Меѓународен Универзитет Визион - International Vision University
Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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DERS İZLENCESİ (SYLLABUS)

COURSE NAME	COURSE CODE	SEMESTER	COURSE LOAD	ECTS
INFORMATION THEORY	**4039**	**7**	**180**	**6**

Prerequisite(s)	None

Course Language	Turkish
Course Type	Elective
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra-Curricular Office Hours and Location	

Course Objectives	The objective of this course is to introduce the theory of automata and formal languages as a further step in abstracting the attention away from any particular kind of programming language. Basic models of computation will be presented which will set the grounds for many branches of computer science such as compiler design and software engineering. At the end of the course, students are expected to deal with all these concepts from an engineering viewpoint.
Course Learning Outcomes	The students who succeeded in this course; be able to apply languages of strings to specify decision problems be able to design deterministic and nondeterministic automata recognising given languages be able to convert a nondeterministic automaton into a deterministic automaton recognising the same language be able to convert a regular expression into a nondeterministic automaton be able to use the pumping lemma that a language is not regular be able to use pushdown automata be able to construct Turing machines
Course Contents	The following topics will be included: regular expressions and context free languages, finite and pushdown automata, Turing machines, computability, un decidability, and complexity of problems.

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Deterministic finite automata	Related Chapters of Course Sources
2	Deterministic finite automata	Related Chapters of Course Sources
3	Regular expressions	Related Chapters of Course Sources
4	Context free grammars	Related Chapters of Course Sources
5	Pushdown automata	Related Chapters of Course Sources
6	Turing machines	Related Chapters of Course Sources
7	Mid-term Exam	Related Chapters of Course Sources
8	Decidability and un decidability	Related Chapters of Course Sources
9	The class P	Related Chapters of Course Sources
10	The class NP	Related Chapters of Course Sources
11	NP completeness	Related Chapters of Course Sources
12	NP completeness	Related Chapters of Course Sources
13	The clique problem	Related Chapters of Course Sources
14	The subset sum problem	Related Chapters of Course Sources
15	Final Exam	Related Chapters of Course Sources

ECTS / WORKLOAD TABLE

Presentation / Seminar			
Hours for off-the-classroom study (Pre-study, practice)	14	3	42
Midterm Exam	1	12	12
Final examination	1	14	14
Total Work Load			
ECTS	**6**		

GENERAL PRINCIPLE RELATED WITH COURSE

Dear students,

You need to be included in the flow, please follow the course of learning and using that to achieve our success you deserve, you need to practice every day on topics that are covered by the course. It takes practice reading basic and auxiliary literature that is strictly recommended. You should visit classes course I need to make an effort to visit all the professors' lectures. Your activity on the session will be assessed by your professors and the Battle active participant in the discussions that will take place during the time. Students visiting lectures for all at the end if an additional 15 points.

SOURCES

COMPULSORY LITERATURE		
No	**Name of the book**	**Author's Name, Publishing house, Publication Year**
1	Kuramı ve Biçimsel Diller, 2. Baskı, 2011	Ünal YARIMAĞAN
2		
3	Introduction to the theory of computation	Michael Sipser.

ADDITIONAL LITERATURE		
No	**Name of the book**	**Author's Name, Publishing house, Publication Year**
1		
2		
3		

EVALUATION SYSTEM

Underlying the Assessment Studies	**NUMBER**	**PERCENTAGE OF GRADE**
Attendance/Participation	15	%10
Project / Event	1	%20
Mid-Term Exam	1	%35
Final Exam	1	%35
TOTAL	**17**	**%100**

ETHICAL CODE OF THE UNIVERSITY

In case students are cheating on exams or preparation the same, it is not making reference to the source to be used in studies, as for example in assignments, projects and presentation (plagiarism), in accordance with legislations by Ministry of Education and Science of the Republic of Macedonia and İnternational Vision University, apply relevant disciplinary rules. İnternational Vision University students are expected never attempts in this kind of behavior.