

City University of Hong Kong

Information on a Course
offered by Department of Information System
with effect from Semester A in 2012/2013

Part I

Course Title:	Management Support and Business Intelligence Systems
Course Code:	IS5740
Course Duration:	One Semester (13 weeks)
Credit Units:	3
Level:	P5
Medium of Instruction:	English
Prerequisites:	Nil
Precursors:	Nil
Equivalent Courses:	Nil
Exclusive Courses:	Nil

Part II

1. Course Aims

This elective course aims to introduce emerging as well as popular analytical concepts and information technologies suitable for management support with business intelligence.

2. Course Intended Learning Outcomes (CILOs)

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

No.	CILOs	Weighting (if applicable)
1.	Recognize the need for management support and business intelligence requirements beyond typical Management Information Systems.	2
2.	Acquire and critically apply analytical concepts and skills of management support and business intelligence.	2
3.	Differentiate between various information technologies for management support and business intelligence that enable quantitative and non-quantitative analysis.	2
4.	Formulate and critically analyze the requirements for management support, and identify appropriate tools and techniques required for implementation of business intelligence systems.	2
5.	Creatively develop effective solutions to real management support and business intelligence problems.	2

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

3. Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

Seminar:	26 hours
Laboratory:	13 hours

TLA1: Seminar

Concepts and applications of information technology in the context of decision making and problem solving for Management support are explained by instructor. Exercises and case studies also are introduced to students for interactive learning in the seminars.

TLA2: Demonstration

Demonstrations of representative technologies and their application to address business problems are given. Course participants critically analyze requirements for management support, and identify appropriate tools and techniques required.

TLA3: Practical

Development of hands-on skills for solving real-life business problems analytically and with appropriate technologies of management support and business intelligence is carried out.

TLA4: Case Analysis

Students will be required to relate to the content of their own workplace or other relevant organizational environment, the relevance of the various business intelligence and management support solutions. Results will be discussed and presented to fellow students.

TLA5: On-Line Discussion

Students will use online media such as discussion forums, weblogs, or wikis to self-reflect on their learning and share their insights with classmates.

CILOs	TLA 1: Seminar	TLA 2: Demonstration	TLA 3: Practical	TLA 4: Case Analysis	TLA 5: On-line Discussion	Hours/week (if applicable)
CILO 1 (Need)	2			2	1	
CILO 2 (Analytical concepts)	2	2	2		1	
CILO 3 (Technolo- gies)	1	2	2	1	1	
CILO 4 (Require- ments)		1	2	1	1	
CILO 5 (Develop- ment)		1	2		1	

(1: Indirectly Supporting ILO; 2: Directly Supporting ILO)

4. Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

AT1. Seminar, Laboratory Exercises, Participation, and Online Discussion (20%): Each seminar and laboratory consists of exercises, small group discussions, self reflection, or student presentations to assess students' understanding of the chosen topics and their abilities to apply their skills. It also includes online comments with which students report key learning, self-reflection, and related concepts found online.

AT2. Individual Assignment (20%). An individual assignment which lets students analyze a business problem and develop an analytical of implemented solution.

AT3. Group Project (20%): A group project, which includes a project report and presentation, will be allocated to let students apply Management Support and Business Intelligence concepts and technologies to solve business problems.

AT4. Examination (40%): A 2-hour written examination is developed to assess student's competence level of the taught subjects.

** Students must pass both coursework and examination in order to achieve an overall pass in this course. **

CILOs	AT1 (20%) Discussion	AT2 (20%) Individual	AT3 (20%) Group	AT4 (40%) Exam
CILO 1 (Need)	2		1	2
CILO 2 (Analytical concepts)	2		2	2
CILO 3 (Technologies)	2	1	2	2
CILO 4 (Requirements)	1	2		
CILO 5 (Development)		2		

(1: Indirectly Supporting ILO; 2: Directly Supporting ILO)

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

CILOs	Achievement Level			
	Excellent	Good	Adequate	Marginal
CILO1 (Need)	Accurately describe key concepts of management support and business intelligence and differentiate against typical management information system;			
	all	most	several	few
	Explain the need for management support and business intelligence systems to support managerial decision making and problem solving.			
	In significant detail, clearly outlining links between needs and solutions.	In considerable detail, with the ability to explain several needs-solution linkages.	In some detail, with examples of problem-solution interdependencies.	By at least providing examples.
CILO2 (Analytical concepts)	Explain how the analytics underlying management support and business intelligence generate better business information and help solve business problems.			
	In significant detail, demonstrating the competence to use formalisms such as logic or mathematics, as well as modelling approaches.	In some detail, demonstrating the ability to use formalisms such as logic or mathematics, as well as modelling approaches.	In some detail.	Demonstrating some level of formal discourse.
CILO3 (Technologies)	Differentiate between quantitative and non-quantitative analysis tools			
	In significant detail, demonstrating deep insight.	In considerable detail, demonstrating some insight.	In some detail, demonstrating some understanding.	In at least a little detail.
	Compare and contrast technology characteristics and corresponding capabilities.			
	Clearly, accurately, and in detail.	With clarity and accuracy and in some detail.	Fairly clearly and accurately.	Demonstrating some ability to differentiate.
CILO4 (Requirements)	Formulate and discriminate the requirements of management support.			
	In great detail, demonstrating thorough understanding.	In considerable detail, demonstrating understanding.	In some detail.	In at least a little detail.
	Identify appropriate tools and techniques for system implementation problems;			
	Clearly, logically, and meaningfully.	Clearly and meaningfully.	Meaningfully.	In some manner.
CILO5 (Development)	Develop a solution			
	Exhibiting technological competence and innovativeness.	Exhibiting technological ability and some level of innovativeness.	Exhibiting technological ability.	Exhibiting some solution finding abilities.
	Demonstrate solution effectiveness, feasibility, and fit with the task/problem.			
	In great detail and substance.	In considerable detail and substance.	In some detail and substance.	In some detail.

Part III

Keyword Syllabus

1. Introduction to Management Support and Business Intelligence Systems – Managerial decision making; Role of decision support systems, expert systems, online analytic processing, data warehouses, data mining, and related technologies in decision making; Developing business intelligence strategies and execution plans.
2. Principles of decision making and problem solving: intelligence-design-choice; decision making under uncertainty; multi-attribute decision making; optimization, satisficing; goal seeking; simulation.
3. Traditional management support technologies and their Web-based extensions – DSS, Group DSS, Organizational DSS, Expert Systems, Executive Information Systems.
4. Data warehousing, data mining and data visualization - Data warehouses and data marts, OLAP, data visualization and multidimensionality, intelligent databases and data mining.
5. Non-quantitative methods and technologies for management support and business intelligence – knowledge management, neural computing, intelligent agents and hybrid intelligent systems.

Recommended Reading

Text(s)

Galit Shmueli, Nitin Patel and Peter Bruce, Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner, 2nd edition, Wiley. ISBN-10: 0470526823, ISBN-13: 978-0470526828