

City University of Hong Kong

**Information on a Course
offered by Department of Information Systems
with effect from Semester A in 2008 / 2009**

Part I

Course Title:	Advanced Business Software Construction
Course Code:	IS5312
Course Duration:	One Semester (13 Weeks)
No. of Credit Units:	Three
Level:	P5
Medium of Instruction:	English
Prerequisites:	IS5311 Business Software Construction
Precursors:	Nil
Equivalent Courses:	Nil
Exclusive Courses:	Nil

Part II

1. Course Aims:

This course aims to:

The aim of this course is to introduce the students to advanced business programming concepts and skill, with emphasis on business information systems construction. On completion of this course, student should be able to: a) understand object-oriented programming; b) understanding basic algorithms; c) construct simple business software application to solve a particular business problem by integrating OO, multimedia, files and database technologies.

2. Course Intended Learning Outcomes (CILOs)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	Design and develop appropriate object oriented programming skill for business software construction.	3
2.	Design and develop appropriate multimedia for business software construction.	1
3.	Design and develop appropriate persistent storage, such as files and databases for business software construction.	2
4.	Develop basic data structures and algorithms for business software construction.	2

(3: Relatively most focused ILOs; 2: moderately focused ILOs; 1: less focused ILOs)

3. Teaching and learning Activities (TLAs)

(designed to facilitate students' achievement of the CILOs)

Lecture: 13 hours

Laboratory: 26 hours

TLA1: Lecture

Concepts and general knowledge of advanced business information systems construction are explained. Further more, advanced business software construction knowledge and skills, such as object oriented programming, multimedia, files and databases, and basic data structures and algorithms are explained and illustrated using examples to enable students understanding on constructing business information system construction and practical characteristics.

TLA2: Laboratory

During laboratory sessions, the following activities are used to reinforce and practice of various business software construction techniques learnt in lectures.

- *Exercises:* Hands-on activities using a programming tool (e.g., Microsoft Visual Basic) as part of systems development exercises.

TLA3: Project

Students would have to complete a group project requiring them to perform systems development activities, aimed at constructing a practical application prototype for business information system construction.

CILO No	TLA1: Lecture	TLA2: Laboratory	TLA3: Project	Hours/week (if applicable)
CILO 1	2	2	2	---
CILO 2	2	2	1	---
CILO 3	2	2	2	---
CILO 4	2	2	2	---

(1: Minor focus on the ILO; 2: Main focus on the ILO)

4. Assessment Tasks/Activities

(designed to assess how well the students achieve the CILOs)

AT1: Continuous Assessment (20%)

Participation in class and lab sessions in activities such as:

- a number of take-home exercises
- class performance

AT2: Project (40%)

Each team of 2 or 3 students will design and develop a proposed business information system, by using appropriate techniques

AT3: Individual Lab Test (40%)

The individual lab test is to assess students' overall competence level in the domain areas.

CILO No	AT1: Continuous Assessment (20%)	AT2: Project (40%)	AT3: Individual Lab Test (40%)	Remarks
CILO 1	2	2	2	1: Minor focus on the ILO; 2: Main focus on the ILO)
CILO 2	2	2	1	
CILO 3	2	2	2	
CILO 4	2	2	2	

5. **Grading of Student Achievement:** Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

(see the rubrics attached)

ILO	Excellent	Good	Adequate	Marginal
CILO1	Creatively, effectively, efficiently and accurately perform programming skills in the area of object oriented programming for business information system development.	Effectively and accurately perform programming skills in the area of object oriented programming for business information system development.	Accurately perform programming skills in the area of object oriented programming for business information system development.	Perform some programming skills in the area of object oriented programming for business information system development.
CILO2	Creatively, effectively, efficiently and accurately perform programming skills in the area of multimedia for business information system development.	Effectively and accurately perform programming skills in the area of multimedia for business information system development.	Accurately perform programming skills in the area of multimedia for business information system development.	Perform some programming skills in the area of multimedia for business information system development.
CILO3	Creatively, effectively, efficiently and accurately perform programming skills in the area of persistent storage or business information system development.	Effectively and accurately perform programming skills in the area of persistent storage for business information system development.	Accurately perform programming skills in the area of persistent storage for business information system development.	Perform some programming skills in the area of persistent storage for business information system development.
CILO4	Creatively, effectively, efficiently and accurately perform programming skills in the area of basic data structures and algorithms for business information system development.	Effectively and accurately perform programming skills in the area of basic data structures and algorithms for business information system development.	Accurately perform programming skills in the area of basic data structures and algorithms for business information system development.	Perform some programming skills in the area of basic data structures and algorithms for business information system development.

Part III

Keyword Syllabus:

Object oriented programming, Multimedia, Files, Data structure and algorithms.

Detailed Syllabus:

- Classes and objects
- Inheritance and Polymorphism
- Multimedia applications
- Files and Database connections
- Basic data structures and algorithms for business software solutions
- Business software application examples

Required Reading:

Deitel, H.M. & Deitel, P.J., Visual Basic B 2005: How to Program, 3rd edition, Prentice-Hall, 2005.

Recommended Reading:

Schneider, David, I., An Introduction to Programming Using Visual Basic.Net, 5th edition, Prentice Hall, 2002.

Saret, L., Programming Logic for Business, 4th edition, McGraw-Hill, 2001.

Burrows, William E., Programming Business Applications with Microsoft Visual Basic, Irwin/McGraw-Hill, 2000.