



MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Fall

CSE4060 Principles Of Programming Languages

**COURSE DESCRIPTION FORM**

<b>Offering Department</b>	Department of Computer Engineering		Technical Elective					
<b>Course Code</b>	CSE4060							
<b>Course Name</b>	Principles Of Programming Languages							
<b>Language of Instruction</b>	English							
<b>ECTS</b>	5							
<b>Contact Hours</b>	Theoretical (T): 3	Practice (P): 0	Laboratory(L): 0					
<b>Pre-requisites</b>	---							
<b>Instructor</b>	<b>Name</b>	Fatma CORUT ERGİN						
	<b>E-mail</b>	fatma.ergin@marmara.edu.tr						
<b>Course Materials</b>	<b>Mandatory</b>	Robert W. Sebesta, Concepts of Programming Languages, 11th edition, Pearson, 2016						
	<b>Recommended</b>	Michael L. Scott, Programming Language Pragmatics, 4th edition, Morgan Kaufmann Publishers, Dec. 2015.						
<b>Course Objectives</b>	To introduce the basic concepts of programming languages and to give the students the ability to think about program behavior. To enable implementing projects using different programming languages.							
<b>Course Content</b>	Syntax and semantics. Lexical and syntax analysis. Names, bindings, scopes. Type control, variables and data types. Expressions and Assignment Statements. Statement Level Control Structures. Subprograms and implementing subprograms. Parameter passing methods. Dynamic and static memory management. Abstract data types. Logic programming. Functional programming.							
<b>Learning Outcomes</b>	<b>LO1</b>	Given the grammar of a language, to be able to define the language and to write its parser.						
	<b>LO2</b>	Given the grammar of a language, to define the semantics rules.						
	<b>LO3</b>	To be able to comment on the scope and lifetime of variables in dynamic/static programming languages.						
	<b>LO4</b>	To be able to comment on the working principles of logical and mathematical terms in different types of programming languages.						
	<b>LO5</b>	To be able to comment on the working principles of different parameter passing methods for subprograms.						
<b>Program Outcomes</b>		<b>LO1</b>	<b>LO2</b>	<b>LO3</b>	<b>LO4</b>	<b>LO5</b>		
<b>PO1</b>	Adequate knowledge in mathematics, science (a) and computer engineering subjects (b) pertaining to the relevant discipline (1); ability to use theoretical and applied information in these areas to model and solve engineering problems (2).		1b	1b	1b	1b		
<b>PO4</b>	Ability to devise (a), select, and use (b) modern techniques and tools needed for engineering practice (1); ability to employ information technologies effectively (2).	2						
<b>Subjects (Knowledge, Skills and Behaviours), Contributions of Subjects to Learning Outcomes, Assessment Methods</b>	<b>No</b>	<b>Week</b>	<b>Subjects</b>	<b>LO1</b>	<b>LO2</b>	<b>LO3</b>	<b>LO4</b>	<b>LO5</b>
	<b>S1</b>	1-2-3	Syntax and Semantics	MF, Q	MF			
	<b>S2</b>	4-5-6	Lexical and Syntax Analysis	MF, P				
	<b>S3</b>	7	Names, Bindings, Scopes			MF		
	<b>S4</b>	8-9	Data Types			MF		
	<b>S5</b>	10-11	Expressions and Assignment Statements				MF	
	<b>S6</b>	12	Statement Level Control Structures				MF	
	<b>S7</b>	13	Subprograms					MF
<b>S8</b>	14	Implementing Subprograms					MF	
<b>Assessment Methods and Weights</b>	<b>No</b>	<b>Type</b>	<b>Weight</b>	<b>Implementation Rule</b>		<b>Make-up Rule</b>		
	<b>MF</b>	Midterm, Final	70%	It is allowed to have an A4 size handwritten cheat sheet in the exams. Any kind of calculators or communication devices are not allowed.		Marmara University regulations will be followed for make-up exams.		
	<b>P</b>	Project	20%	1 project is assigned. The deadline for the project is 4 weeks after the assignment.		Project can be submitted up to 5 days after the due date with a penalty of 10% for each late day. The grade for unsubmitted project is zero.		
	<b>Q</b>	Quiz	10%	There are two pop-up quizzes. Any kind of notes, calculators or communication devices are not allowed.		There is no make-up for the quizzes. The higher grade is taken as the overall quiz grade.		
	<b>TOTAL</b>		100%					

**Determining Letter Grades**

- The letter grades will be determined based on the midterm and final exams, quizzes and project.
- In order to determine the letter grade, a curve or catalog based method will be followed based on the total average scores of the students.
- The final exam score and the total average score of the student must be at least 35 to pass the course.
- According to Marmara University Undergraduate regulations, the weight of the final exam must be at least 40 out of 100.

Assessment	Midterm	Project	Quiz	Final	TOTAL
Weight	30	20	10	40	100

**Teaching Method, Student Work Load****Time Applied by Instructor**

No	Method	Explanation	Hours
1	Lectures	Lectures are given in class using the board or via presentations. Example questions are solved to enhance the concepts.	14x3=42
2	Problem Session/ Practice	Problems related to the course topics are solved on the board.	-
3	Laboratory	Experiments are done in the laboratory or theoretical concepts covered during the lectures are practiced using computer exercises.	-
4	Interactive Courses	Questions are asked to students during lectures and they are encouraged to guess the answers (peer learning is also in this category)	-
5	Field Work	Students attend activities outside the campus.	-
6	Midterm	Midterm exam is given during the midterm week.	2
7	Final	Final exam is given during the final exam week.	2

**Estimated Time to be Allocated by a Student**

8	Project	The students carry out research about the problem given in the project, design and implement their solution and prepare a report.	1x48=48
9	Homeworks	The students solve the problems given as homework.	
10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.	14
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.	14
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.	2
<b>TOTAL</b>			<b>124</b>

**Academic Honesty**

Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

In case academic dishonesty is observed, the first authority is the instructor of the course. The instructor may decide to give the student zero for the homework(s)/lab(s)/exam(s), give the letter grade FF, or may take disciplinary action.