



MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Spring

CSE1142 – Computer Programming II

COURSE DESCRIPTION FORM

Offering Department	Department of Computer Engineering		Undergraduate must course (2nd semester)							
Course Code	CSE1142									
Course Name	Computer Programming II									
Language of Instruction	English									
ECTS	7									
Contact Hours	Theoretical (T): 3			Practice (U): 0			Laboratory(L): 0			
Pre-requisites	CSE1141 Computer Programming I									
Instructor	Name	Sanem Arslan Yılmaz								
	E-mail	sanem.arslan@marmara.edu.tr								
Course Materials	Mandatory	Daniel J. Liang , Introduction to JAVA Programming Comprehensive Version 10th Edition, Pearson. Deitel & Deitel, C How to Program 8th Edition, Pearson.								
	Recommended	J.R. Hanly & E.B. Koffman, Problem Solving and Program Design in C 8th Edition, Pearson.								
Course Objectives	The aim of this course is to teach object-oriented programming concepts in Java programming language, to teach the basic concepts of C programming language and to provide design and development skills for advanced computer programs.									
Course Content	This course starts with the revision of basic object-oriented concepts in CSE1141. Intermediate-level object-oriented concepts including interfaces, abstract classes, JAVA GUI (JAVAFX), exception handling and text I/O, event-based programming are explained. In the second half of the course, basic concepts of C programming language, pointers, structures and introduction to data structures are explained.									
Learning Outcomes	LO1	Design, implement and test computer programs using object-oriented approaches.								
	LO2	Explain basic and intermediate level object-oriented programming concepts.								
	LO3	Implement graphical user interfaces (GUI) using Java programming language.								
	LO4	Design, implement and test moderate computer programs using C programming language.								
	LO5	Gain experience in C programming language development environments.								
	LO6	Explain and use concepts such as pointers, structures and dynamic memory management in C programming language.								
Program Outcomes		LO1	LO2	LO3	LO4	LO5	LO6			
PO1	Adequate knowledge in mathematics, science (a) and 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).		2	1b	2	2			1b, 2	
PO4	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		2	2	2			
PO6	Ability to work efficiently in intra-disciplinary (a) and multi-disciplinary teams (b); ability to work individually (c).		c		c	c				
Subjects (Knowledge, Skills and Behaviours), Contributions of Subjects to Learning Outcomes, Assessment Methods	No	Week	Subjects	LO1	LO2	LO3	LO4	LO5	LO6	LO7
	S1	1	Polymorphism	H, Q,	MF, Q,					
	S2	2-3	Exception Handling and Text I/O	H, Q	MF, Q					
	S3	4-5	Abstract Classes and Interfaces	H, Q	MF, Q,					
	S4	6	JavaFX Basics	P		P				
	S5	6-7	Event-Driven Programming	P		P				
	S6	7	JavaFX UI Controls and Multimedia	P		P				
	S7	8	Introduction to C, Data Types				H	H		
	S8	9	Control Structures and Functions in C				H, Q, MF	H		
	S9	10	Recursion and Arrays in C				H, Q, MF	H, Q		
S10	11, 12	Pointers and Strings in C				H, Q, MF	H, Q	MF, H, Q		

	S11	12	Structures and Unions in C			H, Q, MF	H, Q	MF, H, Q													
	S12	13	Text I/O in C			H	H														
	S13	14	Introduction to Data Structures (Linked Lists, Queues, Stacks)			MF, H		MF, H													
Assessment Methods and Weights	No	Type	Weight	Implementation Rule		Make-up Rule															
	MF	Midterm, Final	%60	Exams will be closed books and notes. The students will be allowed to use 1-page cheat sheet during the exams. No calculators and communication tools are allowed during the exams.		Marmara University regulations will be followed for make-up exams.															
	Q	Quiz	%15	At least five quizzes (both in-class and lab-quizzes) will be done. The date of in-class quizzes will be announced to the students beforehand; however, the lab-quizzes will be done without any announcement.		-															
	H	Homeworks	%15	Five homeworks will be assigned in total. The due date of a given homework will not be more than ten days after it is assigned. Late submission will not be accepted. The student who does not submit the homeworks will take a grade of zero.		-															
	P	Project	%10	A term project will be given which is done in groups of two students. A minimum of 4-5 weeks will be given to the students for the project implementation and report. Late submission will not be accepted.																	
	R	Report	-	Students are expected to write a project report for their term projects. The report grade is included in the project total grade.																	
	L	Class/ Laboratory/ Field Work	-	Two hours of laboratory work will be done every week.																	
	TOTAL		%100																		
Determining Letter Grades	<ul style="list-style-type: none"> The letter grades will be determined based on the midterm and final exams, quizzes and homeworks. 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. 																				
	<table border="1"> <thead> <tr> <th>Assessment</th> <th>Midterm</th> <th>Quizzes</th> <th>Homeworks</th> <th>Project</th> <th>Final</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Weight</td> <td>20</td> <td>15</td> <td>15</td> <td>10</td> <td>40</td> <td>100</td> </tr> </tbody> </table>								Assessment	Midterm	Quizzes	Homeworks	Project	Final	TOTAL	Weight	20	15	15	10	40
Assessment	Midterm	Quizzes	Homeworks	Project	Final	TOTAL															
Weight	20	15	15	10	40	100															
Teaching Method, Student Work Load	Time Applied by the 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.				14x2=28														
	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.				36														
	9	Homeworks	The students solve the problems given as homework.				6x4=24														
10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.				-															
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.				36															
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.				4															

	Total	174
Academic Honesty	<p>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.</p> <p>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.</p>	