UNITED INTERNATIONAL UNIVERSITY

Department of Computer Science and Engineering (CSE)

Course Syllabus

Part A: Introduction		
1	**Course Title**	Introduction to Computer Systems
2	**Course Code**	CSE 1110
3	**Pre-requisites**	N/A
4	**Course Type**	Core Course
5	**Credit Hours**	1.00
6	**Contact Hours**	2.5 Hours/Week
7	**Semester**	1st
8	**Total Marks**	100
9	**Course Instructor's Information**	Shekh. Md. Saifur Rahman Email: saifur@cse.uiu.ac.bd Room: 837 D
10	**Course Rationale**	This course has been designed to introduce an aspirant CSE student to a computer, components and concepts regarding it, and how it works in the inside. It is also designed to give the students a basic foundation on programming and problem solving.
11	**Course Objectives**	The objectives of this course are: ● To know how to use a computer ● To know how a computer works ● To know how to use a programming language to write basic level programs
Part B: Content of the Course		
12	**Course Contents (approved by UGC)**	Introduction to computations; Early history of computing devices; Computers; Major components of a computer; Hardware: processor, memory, I/O devices; Software: Operating system, application software; Basic architecture of a computer; Basic Information Technology; The Internet; Number system: binary, octal, hexadecimal, binary arithmetic; Basic programming concepts; Program development stages: flow charts; Programming constructs: data types, operators, expressions, statements, control statements, functions, array.
13	**Course Outcomes (COs)**	

COs	Description
CO1	**Identify** the components of a computer and demonstrate its internal mechanisms.
CO2	**Derive** the solution steps of basic decision and repetition problems.
CO3	**Use** a programming language to write error-free programs using conditional statements and loops.

		CO4	**Work** in a team and communicate effectively to present a topic about CSE.	

14 Mapping of COs and Program outcomes

15 Mapping COs with Teaching-Learning and Assessment Strategy

Class	Topics/Assignments	Course Outcomes (COs)	Assessment Strategies
1	**Introduction to Computer** Software and Hardware, Opening up a Computer **Introduction to Programming** Introduction to code.org	CO1	
2	**Introduction to Computer** The Binary Number System **Introduction to Programming** Introduction to Codeblocks, The "Hello World" Program	CO1, CO2	Completion of "Accelerated Intro to CS" course in code.org
3	**Introduction to Computer** Representation of Data (ASCII, Text and Image Files) **Introduction to Programming** Standard I/O, Variables, Arithmetic Operators	CO1, CO2	**Quiz on Number System**
4	**Introduction to Computer** How the Internet Works **Introduction to Programming** Deep Dive into Variables, Assignment Operators, The math.h Header	CO1, CO3	
5	**Introduction to Programming** Introduction to Flowcharts, Solving Decision Problems using if...else	CO1, CO3, CO4	**Self-study report writing**
6	**MID-TERM EXAM**		

7	**Introduction to Programming** Deep Dive into Decision Problems, Introduction to switch...case	CO3	
8	**Introduction to Programming** Introduction to for Loop	CO3	**Coding test and assignment**
9	**Introduction to Programming** Deep Dive into for Loop	CO3	
10	**Introduction to Programming** Introduction to while and do...while Loop	CO3	**Coding test and assignment**
11	**Introduction to Programming** Deep Dive into while Loop	CO3	
12	**FINAL EXAMINATION AND VIVA**		

Part C: Assessment and Evaluation Methods

Assessment Types	**Marks**
Attendance	10%
Quiz (Introduction to Computer)	10%
Assignment (Introduction to Comptuer)	5%
Assignment (code.org)	5%
Coding test (in-class)	15%
Coding assignment	10%
Mid-term Exam	15%
Final Exam	20%
Final Viva	10%

Grading System

Letter Grade	**Marks %**	**Grade Point**	**Letter Grade**	**Marks%**	**Grade Point**
A (Plain)	90-100	4.00	C+ (Plus)	70-73	2.33
A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00
B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00
			F (Fail)	<55	0.00

Part D: Learning Resources

Text Book	Teach Yourself C – Herbert Schildt (link)

Appendix-1: Program outcomes

POs	Program Outcomes
PO1	An ability to apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PO2	Identify, formulate, research and analyze complex engineering problems and reach substantiated conclusions using the principles of mathematics, the natural sciences and the engineering sciences.
PO3	An ability to design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety and of cultural, societal and environmental concerns.
PO4	An ability to conduct investigations of complex problems, considering experimental design, data analysis and interpretation and information synthesis to provide valid conclusions.
PO5	An ability to create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modeling, to complex engineering activities with an understanding of their limitations
PO6	An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
PO7	An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.
PO8	An ability to apply ethical principles and commit to the professional ethics, responsibilities and the norms of the engineering practice.
PO9	An ability to function effectively as an individual and as a member or leader of diverse teams and in multidisciplinary settings.
PO10	An ability to communicate effectively about complex engineering activities with the engineering community and with society at large. Be able to comprehend and write effective reports, design documentation, make effective presentations and give and receive clear instructions.
PO11	An ability to demonstrate knowledge and understanding of engineering and management principles and apply these to one's work as a team member or a leader to manage projects in multidisciplinary environments.
PO12	An ability to recognize the need for and have the preparation and ability to engage in independent, life-long learning in the broadest context of technological change.