

Course Outline for CSE-144

Part A

1. Course Code: CSE-144

2. Course Title: Object Oriented Programming (Sessional)

3. Course Type: Core Course

4. Level/ Term: Level: 1 Term: II

5. Academic Session: 2020-21

6. Course Teacher: Omar Sharif, Lecturer, Dept. of CSE, CUET
Md. Billal Hossain, Lecturer, Dept. of CSE, CUET

7. Prerequisite(s): None

8. Credits: 1.5

9. Contact Hours: 3 hours of lab work per week

10. Total Marks: 150

11. Rational of the Course:

This course introduces advanced programming skills and focuses on the core concepts of object-oriented programming and design using a high-level language, C++. The course focuses on the understanding and practical mastery of object-oriented concepts such as classes, objects, data abstraction, methods, method overloading, inheritance and polymorphism. Detailed knowledge of class and object along with Standard Template Library will enable students to implement complex programs systematically and efficiently. This is a required course for all the students enrolling B. Sc. Engg. in CSE program. The catalogue description of the course is

Course Content:

Sessional based on the following topics:

Concepts of object-oriented programming, Classes, Friend functions: Objects, isomorphism, polymorphism, inheritance, parameterized constructors, multiple inheritance, passing object to functions, arrays of objects, pointer to objects. Function and operator overloading, overloading constructor functions, references, virtual functions,

Part B

14. Course plan specifying content, CLOs, co-curricular activities (if any), teaching learning and assessment strategy mapped with CLOs

Course Plan

	Topic	Teaching-Learning Methodology	Assessment Method	Corresponding CLOs
Week-01	Introduction to Object-Oriented Programming and overview of C++ basics	<ul style="list-style-type: none">• Lecture on theoretical background and design principle• Hands on demonstration on the implementation	Lab Performance	• CLO-1
Week -02	Overview of C++ basics	<ul style="list-style-type: none">• Lecture on theoretical background and design principle• Hands on demonstration on the implementation	Lab Performance Report	• CLO-1
Week -03	Standard Template Library (STL)	<ul style="list-style-type: none">• Lecture on theoretical background and design principle• Hands on demonstration on the implementation	Lab Performance Report	• CLO-1
Week -04	Class and Object	<ul style="list-style-type: none">• Lecture on theoretical background and design principle• Hands on demonstration on the implementation	Lab Performance Report	• CLO-2
Week -05	Constructor and Destructor	<ul style="list-style-type: none">• Lecture on theoretical background and design principle• Hands on demonstration on the implementation	Lab Performance Report	• CLO-2

Week -06	Constructor and Destructor	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-2
Week -07	Inheritance	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-2
Week -08	Polymorphism	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-2
Week -09	File Handling	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-3
Week -10	Exception Handling and Generic programming	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-3
Week -11	Graphical User Interface – layout Managers and Event Driven Programming	<ul style="list-style-type: none"> • Lecture on theoretical background and design principle • Hands on demonstration on the implementation 	Lab Performance Report	• CLO-3
Week -12	Lab Test			
Week -13	Viva-voce and Quiz			

Part C

15. Assessment and Evaluation

1) Assessment Strategy

Quizzes	15%
Viva-voce	15%
Class performance including reports	60%
Attendance	10%
Total	100%

2) Marks distribution:

- a) Continuous Assessment: 70%
- b) Summative: 30%

3) Make-up Procedures:

- Course teacher may arrange for makeup lab schedule if necessary.

Part D

16. Learning Materials

Textbook(s): E. Balagurusamy, -- Object Oriented Programming with C++ by Tata McGraw Hill Education Private Limited (June 16, 2011)

Reference: Herbert Schildt -- C++: The Complete Reference, Mcgraw-Hill Osborne Media; 3rd edition (August 1, 1998)