T.C. ESKİŞEHİR OSMANGAZİ UNIVERSITY
ENGINEERING AND ARCHITECTURE FACULTY
ELECTRICAL-ELECTRONICS ENGINEERING DEPARTMENT

COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE		COURSE NAME	OBJECT ORIENTED PROGRAMMING II

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	**Practice**	**Laboratory**	**Credit**	**ECTS**	**TYPE**	**LANGUAGE**
8	3	0	2	4	7	COMPULSORY ( ) ELECTIVE (X)	ENGLISH

COURSE CATAGORY				
Basic Science	**Basic Engineering**	**Engineering Subjects** [if it contains considerable design, mark with (√)]		**Social Science**
		( )		

ASSESSMENT CRITERIA			
	Evaluation Type	**Quantity**	**%**
MID-TERM	Mid-Term	1	25
	Quiz	3	30
	Homework		
	Project		
	Report		
	Others (Laboratory)	6	10
FINAL EXAM		1	35

PREREQUIEITE(S)	
COURSE DESCRIPTION	Basic Concepts, Input/Output,Decision and Repetition Structures, QT-IDE, Functions, File Processing, Exception Handling, String and Lists, Classes.
COURSE OBJECTIVES	To introduce basic concepts of the object-oriented programming. To be able to use decision and repetition structures, functions, file processing and exception handling while developing software. To know data structures such as lists and strings in order to implement software. To design software by using classes.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	In this course, students will be familiar with object-oriented programming techniques which are used to develop high-quality and large-scale software. They will also learn to model real-world problems. Then, they will learn to choose appropriate tools to implement software which is proposed a solution to these problems.
COURSE OUTCOMES	1) Students will learn basic concepts about the object-oriented programming. 2) Students will learn and use decision and repetition structures. 3) Students will learn and use functions concept. 4) Students will learn why exception handling is an important concept and how it is implemented. 5) Students will learn and use data structures such as list and string. 6) Students will learn how to be used classes while developing software.
TEXTBOOK	Tony Gaddis, Starting Out with Python, 4th Edition, Pearson Education, 2009.
OTHER REFERENCES	Robert Sedgewick, Kevin Wayne, Robert Dondero, Introduction to Programming in Python: An Interdisciplinary Approach, First Edition, Addison-Wesley Professional, 2015.
TOOLS AND EQUIPMENTS REQUIRED	

	COURSE SYLLABUS	
WEEK	**TOPICS**	
1	Introduction to Python programming	
2	Basic Concepts(Input/Output, Variables, Comments, Arithmetic and so on)	
3	Decision Structures	
4	Repetition Structures	
5	Functions	
6	Qt-IDE applications	
7	Qt-IDE applications	
8	Mid-Term Examination	
9	Mid-Term Examination	
10	Exception Handling	
11	File Processing	
12	Data Structures (lists and strings)	
13	Classes	
14	Classes	
15,16	Final Exam	

NO	PROGRAM OUTCOMES	3	2	1
1	Sufficient knowledge of engineering subjects related with mathematics, science and own branch; an ability to apply theoretical and practical knowledge on solving and modeling of engineering problems.	[ ]	[x]	[ ]
2	Ability to determine, define, formulate and solve complex engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	[ ]	[x]	[ ]
3	Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods.	[ ]	[x]	[ ]
4	Ability to develop, select and use modern methods and tools required for engineering applications; ability to effective use of information technologies.	[x]	[ ]	[ ]
5	In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	[ ]	[ ]	[x]
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	[ ]	[ ]	[x]
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	[ ]	[ ]	[x]
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	[ ]	[ ]	[x]
9	Understanding of professional and ethical issues and taking responsibility	[ ]	[ ]	[x]
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	[ ]	[ ]	[x]
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	[ ]	[ ]	[x]
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Prepared by: Asist. Prof. Dr. Burak Kaleci   **Date:**

Signature(s):