

**Department of Computer Science
University of Massachusetts Lowell
COMP.3040 Foundations of Computer Science
Fall 2019**

Instructor: Dr. Krishnan Seetharaman
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Time: Thursday 6:30-9:20 PM
Location: Olsern 407

Course Description

This is an introductory course on Foundations of Computer Science. Topics covered include:
A survey of the mathematical foundations of Computer Science. Finite automata and regular languages.
Stack Acceptors and Context-Free Languages. Turing Machines, recursive and recursively enumerable sets. Decidability. Complexity.

Some objectives of this course:

- Learn about Computational Models
- Learn about Languages
- Learn about Automata's
- Learn about State Machines
- Learn about Computability
- Learn about Complexity
- Learn about Reducibility

Pre-requisites

COMP.1020, MATH.3220

Required Text

Introduction to the Theory of Computation Third Edition, M. Spiser. Cengage Learning, 2013, ISBN 978-1-133-18779-0.

Additional References

Syllabus

- Chapters 1-5 of textbook

Course Schedule

Quiz 1	5%	[9/26/2019]
Exam 1	20%	[10/17/2019]
Quiz 2	5%	[11/14/2019]
Exam 2	20%	[12/19/2019]
Programming Assignment	15%	
Homeworks	35%	
Class Attendance	0-2%	

Class Schedule

Week	Material
1	Ch 0: Introduction; Ch 1: Regular Languages; 1.1; Introduction to Latex;
2	Ch 1.1-1.3
3	1.3-1.4; Ch 2.1
4	Quiz 1
5	Ch 2.2-2.3
6	Ch 2.3-2.4
7	Exam 1
8	Ch 3.1-3.2
9	Ch 3.2-3.3
10	Ch 4.1-4.2
11	Quiz 2
12	Ch 4.2; 5.1
13	Ch 5.2-5.3
14	Exam 2

Grading

Grades will be assigned as follows—based on the cumulative score:

A	95-100
A-	90-94
B+	85-89
B	80-94
B-	75-79
C+	70-74
C	65-69
C-	60-64
D+	55-59
D	50-54
F	< 50

Academic Policies

All work for this course must be done individually—no joint work or collaboration is permitted.

Students can discuss general concepts and problems they face when they work on the assignments but cannot copy or share code. Any form of plagiarism or copying will result in a grade of F. Please be aware of the Computer Science Department and the University's policies on copying and plagiarism.