General Information:

Course ID: CSE110
Course credits: 3

Course Overview:

CSE110: Programming Language I introduces foundational knowledge of string manipulation, arrays, control structure, file input/output, and the like. The debugging techniques and programming tools will make the students well-equipped in creating fundamental programs. Students are expected to do a significant amount of practice on problem-solving and program design to reinforce the lecture material. The course includes a compulsory 3-hour weekly lab session, where students implement the concepts learned by writing computer programs.

Learning Outcomes:

By the end of this course, students will be able to:

- ➢ Identify the basic structures of computer programs (Tech Awareness)
- ➢ Identify common problem patterns and associate them with programming structures (Critical Thinking Skills)
- ➢ Apply solution patterns to relevant real-world problems (Critical Thinking Skills)
- ➢ Analyze computer programs and verify output (Quantitative Skills)
- ➢ Design small computer programs (Critical Thinking Skills)

Teaching-learning Methodology:

- ➢ Interactive discussion.
- ➢ Recitation and oral questions by the teacher are answered orally by students.
- ➢ Problem-solving.

Course Content:

- ➢ Problem Analysis
- ➢ Problem Solving (solution design)
- ➢ Intro to Programming

Tentative Course Evaluation:

- ➢ Lab: 25%
- ➢ Attendance: 5%
- ➢ Quiz: 20%
- ➢ Midterm: 20%
- ➢ Final: 30%

Required Course Materials:

Suggested Books:

- ➢ Java: The Complete Reference, 12th Edition by Herbert Schildt
- ➢ Head First Java, 3rd Edition by Kathy Sierra, Bert Bates, Trisha Gee

Lecture Materials:

Provided in buX

Tentative Course Schedule:

Topics
Introduction to CSE, Flow of the program
Introduction to Java, Output, Variables and Datatypes
Operators, User Input and Understanding Errors
Decision Making /Branching (Conditions, Nested conditions, Logical Connectives)
Iterations/ Loop (While, For)
Nested Loops, Jump Statements (Break, Continue)
Tracing and Debugging
String
Array, Sorting
Method, Recursive Method
File Input/Output
Pointer,Values and Addresses

General Policy:

Grading criteria:
The grades at the University will be indicated in the following manner:

97 - < 100* = A+ (4.0) Exceptional
90 - < 97* = A (4.0) Excellent
85 - < 90 = A- (3.7)
80 - < 85 = B+ (3.3)
75 - < 80 = B (3.0) Good
70 - < 75 = B- (2.7)
65 - < 70 = C+ (2.3)
60 - < 65 = C (2.0) Fair
57 - < 60 = C- (1.7)
55 - < 57 = D+ (1.3)
52 - < 55 = D (1.0) Poor
50 - < 52 = D- (0.7)
< 50 = F (0.0) Failure

* Grading system introduced from Fall 2020 Semester.

Grades without numerical value:
P: Pass
A course may be taken for a pass/fail grade providing that the instructor approves the option and the student carries 12 credits for regular letter grades in that semester.

I: Incomplete
Incomplete Is assigned only when a student has failed to complete one or more requirements of the course for an unavoidable reason/accidental circumstance and has applied for an I grade.

W: WithdrawalWithdrawalis assigned to a student who withdraws from the course within the deadline for withdrawal with a 'W' grade.

Inclusive education policy statement:
Each of the students shall be given equal access to laboratory resources, relevant materials, and consultation hours, free from discrimination based on gender, language, sexual orientation, pregnancy, culture, ethnicity, religion, health or disability, socioeconomic background, or geographic location, as per the inclusive education policy of Bangladesh.

Gender policy:
Gender equity among male and female students in the class will be maintained as per the BRAC University concern and BRAC's consistent endeavors on women's empowerment. Therefore, all students will be evaluated equally based on their performance in the course concerned regardless of their gender.