

# CSE 110: Programming Language I

General Information:		Instructor Information:	
Course ID: CSE110 Course credits: 3		<a href="https://docs.google.com/spreadsheets/d/1KZKkqfVi_BY6uQgIKZdEm3u75PJC4Ln9aLfg4MnxBb0/edit#gid=326326482">https://docs.google.com/spreadsheets/d/1KZKkqfVi_BY6uQgIKZdEm3u75PJC4Ln9aLfg4MnxBb0/edit#gid=326326482</a>	
Course overview:			
CSE110: Programming Language I gives an overview of basic operations, data types, operators, decision-making, and iterations. Advanced topics like list, tuple, dictionary, classes, and objects are also introduced. Students also learn to build and test small computer programs using an appropriate computer programming language. For this semester, this course will be taught using Python 3. 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:		Teaching-learning methodology:	
By the end of this course, students will be able to:  <ul style="list-style-type: none"><li>Identify the basic structures of computer programs (Tech Awareness)</li><li>Identify common problem patterns and associate them with programming structures (Critical Thinking Skills)</li><li>Apply solution patterns to relevant real-world problems (Critical Thinking Skills)</li><li>Analyze computer programs and verify output (Quantitative Skills)</li><li>Design small computer programs (Critical Thinking Skills)</li></ul>		<ul style="list-style-type: none"><li>Interactive discussion.</li><li>Recitation and oral questions by the teacher answered orally by students.</li><li>Problem-solving.</li></ul>	
Course content:		Tentative Course Evaluation:	
<ul style="list-style-type: none"><li>Problem Analysis</li><li>Problem Solving (solution design)</li><li>Intro to Programming</li></ul>		<ul style="list-style-type: none"><li>Assignments (Lab): 25%</li><li>Attendance: 5%</li><li>Coding based Quiz: 20%</li><li>Midterm: 20%</li><li>Final: 30%</li></ul>	
Required course materials:			
<p><b>Suggested Book:</b></p> <ul style="list-style-type: none"><li>Think Python by Allen B. Downey</li><li>Introduction to Computation and Programming Using Python with Application to Understanding Data by John V. Guttag</li><li>The Python Workbook A Brief Introduction with Exercises and Solutions By Ben Stephenson</li></ul> <p><b>Lecture Materials:</b> Provided in the buX</p>			

**Tentative course schedule:**

Lecture /Session	Topic	
<b>Week – 0</b>	Install Anaconda	
<b>Week – 1</b>	Introduction to Variables, Conventions, User Input/Output, Data Type Conversion, Operators	
<b>Week – 2</b>	Decision Making /Branching (Conditions, Nested conditions, Logical Connectives)	
<b>Week – 3</b>	Iterations/ Loop (While, For)	
<b>Week – 4</b>	String, List	
<b>Week – 5</b>	Review and Midterm exam	
<b>Week – 6</b>	Tuple, Dictionary	
<b>Week – 7</b>	Function, Scoping (Local, Global)	
<b>Week – 8</b>	Sorting (built-in, Selection, Bubble), Searching (Linear, Binary search)	
<b>Week – 9</b>	File (I/O), Exception	
<b>Week – 10</b>	Introduction to objects and classes	
<b>Week – 11</b>	Introduction to objects and classes continue	
<b>Week – 12</b>	Review & Final exam	

**General policy:**
**Grading criteria:**

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

97 - <100 = A+ (4.0) Exceptional

90 - 100 = 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

**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: WithdrawalWithdrawal is 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 empowerment. Therefore, all students will be evaluated equally based on their performance in the course concerned regardless of their gender.