HASAN KALYONCU UNIVERSITY
Faculty of Engineering
Course Description Form

COURSE: COMPUTER PROGRAMMING I				
CODE: CENG111	SEMESTER: FALL			
LANGUAGE: ENGLISH	TYPE: COMPULSORY			
PRE-REQUISITES: NONE CO-REQUISITES: NONE	THEORY	PRACTICAL	CREDIT	ECTS
WEEKLY HOURS:	3	2	4	5

CONTENT OF THE COURSE:

This first course in a sequence of two courses as covering subjects at higher level in Python Programming language and an introduction to programming concept by using C programming language. Specifically following subjects in Python Programming Language are taught in this course. Algorithm concept. Flow charts. Structural programming concept. Modular programming. File processing. Lists and applications.

OBJECTIVE OF THE COURSE:

The course aims to make an introduction to computer programming. It presents knowledge about structural programming, algorithm concept and design of algorithms from an elementary level to an advanced level. At the end of this course, the students will have learned how to develop a program in Python programming language for various problems.

WEEKLY SCHEDULE	
Week	Topics
1	Introduction of Course Syllabus
2	Chapter 1 Introduction to Computers and Programming
3	Chapter 2 Input, Processing, and Output
4	Chapter 2 Input, Processing, and Output
5	Flow Charts and Algorithm Concept
6	Chapter 3 Decision Structures and Boolean Logic
7	Chapter 3 Decision Structures and Boolean Logic and General Review Before Midterm
8	Midterm Examination
9	Chapter 4 Repetition Structures
10	Chapter 4 Repetition Structures
11	Chapter 5 Functions
12	Chapter 5 Functions
13	Chapter 6 Files and Exceptions
14	Chapter 7 Lists and Tuples

TEXTBOOK:
- Starting Out with Python Global Edition (4E) by Tony Gaddis Pearson (2018).

REFERENCE BOOKS:
- Introduction to Programming using Python, 1E by Y. Daniel Liang, Pearson (2012).
- Python Programming for the Absolute Beginner, 3E by M. Dawson, Course Technology (2010).
- Introduction to Programming Concepts with Case Studies in Python, 1E by Üçoluk & Kalkan, Springer (2012).
- Python How to Program, 1E by Paul Deitel and Harvey Deitel, Pearson (2001).

EVALUATION SYSTEM:

IN-TERM STUDIES	QUANTITY	PERCENTAGE (%)
Midterm Exam	1	25
Attendance	1	5
Laboratory works	13	25
Quiz		
Final Exam	1	45
TOTAL	16	100
CONTRIBUTION OF INTERM STUDIES TO OVERALL GRADE	15	55
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	1	45
TOTAL	16	100

COURSE CATEGORY:	PERCENTAGE (%)
Mathematics and Basic Sciences	20
Engineering	40
Engineering Design	40
Social Sciences	0

TABLE OF ECTS / WORKLOAD:

Activities	QUANTITY	Duration (Hour)	Total Workload
Course Duration	13	3	39
Hours for off-the-classroom study (Pre-study, practice)	14	5	70
Laboratory works	13	2	26
Mid-term	1	2	2
Final examination	1	2	2
Homework			
Quiz			
Total Work Load			**139**
Total Work Load / 30			**4,63**
ECTS Credit of the Course			**5**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
LO1	1	2	3	0	0	2	0	2	0	0	0
LO2	1	3	3	0	0	3	0	2	0	0	0
LO3	2	3	3	0	0	3	0	2	0	0	0
	PO: Program Outcomes | LO: Learning Outcomes Values: 0: None | 1: Low | 2: Medium | 3: High										

INSTRUCTOR(S):	Assoc. Prof. Dr. M. Fatih HASOĞLU
FORM PREPARATION DATE:	22.05.2019

LEARNING OUTCOMES OF THE COURSE:	PROGRAM OUTCOMES:
LEARNING OUTCOMES OF THE COURSE: **LO1:** Gain knowledge about programming. **LO2:** Gain knowledge about structural programming, algorithm concept and design of algorithms. **LO3**: Learn how to develop a program in Python programming language for various problems.	**PO1:** Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems. **PO2:** Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose. **PO3:** Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose. **PO4:** Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice; ability to employ information technologies effectively. **PO5:** Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions. **PO6:** Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually. **PO7:** Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language; ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions. **PO8:** Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself. **PO9:** Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice. **PO10:** Knowledge about business life practices such as project management, risk management, and change management; awareness in entrepreneurship,

| | innovation; knowledge about sustainable development.
PO11: Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions. |