University of Macau
Faculty of Science and Technology
Department of Computer and Information Science
CISB462 Introduction to Electronic Commerce
Syllabus
2nd Semester 2014/2015
Part A – Course Outline

Elective course in Computer Science

Catalog description:

(2-2) 3 hours credit. Business and revenue models; e-commerce technology infrastructure; e-commerce strategies for e-marketing, e-trading and online auction; legal, ethical and tax issue of e-commerce; e-commerce technologies for systems design and implementation on hardware, software, security and payment; integration and planning for e-commerce.

Course type:

Theoretical with substantial laboratory/practice content

Prerequisites:

- CISB110

Textbook(s) and other required material:

- Gary P. Schneider, **Electronic Commerce, 8**th Annual Edition, Thomson Course Technology, 2008 (Required);

References:

- Bharat Bhasker, **Electronic Commerce: Framework, Technologies and Applications**, Tata McGraw-Hill, 2009.

Major prerequisites by topic:

1. Computer organization.
2. Web-based programming.
3. Basics of business management.

Course objectives:

1. Introduce students to real systems, which use e-commerce techniques [k].
2. Introduce students to analysis of e-commerce systems [a, c, e].
3. Introduce students to solving real e-commerce problems [a, c, e, f, h].
4. Learning to apply course materials to improving thinking and self-learning [a, g, i].

Topics covered:

1. E-commerce business models and revenue models (4 hours).
2. Internet and WWW (4 hours).
3. Electronic marketing (4 hours).
4. Selling online to consumers (4 hours).
5. Electronic trading through supply chain and electronic marketplace (4 hours).
6. Online auctions (4 hours).
7. Electronic payment systems (4 hours).
8. Understanding legal, ethical and tax issues in e-commerce (4 hours).
9. Managing risks by understanding security issues in e-commerce (4 hours).
10. Hardware and software necessary for e-commerce (4 hours).
11. Planning for real e-commerce (4 hours).

Class/laboratory schedule:

Timetabled work in hours per week			No of teaching weeks	Total hours	Total credits	No/Duration of exam papers
Lecture	Tutorial	Practice				
2	2	Nil	14	56	3	1/3 hours

Student study effort required:

Class contact:	
Lecture	28 hours
Tutorial	28 hours
Other study effort	
Self-study	28 hours
Homework assignment	6 hours
Project / Case study	15 hours
Total student study effort	105 hours

Student assessment:
Final assessment will be determined on the basis of:
Homework: 10% Project: 20%
Mid-term: 30% Final exam: 40%

Course assessment:
The assessment of course objectives will be determined on the basis of:
- Homework, project and exams
- Course evaluation

Course Outline:

Weeks	Topic	Course work
1	E-commerce business models and revenue models	
2	Internet and WWW	
3	Electronic marketing	Course project
4	Selling online to consumers	Assignment 1
5	Electronic trading through supply chain and electronic marketplace	
6	Online auctions	
7	Electronic payment systems	
8-9	Understanding legal, ethical and tax issues in e-commerce	Mid-term exam
10	Managing risks by understanding security issues in e-commerce	Assignment 2
11	Hardware and software necessary for e-commerce	
12	Planning for real e-commerce	
13	Review	
14	Project demonstration	

Contribution of course to meet the professional component:

This course prepares students to work professionally in the area of e-commerce technology.

Relationship to CS program objectives and outcomes:

This course primarily contributes to Computer Science program outcomes that develop student abilities to:
(a) an ability to apply knowledge of computing, mathematics, science, and engineering.
(f) an understanding of professional, ethical, legal, security and social issues and responsibilities.
(k) an ability to use the techniques, skills, and modern computer tools necessary for engineering practice.

The course secondarily contributes to Computer Science program outcomes that develop student abilities to:
(c) an ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
(e) an ability to analyze a problem, and identify, formulate and use the appropriate application requirements for obtaining its computing solution.
(h) the broad education necessary to understand the impact of computing solutions in a global, economic, environmental, and societal context.
(j) a knowledge of contemporary issues.

Relationship to CS program criteria:

Criterion	DS	PF	AL	AR	OS	NC	PL	HC	GV	IS	IM	SP	SE	CN
Scale: 1 (highest) to 4 (lowest)							2		4			2	1	3

Discrete Structures (DS), Programming Fundamentals (PF), Algorithms and Complexity (AL), Architecture and Organization (AR), Operating Systems (OS), Net-Centric Computing (NC), Programming Languages (PL), Human-Computer Interaction (HC), Graphics and Visual Computing (GV), Intelligent Systems (IS), Information Management (IM), Social and Professional Issues (SP), Software Engineering (SE), Computational Science (CN).

Course content distribution:

Percentage content for			
Mathematics	Science and engineering subjects	Complementary electives	**Total**
0	100%	0	100%

Coordinator:

Dr. Jingzhi Guo, Assistant Professor of E-Commerce Technology and Internet Computing

Persons who prepared this description:

Dr. Jingzhi Guo

Part B General Course Information and Policies

2nd semester 2014/2015

Instructor: (*to be announced*) Office: (*to be announced*)
Office Hour: (*to be announced*) Phone: (*to be announced*)
Email: (*to be announced*)

Time/Venue: (*to be announced*)

Grading Distribution:

Percentage Grade	Final Grade	Percentage Grade	Final Grade
100 - 93	A	92 - 88	A–
87 - 83	B+	82 - 78	B
77 - 73	B–	72 - 68	C+
67 - 63	C	62 - 58	C–
57 - 53	D+	52 - 50	D
below 50	F		

Comment:
The objectives of the lectures are to explain and to supplement the text material. Students are responsible for the assigned material whether or not it is covered in the lecture. Students who wish to succeed in this course should read the assignments prior to the lecture and should work all homework and lab assignments. You are encouraged to look at other sources (other texts, etc.) to complement the lectures and text.

Homework Policy:
The completion and correction of homework is a powerful learning experience; therefore:

- There will be approximately 3 homework assignments including the project.
- Homework is due after assignment deadline unless otherwise noted, no late homework is accepted.
- The course grade will be based on the average of the grades.

Quizzes
One mid-term exams will be held during the semester.

Note

- Recitation session is important part of this course and attendance is strongly recommended.
- Check UMMOODLE for announcement, homework and lectures. Report any mistake on your grades within one week after posting.
- No make-up exam is given except for CLEAR medical proof.
- Cheating is absolutely prohibited by the university.

Appendix:

Rubric for Program Outcomes

Rubric for (a)	5 (Excellent)	3 (Average)	1 (Poor)
Understand the theoretic background	Students understand theoretic background and the limitations of the respective applications.	Students have some confusion on some background or do not understand theoretic background completely.	Students do not understand the background or do not study at all.

Rubric for (c)	5 (Excellent)	3 (Average)	1 (Poor)
Design capability and design constraints	Student understands very clearly what needs to be designed and the realistic design constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	Student understands what needs to be designed and the design constraints, but may not fully understand the limitations of the design constraints.	Student does not understand what needs to be designed and the design constraints.

Rubric for (e)	5 (Excellent)	3 (Average)	1 (Poor)
Modeling, problem formulation and problem solving	Students choose and properly apply the correct techniques.	Students model correctly but cannot select proper technique or model incorrectly but solve correctly accordingly.	Students at loss as to how to solve a problem.

Rubric for (f)	5 (Excellent)	3 (Average)	1 (Poor)
Design	Understand how to critique and analyze design tradeoffs and constraints with respect to safety, liability, and integrity of data, and context of use.	Have knowledge of safety, liability, and integrity of data, and context of use but cannot analyze thoroughly.	No awareness of importance of safety, liability, and integrity of data, and context of use.

Rubric for (h)	5 (Excellent)	3 (Average)	1 (Poor)
Scope of content	Students will demonstrate material, items, or topics characterized by a sophisticated array of information, insight, and understanding.	Students demonstrate significance reflecting an acceptable degree of perception and thoughts.	Students have limited abilities to relate, incorporate, or demonstrate knowledge of subject with a dynamic breadth.

Rubric for (i)	5 (Excellent)	3 (Average)	1 (Poor)
Research/ gathering information	Comprehensive collection of information on a subject, including state-of-the-art and background.	Collects adequate information on a subject.	Collects minimal information on a subject.

Rubric for (k)	5 (Excellent)	3 (Average)	1 (Poor)
Use modern principles, skills, and tools in engineering practice	Student applies the principles, skills and tools to correctly model and analyze engineering problems, and understands the limitations.	Student applies the principles, skills and tools to analyze and implement engineering problems.	Student does not apply principles and tools correctly and/or does not correctly interpret the results.