

Course Name : Introduction to Algorithms and Programming							
Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
CMP 111	A	Fall	3.00	1.00	0.00	3.50	5.00
Lecturer		Edlir Spaho, MSc					
Assistant							
Course language		Albanian					
Course level		Bachelor					
Description							
Objectives							
Core Concepts							
Course Outline							
Week	Topic						
1	Introduction to Computers and C++						
2	Introduction to C++ Programming, Flowcharts, Algorithms and Pseudo codes						
3	Variables Declaration, Data Types, Operators and Expressions						
4	Formatting of Data in C++						
5	Conditional Structures						
6	Repetitive Structures (Loops)						
7	Vectors and Matrices						
8	Midterm Exam						
9	Operations with Vectors and Matrices						
10	Functions						
11	Functions and Recursion						
12	Functions with Vectors and Matrices						
13	Enumerations						
14	Files in C++						
15	Review and Projects Presentation						
16	Final Exam						

Prerequisites	The student must attend the course at a minimum rate of 75%.		
Literature	• Agni Dika - Bazat e programimit ne C++, 2005 • Deitel H. and Deitel P., “C How to Program”, 5th Edition, Prentice Hall, 2007		
References			
Course Outcome			
1	Students will be able to understand principles of structuring Flowcharts and Algorithms.		
2	Students will be able to program in C++ by using conditional structures, loops, functions, vectors, matrices and files.		
3	Students will be able to use different programming techniques to build modular programming with high efficiency.		
4	Students will be equipped with necessary terminology and techniques to pursue other subsequent subjects such as Object Oriented Programming as well as other programming languages.		
5	Students will be able to understand and use the key elements of C++ Programming Language		
Course Evaluation			
In-term Studies		Quantity	Percentage
Midterms		1	20
Quizzes		0	0
Projects		1	20
Term Projects		0	0
Laboratory		2	10
Class Participation		1	10
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	3	42
Duties	3	5	15
Midterms	1	5	5
Final Exam	1	10	10
Other	0	1	0
Total Work Load			136
Total Work Load / 25 (hours)			5.44
ECTS			5.00