Identification	**Subject**	CMS 140: Fundamentals of Computer Programming (6 ECTS credits)	
	Department	Physics and Electronics	
	Program	Undergraduate	
	Term	Spring, 2021	
	Instructor	Behnam Kiani Kalejahi	
	E-mail:	Bkiani@khazar.org	
	Classroom/hours	41 Mehseti str. (Neftchilar campus)	
Prerequisites	CMS 101: Introduction to Computer Science		
Language	English		
Compulsory/Elective	Compulsory		
Required textbooks and course materials	1. The Python Manual Vol 33, Publisher: Various (2018) 2. Python Notes for Professionals, Stack Overflow Contributors, (January 28, 2018)		
Course website			
Course outline	This is a computer science course that introduces the Fundamentals of computer technology, architecture, programming languages and their application in daily life. Introduction to programming using Python language, sequential programming, control of flow, arrays and iterators, blocks and process.		
Course objectives	Course objectives are: - Learn to program in Python language - Learn working with numbers, letters and string - Learn working with arrays and iterators - Learn to program using conditions and loops - Learn to program using blocks and process		
Learning outcomes	By the end of the course students should be able: - To understand basics computer structure - To develop programs using Python language - To solve various problems using programming		
Teaching methods	**Lecture**		x
	Experiential exercise		x
	Assisted work		x
	Lab work		x
	Others		
Evaluation	**Methods**	**Date/deadlines**	**Percentage (%)**
	Midterm Exam		30
	Class Participation and Attendance	During of the semester	10
	Assignment and quizzes (2)	During of the semester	20
	Final Exam		40
	Total		100

Policy	✦ **Preparation for class** The structure of this course makes your individual study and preparation outside the class extremely important. The lecture material will focus on the major points introduced in the text. Reading the assigned chapters and having some familiarity with them before class will greatly assist your understanding of the lecture. After the lecture, you should study your notes and work relevant problems and cases from the end of the chapter and sample exam questions. Throughout the semester we will also have a large number of review sessions. These review sessions will take place during the regularly scheduled class periods. ✦ **Withdrawal (pass/fail)** This course strictly follows grading policy of Khazar University. Thus, a student is normally expected to achieve a mark of at least 60% to pass. In case of failure, he/she will be required to repeat the course the following term or year. **Cheating/plagiarism** Plagiarism and Cheating of any kind on an examination, quiz, or project will lead to assignment cancellation. In this case, the student will automatically get zero (0), without any considerations. **Professional behavior guidelines** The students shall behave in the way to create favorable academic and professional environment during the class hours. Unauthorized discussions and unethical behavior are strictly prohibited.

Tentative Schedule			
Weeks	**Date/Day (tentative)**	**Topics**	**Textbook/Assignments**
1	10.02.2021 12.02.2021	The Context of Software Development - Software – Learning Programming with Python	
2	17.02.2021 19.02.2021	Introduction to Computer Programming	Chapter 1/ Text Book1
3	24.02.2021 26.02.2021	Introduction to Python programming	Chapter 2 / Text Book1
4	02.03.2021 04.03.2021	Simple examples in Python	Chapter 2 / Text Book1
5	09.03.2021 11.03.2021	Values and Variables - Integer and String Values - Identifiers - User Input - String Formatting	Chapter 3 / Text Book1 Chapter 2 / Text Book2
6	16.03.2021 18.03.2021	Expressions and Arithmetic - Expressions - Arithmetic Examples	Chapter 4 / Text Book1 Chapter 9 / Text Book2
7	30.03.2021 01.04.2021	Conditional Statements - Boolean expressions - If/Else statement - Other Conditional Expressions	Chapter 4 / Text Book1 Chapter 11 / Text Book2
8		**Midterm Exam**	
9	06.04.2021 08.04.2021	Iteration - Loops	Chapter 5 / Text Book1 Chapter 16 / Text Book2
10	13.04.2021 15.04.2021	Using Functions - Introduction to Using Functions - Functions and Modules	Chapter 5/ Text Book1 Chapter 33 / Text Book2
11	20.04.2021 22.04.2021	Writing Functions -1 - Function Basics - Parameter Passing - Custom Functions vs Standart Functions - Refactoring	Chapter 6 / Text Book1 Chapter 33 / Text Book2
12	27.04.2021 29.04.2021	Writing Functions -2 - Global Variables - Making Functions Reusable - Functions as Data	Chapter 6/ Text Book1 Chapter 33 / Text Book2
13	04.05.2021 06.05.2021	Objects - Using Objects - String, File Objects	Chapter 6/ Text Book1

14	11.05.2021 13.05.2021	Lists - Using Lists - Building Lists - List Traversal	Chapter 7/ Text Book1 Chapter 20 / Text Book2
15	18.05.2021 20.05.2021	Tuples, Dictionaries, and Sets - Storing Aggregate Data - Enumerating the Elements of a Data Structure	Chapter 7/ Text Book1 Chapter 28 / Text Book2
16	25.05.2021	Class Design - Composition and Inheritance	Chapter 8/ Text Book1 Chapter 38 / Text Book2
		Final Exam