DEPATMENT OF COMPUTING & TECHNOLOGY

IQRA UNIVERSITY ISLAMABAD

COURSE DESCRIPTION FORM

Iqra University, Islamabad Campus (A campus of Iqra University, Karachi)

A. Course Description

Course Code	CSC205
Course Title	Object Oriented Programming
Credit Hours	1
Prerequisites by Course(s) and Topics	CSC102 Computer Programming
Course Description	This course is designed as an entry level programming course for students who have prior programming experience. This course introduces the concepts of object-oriented programming to students with a background in the procedural paradigm. This course covers an introduction to the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Other topics include an overview of programming language principles, simple analysis of algorithms, and an introduction to software engineering issues. - Brief review of control structures, functions, and primitive data types - Object-oriented programming: Object-oriented design; encapsulation and information-hiding; separation of behavior and implementation; classes, subclasses, and inheritance; polymorphism; class hierarchies - Introduction to computer graphics: Using a simple graphics API - Memory management
Course Objectives	At the end of this course the students will be able to: Design classes, with increased level of cohesion and reduced or at the very least light coupling Draw detailed class and object diagrams Code reasonable sized Object Oriented applications Demonstrate an understanding of refactoring, encapsulation, inheritance, and polymorphism Demonstrate an understanding of abstract classes and interfaces Demonstrate an understanding of exception and file handling, and event listeners
Assessment Instruments with Weights (homework, quizzes, programming assignments, lab work, etc.)	Assignments: 10 Quizzes: 05 Lab Tasks: 05 Project: 05
Course Coordinator	Mr. Muhammad Awais / Mr. Sadiq Hussain
URL (if any)	
Current Catalog Description	
Textbook (or **Laboratory Manual** for Laboratory Courses)	Herbert Schildt, Java: The Complete Reference, J2SETM 7th Edition.
Reference Material	Deitel & Deitel, Java How to Program
Course Goals	To learn and understand OO Programming
Topics Covered in the Course, with Number of Lectures on Each Topic	1 Why Java? Genesis of Java 2 Arrays, operators, control statements, Introducing for-each loop 3 OOP Overview 4 Classes

	5	Procedures versus Objects
	6	Members functions and variables
	7	Primitive vs Class Types
	8	Class Design
	9	Class Diagrams, Object Diagrams
	10	Overloading, & Over-riding
	11	Code Duplication, Inheritance
	12	Encapsulation, Coupling, Cohesion, Polymorphism
	13	Abstract classes, Interfaces
	14	Exception Handling
	15	Project

Instructor Name: Mr. Khayal Abbas Akhtar

Instructor Signature: _____

Date: _____