

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of ARTIFICIAL INTELLIGENCE,
2025-2026 Fall
Course Information for AI 111 Programming I

Course Name:		Programming I			
Code	Regular Semester	Theoretical	Practical	Credits	ECTS
AI 111	1	3	2	4	7
Name of Lecturer(s):		Dr. Hemin Fatih Ibrahim			
Teaching Assistant:		None			
Course Language:		-			
Course Type:		Main			
Office Hours		All the working day			
Contact Email:		hemin.ibrahim@tiu.edu.iq Tel:07504562693			
Teacher's academic profile:		BSc in Mathematics, BSc in IT, MSc(Eng) in Advanced Software Engineering, PhD in AI.			
Course Objectives:		This course will teach students to: Experience problem solving skills through the use of the C++ programming language. Learn and apply C++ basics including variables, data types, arithmetic operations, if statements, and loops. Write and read C++ code. Isolate and fix common errors in C++ program			
Course Description (Course overview):		Programming I			
COURSE CONTENT					
Week	Hour	Date	Topic		
1	3	01-05/12/2025	Introduction this course		
2	3	08-12/12/2025	Introduction to C++ Programming		
3	3	15-19/12/2025	Output and printing in C++		
4	3	22-26/12/2025	Variables		
5	3	29/12-02/01/2026	Arithmetic, Casting, Random, Flowchart 1		
6	3	05-09/01/2026	Arithmetic, Casting, Random, Flowchart 2		
7	3	12-16/01/2026	Midterm Exam		
8	3	19-23/01/2026	Control Statement 1		
9	3	26-30/01/2026	Control Statement 2		
10	3	02-06/02/2026	Loops		
11	3	09-13/02/2026	Do-While & Nested Loops		
12	3	16-20/02/2026	revision		
13	3	23-27/02/2026	Final Exam		
COURSE/STUDENT LEARNING OUTCOMES					
1	Able to compose simple C++ programs with correct syntax and structure, utilizing variables and constants				
2	Effectively use C++ input (cin) and output (cout) operations, incorporating techniques				
3	Employ different methods of Conditional Statements and Loops				
4	Declare, initialize, and manipulate arrays in C++, understanding array indexing, traversal, and basic operations				
5	Develop problem-solving abilities by analyzing programming challenges				
COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES					
(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)					
Program Learning Outcomes					Cont.
1	Analyse issues and employ critical thinking to find and formulate unique solutions within the computer domain				P

2	Design, construct, and assess computer-based systems that fulfil user requirements.	I		
3	Collaborate efficiently in teams to devise solutions and attain objectives, demonstrating robust communication skills with colleagues and users	P		
4	Integrate emerging technology into the organizational framework, considering the organization	I		
5	Examine the effects of computer-based systems, platforms, and technologies on persons, organizations, and society	I		
6	Identify and incorporate emerging AI technology into the organizational framework, taking into account the organization			
7	Evaluate the impact of intelligent systems, platforms, and automated technologies on persons, organizations, and society	I		
8	Formulate algorithms to solve problems and predict outcomes by assessing complex data patterns and relationships			
9	Utilise deep learning methodologies and data science protocols to examine and efficiently address real-world challenges			
10	Design and implement AI solutions across diverse technology platforms and architectures (e.g., Robotics, NLP, Computer Vision)			
11	Evaluate professional, legal, and ethical challenges, ensuring adherence to ethical obligations in the development of AI systems			
12	Design, construct, and assess intelligent systems and machine learning models that fulfil user requirements.			
Prerequisites (Course Reading List and References):		None		
Student's obligation (Special Requirements):		Students are expected to attend lectures regularly. Actively participate in class discussions and ask questions. Students are required to complete programming assignments and regularly practice coding outside of class. Prepare thoroughly for exams and assessments by reviewing class materials, completing assigned readings, and practicing programming problems to demonstrate comprehension of course content.		
Weekly Laboratory/Practice Plan:	Week	Hour	Date	Topics
	1	2	01-05/12/2025	Intro to environment
	2	2	08-12/12/2025	Print and C++ based code lines
	3	2	15-19/12/2025	Variables 1
	4	2	22-26/12/2025	Variables 2
	5	2	29/12-02/01/2026	Arithmetic, Casting, Random, Flowchart 1
	6	2	05-09/01/2026	Arithmetic, Casting, Random, Flowchart 2
	7	2	12-16/01/2026	Midterm Exam
	8	2	19-23/01/2026	Control Statement 1
	9	2	26-30/01/2026	Control Statement 2
	10	2	02-06/02/2026	Loops
	11	2	09-13/02/2026	Do-While & Nested Loops
Course Book/Textbook:		Starting Out-with-C-Early-Objects-7th-Edition-Gaddis. C++ Programming. 5th edition, D.S.Malik, 2011. Problem Solving, Abstraction, and Design using C++ 6th Edition.		
Other Course Materials/References:		http://www.cplusplus.com/doc/tutorial/ https://www.tutorialspoint.com/cplusplus/index.htm http://stackoverflow.co		
Teaching Methods (Forms of Teaching):		Lectures, Practical sessions, Exercises, Demonstation, , ,		
COURSE EVALUATION CRITERIA				
Method			Quantity	Percentage (%)
Participation			1	5
Quiz			3	5
Midterm Exam			1	30
Practical Exam			1	10
Final Exam			1	40
Total				100

Examinations: True-False, Multiple Choices, Short Answers, , ,

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD

Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	11	3	33
Practical Hours	11	2	11
Final Exam	1	35	35
Participation	1	10	10
Quiz	3	12	36
Midterm Exam	1	25	25
Practical Exam	1	20	20
Total Workload			170
ECTS Credit (Total workload/25)			7

Peer review

Signature:

Name:

Lecturer

Signature:

Name:

Head of Department

Signature:

Name:

Dean