## **BLG311E – Formal Languages and Automata**

## 2013-2014 SPRING

	CRN: 21658 - 21659	
Instructors:	Assoc.Prof.Dr.Osman Kaan Erol Asst.Prof.Dr.Tolga Ovatman	
Office:	5309	
Contact:	okerol@itu.edu.tr - ovatman@itu.edu.tr	
Assistant:		

**Textbook:** J.E. Hopcroft, J.D. Ullman, *Introduction to Automata Theory, Languages and Computation – Second Edition*, Addison-Wesley, 2001

Week	Topic	RECITATIONS
1	Finite State Machines - Definitions and Models	
2	Finite State Machines - State reduction and state equivalency	Recitation 1
3	Mathematical Foundations of Formal Languages - Inductive definitions, Alphabets and languages	Homework 1, Quiz 1
4	Mathematical Foundations of Formal Languages - Relations and closures, Languages and Grammars	Rec 2
5	Mathematical Foundations of Formal Languages - Chomsky Hierarchy, Regular Expressions	HW2 - Q2
6	MIDTERM I	
7	Automata - Deterministic Finite Automata	Rec 3
8	Automata - Non-Deterministic Finite Automata	HW3 - Q3
9	Automata - NFA/DFA equivalency	Rec 4
10	Automata – Pumping Lemma	HW4 - Q4
11	Push-down Automata and Context-free Languages	HW5 - Q5
12	1st of MAY	
13	MIDTERM II	
14	Turing Machines	Rec 5

## Grading

- Homeworks will not be graded, however students should deliver at least 3 homeworks to pass
- Quizzes: 10%
- Midterm: 50%
- Final exam: 40%.
- To enter the final exam you must attend at least 70%, your midterm term avarage should be over 35.
- At the end of the term, a total average below 40 will fail.

You can follow the course announcements, exam results and your attendance status on the Ninova system (<a href="http://ninova.itu.edu.tr/">http://ninova.itu.edu.tr/</a>).