COURSE HANDBOOK
Section C BCS FALL 11

1	**Course Title**	Object Oriented Concepts and Programming
2	**Course Code**	CSC244
3	**Credit Hours**	4(3,1)
4	**Semester**	Spring 2012
5	**Resource Person**	Dr. Tabbasum Naz
6	**Supporting Team Members**	Ms Ayesha Sadiq
7	**Contact Hours (Theory)**	3 hours per week
8	**Contact Hours (Lab)**	3 hours per week
9	**Office Hours**	Shall be communicated later

10 Course Introduction

This module will introduce students to Object Oriented paradigm of programming. They will learn Object Oriented programming concepts and how to apply them in real world problems. Java will be used as the programming language due to its benefits like portability, versatility and its very wide usage, particularly in open source software development.

11 Learning Objectives

The aim of this course is to provide a solid introduction to Object Oriented paradigm of application development. The language that will be used to achieve this goal is Java. As a result a thorough understanding of Java is also expected to take place. J2EE will not be covered but database interaction for desktop applications built using Java will be touched upon.
Students should be able to:

- Differentiate between OOP and procedural paradigm.
- Demonstrate understanding of and differences between classes, objects and methods.
- Demonstrate understanding of static methods and fields.
- Exhibit their understanding of arrays in Java and how to use the enhanced for statement to iterated through arrays.
- Use the concepts of encapsulation, data hiding, inheritance, superclass, subclass, polymorphism, constructors in design and development of OO applications.
- Demonstrate an understanding of graphical user interface (GUI)
- Create and manipulate basic components like labels, lists, panels, buttons used in building GUI.
- Demonstrate the understanding of the concept of exception handling and how it is actually used in Java.
- Store and retrieve data from a RDMS by using JDBC.

12 Course Contents

The module consists of theory and practical portion. Theory part will consist of class lecture that will introduce students object oriented concepts. The lab part will use more of a supervisory model in which students will be assigned problems related to the theory part that they had covered in class. They will be encouraged to come up with their own solutions and implement them. If and when they get stuck the instructor will guide them through the debugging process.

13 Lecture Schedule

Weeks	Topic of Lecture	Reading Assignment
Week 1	• Review, history, and introduction to Java	Chapter 1& 2
Week 2 & 3	• OOP basics • Difference between OOP and procedural paradigm • Introduction to classes and objects	Chapter 3 + Handouts
Week 4	• Familiarizing with Java syntax • Control statements	Chapter 4 & 5
Week 5	• Methods: A deeper look • Introduction to Unified Modelling Language o State diagram o Use case diagram o Class diagram o Activity diagram	Chapter 6 + Handouts
Week 6	• Arrays in Java	Chapter 7
Week 7	• A deeper look in Java classes and objects o Encapsulation o Data hiding o Data abstraction	Chapter 8
Week 8 & 9	• Object oriented programming o Inheritance	Chapter 9 + Handouts
Week 10	• Object oriented programming o Polymorphism	Chapter 10
Week 11 & 12	• GUI components + Graphics	Chapter 11 & 12
Week 13	• Exception handling	Chapter 13
Week 14	• Introduction to Java applets	Chapter 20
Week 15 & 16	▪ Accessing Database with JDBC	Chapter 25

15 Course Assessment

The assessment of this module shall have following breakdown structure

Theory Part

Sessional-I Exam	10%
Sessional-II Exam	15%
Final Exam	50%
Quiz (3-6 per semester)	15%
Assignments (3-6 per semester)	10%

The minimum pass marks for each course shall be 50%. Students obtaining less than 50% marks in any course shall be deemed to have failed in that course. The correspondence between letter grades, credit points, and percentage marks at CIIT shall be as follows:

Grades	Letter Grade	Credit Points	Percentage Marks
A	(Excellent)	4.0	90and above
A-		3.7	85-89
B+		3.3	80-84
B	(Good)	3.0	75-79
B-		2.7	70-74
C+		2.3	65-69
C	(Average)	2.0	60-64
C-		1.7	55-59
D	(Minimum passing)	1.3	50-54
F	(Failing)	0.0	Less than 50

Note: The marks to be assigned to students shall be in whole numbers and are not same as followed in the annual system of Lancaster University.

16 Assessment Schedule

Week	Assignment and Quiz
Week 2	1st Assignment and Quiz
Week 5	2nd Assignment and Quiz
Week 8	3rd Assignment and Quiz
Week 11	4th Assignment and Quiz
Week 13	5th Assignment (Project) and Quiz
Week 15	6th Assignment (Presentation) and Quiz

17 Format of Assignment

This course indoctrinates the following format for all assignments except code:

1. Paper Size: A4
2. Left Margin: 2 Inches
3. Right Margin: 1 Inch
4. Top Margin: 0.5 Inch
5. Bottom Margin: 0.5 Inch
6. Font: Times New Roman
7. Font Size:
    a. Main Heading 14
    b. Sub Heading 12
    c. Text 12

d. Titles 16
8. Font Color: Black
9. Line Spacing: 1.5
10. Diagrams & Charts: Need not be colored
11. Title page must be designed as guided by resource person in class
12. Number of Pages: No Limit
13. Reference Style: APA (If applicable)

Code will be submitted in text files that can be compiled with specified programming language compiler.

18	**Text Book**	• "Java How to Program", 7th Edition by Deitel & Deitel, ISBN: 0132222205
19	**Reference Books**	• "Java 2: The Complete Reference", by Patrick Naughton and Herbert Schildt • "Thinking in Java" by Bruce Eckel, Prentice Hall, 4th Edition, 2006 • "Beginning Java 2" by Ivor Horton • "Object-Oriented Software Development Using Java", --2nd Editions, Addison Wesley 2003 • "The Elements of Java Style", By Allan Vermeulen, et al.

20 Plagiarism

Plagiarism involves the unacknowledged use of someone else's work, usually in coursework, and passing it off as if it were one's own. Many students who submit apparently plagiarised work probably do so inadvertently without realising it because of poorly developed study skills, including note taking, referencing and citations; this is poor academic practice rather than malpractice. Some students, particularly those from different cultures and educational systems, find UK academic referencing/acknowledgement systems and conventions awkward, and proof-reading is not always easy for dyslexic students and some visually-impaired students. Study skills education within programmes of study should minimise the number of students submitting poorly referenced work. However, some students plagiarise deliberately, with the intent to deceive. This intentional malpractice is a conscious, pre-mediated form of cheating and is regarded as a particularly serious breach of the core values of academic integrity. **The Dual Degree Prorgamme has zero tolerance for intentional plagiarism.**

Plagiarism can include the following:

1. Collusion, where a piece of work prepared by a group is represented as if it were the student's own;
2. Commission or use of work by the student which is not his/her own and representing it as if it were, e.g.:
    a. purchase of a paper from a commercial service, including internet sites, whether pre-written or specially prepared for the student concerned
    b. submission of a paper written by another person, either by a fellow student or a person who is not a member of the university;
3. Duplication (of one's own work) of the same or almost identical work for more than one module;
4. The act of copying or paraphrasing a paper from a source text, whether in manuscript, printed or electronic form, without appropriate acknowledgement (this includes quoting directly from another source with a reference but without quotation marks);
5. Submission of another student's work, whether with or without that student's knowledge or consent;

6. Directly quoting from model solutions/answers made available in previous years;
7. Cheating in class tests, e.g.
    a. when a candidate communicates, or attempts to communicate, with a fellow candidate or individual who is neither an invigilator or member of staff
    b. copies, or attempts to copy from a fellow candidate
    c. attempts to introduce or consult during the examination any unauthorised printed or written material, or electronic calculating, information storage device, mobile phones or other communication device
    d. personates or allows himself or herself to be impersonated.
8. Fabrication of results occurs when a student claims to have carried out tests, experiments or observations that have not taken place or presents results not supported by the evidence with the object of obtaining an unfair advantage.

These definitions apply to work in whatever format it is presented, including written work, online submissions, group work and oral presentations.

21 Attendance Policy

Every student must attend 80% of the lectures/seminars delivered in this course.

22 Field Trips/Case Studies/Seminars/Workshop

Not Applicable