Instructor:	Dr. Raj Singh
Email:	rksingh@central.uh.edu
Office Hours:	By appointment
Office Location:	Virtual

COURSE OBJECTIVES

- Introduce concepts in automata theory and theory of computation
- Identify different formal language classes and their relationships
- Design grammars and recognizers for different formal languages
- Prove or disprove theorems in automata theory using its properties
- Determine the decidability and intractability of computational problems

COURSE ORGANIZATION

- Very broadly, the course will contain three parts:
  - Part I) Regular languages
  - Part II) Context-free languages
  - Part III) Turing machines & decidability

RECOMMENDED TEXTBOOK

Introduction to Automata Theory, Languages and Computation

By J.E. Hopcroft, R. Motwani, J.D. Ullman, 3rd Edition, Addison Wesley/Pearson

Course book homepage:
http://infolab.stanford.edu/~ullman/ialc.html

Solutions to starred exercises in the textbook & Errata

COURSE CONTENTS

- Class website: Blackboard
- Syllabus
- Class notes
- Assignments
- Quizzes
- Exams

LECTURES

- Online via Team
- Recordings are available on Blackboard
- Students are required to review material and recordings.
- We will only cover important material during lectures.

GRADING

Assignments	50 %
Quizzes	10 %
Midterm	20 %
Final	20%

ASSIGNMENTS

Five assignments (may change)

Soft copy on the due date

Submit in Blackboard
Early submissions allowed

No late submissions

Extensions may be permitted under extraordinary circumstances

Contact the instructor

Assignments will be available in Blackboard.

Pay close attention to due date.

Quizzes & Exams

- Quizzes: 2
- Exams: 2
- Multiple choice and short answers.
- Posted in Blackboard
- Final - Online Lockdown

CHEATING POLICY

All work must be done individually

Cheating: Copying someone else's work, paying someone …

Students caught cheating will be awarded "F" grade and will be subjected to the University academic dishonesty policy.

If something is not clear, on what constitutes and what does not, please consult the instructor in advance.

LECTURE BASICS

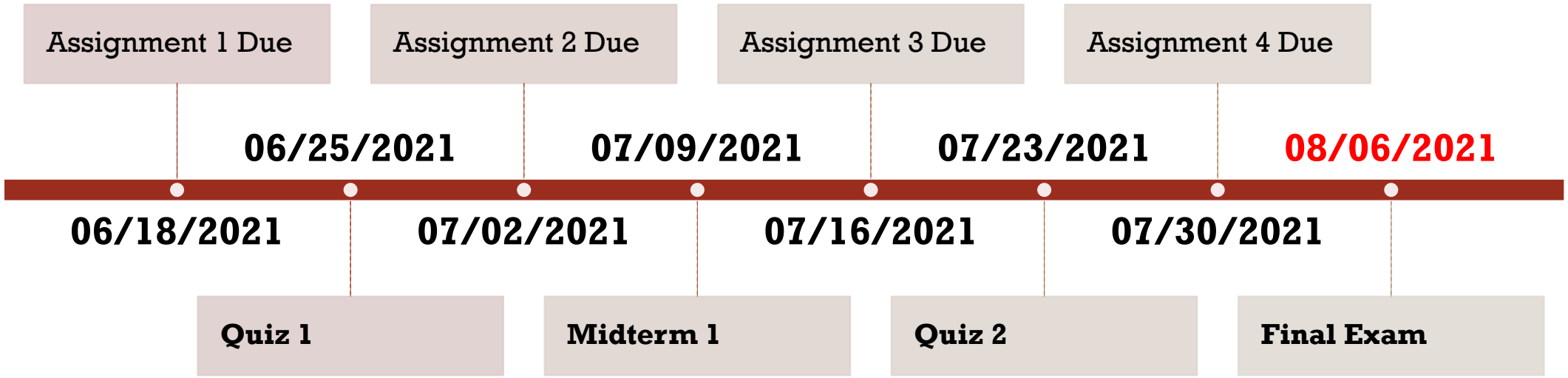
Lectures will involve slides and other resources.

Lecture slides and recordings are available in Blackboard

Students must review slides before lectures. We will only cover main topics during lectures.

Ask questions and participate in discussions.

TENTATIVE SCHEDULE (MAY CHANGE)



ADDITIONAL RESOURCES

- https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-045j-automata-computability-and-complexity-spring-2011/lecture-notes/