

Course Syllabus

Course Information

CS6382.001.16F

Theory of Computation

Fall 2016

MW 2:30-3:45pm CB2 1.204

Professor Contact Information

Ding-Zhu Du

Phone: 972-883-6615

Email: dzdu@utdallas.edu

Office: ECSS 3-611

Office hour: 2:30-3:45 Thursday

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

Pre-require some basic knowledge on Automata Theory and Algorithm Design.

Course Description

The course consists of five parts: theory of deterministic computation, theory of nondeterministic computation, theory of parallel computation, theory of probabilistic computation, and theory of approximate computation.

Student Learning Objectives/Outcomes

Formal models of various computation, recursive function theory, undecidability, NP-completeness, PSPACE-completeness, P-completeness, #P-completeness, APX-completeness, etc.

Required Textbooks and Materials

Ding-Zhu Du and Ker-I Ko,

Theory of Computational Complexity (2nd Ed.)

John-Wiley, 2014.

Suggested Course Materials

Some reading materials may be provided in elearning system.

Assignments & Academic Calendar

Assignments: *There will be four assignments.
Each assignment will be due at the time as shown in elearning.
No late assignment will be accepted.*

Examinations: *There are two exams, the midterm examination
and the final examination. Each exam consists of two parts, an in-class part
(close books/notes) and a take-home part. Exam dates will be informed in elearning.*

Grading Policy

Each assignment 10%; the Midterm 30%; Final 30%.

**Grades will be assigned according to the total points
as follows: $A \geq 85 > B \geq 70 > C \geq 50$.**

Course & Instructor Policies

- (1) Homeworks and take-home parts of exams will be submitted in elearning and will not be accepted if submit after due time.
 - (2) Classroom presence will be enforced. If a student does not appear in classroom for three lectures without getting permission, then the grade will be decreased for one letter. Moreover, if for four lectures, then the grade will be F.
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Off-campus Instruction and Course Activities

There is no off-campus instruction and course activities.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.