Special Message: Test 1 will be on Wednesday, September 28 as scheduled. It will cover the sections given below through Section 3.6.

Last Updated: 9/25/2016

Course Information

Fall, 2016

Mathematics Foundations of Software Engineering

SE 3306.001 MW 4:00pm - 5:15pm in SLC 2.303

Professor Contact Information

Prof. Tim Farage

See my UTD homepage at www.utdallas.edu/~tfarage for office hours, etc.

TA Contact Information

TBA

Computer Science Mentoring Center: Computer Science/Discrete Math Mentoring Center Hours

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Pre-requisite: Discrete Math I

Course Description

Topics in Boolean logic, first-order logic, models of first-order logic. Introduction to program verification, applications in Software Engineering. Completeness Theorem. Regular expressions, regular sets, finite-state machines, and applications in Software Engineering. Graph Theory, graph algorithms.

Student Learning Objectives/Outcomes

1) Ability to understand and use propositional and predicate logic

2) Ability to understand and construct valid deductive proofs

3) Ability to understand and use set theory

4) Ability to understand and use graph theory

5) Ability to understand and use regular expressions/grammars/languages

6) Ability to understand and use finite state machines and automata

---

Required Textbooks and Materials

We'll be using the online zyBook for this course. To get it do this:

1. Go to zyBooks.com
2. Enter zyBook code "UTDALLASCS2305FarageFall2016"
3. Click Subscribe

The cost to subscribe is $48; any applicable returning student discounts will be applied automatically.

Assignments & Academic Calendar

The Participation Activities that appear in each section will be counted toward your grade, so be sure to do them.

Sections Covered in this Course:

Section 1.1

Section 1.2

Section 1.3

Section 1.4

Section 1.5

Section 1.6

Section 1.7

Section 1.8

Section 1.9

Section 1.10

Section 2.2

Section 2.4

Section 3.1

Section 3.2

Section 3.3

Section 3.6

Others TBA

The following are exercises given at the end of the sections. Please do these exercises in order to practice for the tests. They will not count toward your grade.

Exercise: 1.1.2

Exercise: 1.1.4

Exercise: 1.2.2

Exercise: 1.2.3

Exercise: 1.2.5

Exercise: 1.3.2

Exercise: 1.3.3

Exercise: 1.3.4

Exercise: 1.4.1

Exercise: 1.4.4

Exercise: 1.5.2

Exercise: 1.5.3

Exercise: 1.6.1

Exercise: 1.6.2

Exercise: 1.6.3

Exercise: 1.7.1

Exercise: 1.7.3

Exercise: 1.7.4

Exercise: 1.7.5

Exercise: 1.8.1

Exercise: 1.8.2

Exercise: 1.9.3

Exercise: 1.9.4

Exercise: 1.9.5

Exercise: 1.10.3

Exercise: 1.10.4

Others TBA

Note: Only pencils and blank paper are allowed during tests. No electronic devices of any kind are allowed. Test dates are subject to change.

Test Dates

Test 1 - Wednesday, September 28
Test 2 - Wednesday, November 2
Test 3 - Wednesday, December 7

All tests are weighted equally. Each test will contain an extra credit problem. No other extra credit will be given.

Grading Policy

The tests and any Participation Activities will determine your grade.

The final course average will be weighted as follows (These are subject to change):
Each test makes up 30% of your grade. The Participation Activities in zyBook make up 10% of your grade.

Letter grades will be assigned as given below. I reserve the right to make the grading scale easier than given here.

98-100	A+
92-97	A
90-91	A-
88-89	B+
82-87	B
80-81	B-
78-79	C+
72-77	C
70-71	C-

68-69	D+
62-67	D
60-61	D-
Below 60	F

Your grade will be based only on your scores as described above. PLEASE do not ask me to change your score/grade or give you a score/grade for any other reason. I know that some of you will lose scholarships, be deported, etc. if you do not make a certain score/grade; there is nothing I can do about this. Of course, if a mistake was made in scoring, I will correct it. Any requests for changes to scores must be made within 30 days after the day the graded material was returned to the class. Any request for a grade change must be made within 60 days after the day that grades were posted.

Course & Instructor Policies

All make-up exams are scheduled and given at the discretion of the instructor. Make-up exams are only given to those students who coordinate the missing of an exam prior to the originally scheduled exam date and time, or for an emergency.

Class attendance is recorded. There is a strong, direct correlation between class attendance and class performance. Those students who regularly attend class tend to make significantly higher final grades than those who don't.

Students are expected to be respectful to each other and to the course instructor. Disruptive behavior in the class room is not tolerated.

Each student in the class is encouraged to join/form a study group. Members of each study group are strongly encouraged to assist one another in learning and understanding the course material.

UT DALLAS SYLLABUS POLICIES AND PROCEDURES

For general UTD policies go to the link: **http://provost.utdallas.edu/syllabus-policies/**

These descriptions and timelines are subject to change at the discretion of the Professor.