



INTERNATIONAL UNIVERSITY OF SARAJEVO
FACULTY OF ENGINEERING AND NATURAL SCIENCES
ENS213 - Programming for Engineers
AY 2019-2020

Course Code	Course Title		Weekly Hours*			ECTS	Weekly Class Schedule	
			T	A	L			
ENS213	Programming for Engineers		3	0	2	6	Tue: 11:00-13:00 Thur: 10:00-11:00	
Prerequisite	None	It is a prerequisite to						
Lecturer	Assist. Prof. Dr. Emine Yaman		Office Hours Schedule			Tue: 13:00-15:00, Wed:11:00-13:00, Thur:14:00-16:00		
E-mail	eyaman@ius.edu.ba							
Phone	205		Office / Room No		BF2.7C			
Assistant	Sejla Burnic, Merima Mujala							
E-mail								
Course Objectives	Designed for students with little or no prior experience in programming. The course introduces the basic concepts of procedural programming. The main goal is for students to develop confidence in programming and the ability to apply programming skills to problems arising in a variety of fields. Topics include: high-programming languages, language syntax, control statements, loops, functions, arrays, simple searching and sorting.							
Textbook	Problem Solving with C++, W. Savitch, 9th ed. Pearson, 2014.							
Learning Outcomes	After successful completion of the course, the student will be able to:							
	1	Design programs to solve basic problems.						
	2	Apply the concept of variables and control structures to real-life computational problems.						
	3	Design and implement functions, parameters, and return values.						
	4	Solve problems requiring the use of arrays and pointers.						
5	Perform file input and output.							
Teaching Methods	Class discussions with examples. Active lab sessions for engaged learning and continuous feedback on progress. Lab exercises and practical assignments.							
WEEK	TOPIC					REFERENCE		
Week 1	Introduction to course					Chapter 1		
Week 2	Introduction to computers & C++ programming, C++ basics					Chapter 1,2		
Week 3	C++ basics, variables					Chapter 2		
Week 4	Flow of control					Chapter 3		
Week 5	Flow of control +Quiz1					Chapter 3		
Week 6	Flow of control+Review					Chapter 3		
Week 7	MID-TERM Exam							
Week 8	Abstraction and Functions					Chapter 4		
Week9	Abstraction and Functions					Chapter 4		
Week 10	Functions, passing by value and by reference					Chapter 5		
Week 11	Recursion +Quiz2					Chapter 14		
Week 12	Arrays					Chapter 7		
Week 13	Searching in Arrays					Chapter 7		
Week 14	Sorting in Arrays					Chapter 7		
Week 15	Review							
Assessment Methods and Criteria	Evaluation Tool		Quantity		Weight	Alignment with LOs		
	Final Exam		1		40	1,2,3,4,5		
	Semester Evaluation Components				60			
	Midterm Exam		1		25	1,2,3		
	Quiz		2		20	1,2,3,4,5		
Labs(Assignments)		8		15	1,2,3,4,5			
*** ECTS Credit Calculation ***								
Activity	Hours	Weeks	Student Workload Hours	Activity	Hours	Weeks	Student Workload Hours	
Lecture Hours	3	15	45	Midterm exam study	10	1	10	
Assignments	2	8	16	Final Exam study	19	1	19	
Active Tutorials	2	10	20	Home study	2	15	30	
Quizzes study	5	2	10	Total Workload Hours =			150	
						ECTS Credit =		6