

Course Name : The Compilers							
Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
CMP 116	B	Spring	3.00	1.00	0.00	3.50	5.00
Lecturer		Elton Kaziu, Msc					
Assistant		Kleona Elezi, Msc					
Course language		Albanian					
Course level		Bachelor					
Description		Compilers is a course that describes the bases of the compilers, functions and processes. the phases of a compiler and its elements. This course has a broader aspect and will introduce the students with the fundamentals of the compilers, their important role they play on transforming the code from a higher programming language to the code known by the machine.					
Objectives							
Core Concepts		Introduction to Compilers Compiler Construction System Lexical Analysis (Lexing) Syntax Analysis (Parsing) Semantics and Error Checking Code Generation Compiler Optimization Compiler Structure Programming Languages and Compiler Construction Tools and Technologies for Compilers Importance of Compiler Testing Improvement and Development of Compilers					
Course Outline							
Week	Topic						
1	Introduction						
2	A Simple Syntax-Directed Translator I						
3	A Simple Syntax-Directed Translator II						
4	Lexical Analysis						
5	Lexical Analysis(Finite Automata, NFA)						
6	Syntax Analysis (DFA)						
7	Review						
8	Midterm						
9	Syntax Analysis (DFA) ys						
10	Syntax Analysis Top-Down Parsing I						
11	Syntax Analysis Top-Down Parsing II						
12	Syntax Analysis Bottom-Up I						
13	Syntax Analysis Bottom-Up II						
14	Syntax Analysis Bottom-Up III						
15	Review						
16	Final Exam						

Prerequisites	The student must attend the course at a minimum rate of 75%.		
Literature	• Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman, Compilers - Principles, Techniques, and Tools, Second Edition, 2007, Pearson/Addison Wesley		
References	•		
Course Outcome			
1	Njohuri në strukturën e kompilatorëve.		
2	Ndërtimin e kompilatorëve.		
3	Fazat në të cilat kalon një program burim për tu përkthyer nga kompilatori në një gjuhë të kuptueshme dhe të ekzekutueshme nga makinat.		
Course Evaluation			
In-term Studies		Quantity	Percentage
Midterms		1	30
Quizzes		0	0
Projects		1	30
Term Projects		0	0
Laboratory		0	0
Class Participation		0	0
Total in-term evaluation percent			60
Final exam percent			40
Total			100
ECTS Workload (Based on Student Workload)			
Activities	Quantity	Duration (hours)	Total (hours)
Course duration (Including the exam week: 16x Total hours of the course)	16	4	64
Study hours outside the classroom (Preparation, Practice, etc.)	14	4	56
Duties	1	2	2
Midterms	1	1	1
Final Exam	1	1	1
Other	0	0	0
Total Work Load			124
Total Work Load / 25 (hours)			4.96
ECTS			5.00