The University of Southern Queensland

Course specification

Description: Advanced Systems Analysis and Design						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIS	3002	40550	1, 2005	EXT	1.00	Toowoomba

Academic group:	FOBUS
Academic org:	FOB005
Student contribution band:	2
ASCED code:	020305

STAFFING

Examiner: Fiona Darroch
Moderator: Kristeen Casey

REQUISITES

Pre-requisite: CIS2000 and CIS2002

RATIONALE

We are in a climate of technological change and increasing demand for management information systems. There is a definite trend toward package-based solutions. This challenging work environment demands that system professionals be familiar with the variety of new and effective system development methodologies, tools and techniques. This course covers a range of fundamental concepts and terminology used in the contemporary business systems environment. Case studies are used to apply the concepts and techniques involved.

SYNOPSIS

This course further develops the techniques for systems analysis and design, with an emphasis on object oriented methodologies. The latest analysis requirements and design specification methods are given detailed coverage in accord with their currently accepted importance. The issue of system acquisition via packages is also considered. The importance of written and verbal communication skills is given prominence. The course will enable students to understand the overall Systems Development Lifecycle, and particularly contemporary approaches to Systems Development Methodologies, as well as a range of tools and techniques. Students will be exposed to current software industry Quality Assurance concepts and standards and will apply a standard in their assessment tasks. Major trends and issues affecting systems analysis and design in the business sector are also studied.

OBJECTIVES

Completion of this course will enable students to:

1. demonstrate strong communication skills in the preparation and delivery of formal systems documentation to management and user groups;

2. outline the phases in the development of a business system and describe purposes of each;
3. apply the major activities and techniques relevant to the analysis and design phases;
4. discuss the advantages and disadvantages of the major contemporary system development methodologies;
5. discuss the major trends and issues associated with system development and package acquisition;
6. explain the project management issues associated with system development and package acquisition;
7. accurately and consistently develop a systems proposal; define systems requirements; and prepare systems specification; and
8. demonstrate basic literature research and academic report writing skills.

TOPICS

	Description	Weighting (%)
1.	Communication Skills	25.00
2.	SA&D Methodologies and Techniques	50.00
	2.1. The Systems Development Life Cycle, including project feasibility	
	2.2. Contemporary System Development Methodologies including Agile/XP, Spiral, RUP and RAD	
	2.3. Requirements and Design Formal Specification Document Production	
	2.4. Requirements modelling: UML modelling (in depth) and Event Tables	
	2.5. SAD Tools and Techniques including: Prototyping, JAD and CASE tools- theory and practice	
	2.6. Interface Design	
3.	SA&D Issues	25.00
	3.1. Software QA including: Software industry standards and Testing (including test plans, test cases, testing tools)	
	3.2. Packaged Software	
	3.3. Configuration Management	
	3.4. Data Conversion	
	3.5. Project Management	

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07

46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at http://bookshop.usq.edu.au click 'Semester', then enter your 'Course Code' (no spaces).

Students are encouraged to use a case tool package (see CIS3002 Introductory Book).

Satzinger, JW, Jackson, RB & Burd, SD 2004, *Systems analysis and design in a changing world*, 3rd edn, Course Technology, Cambridge, Massachusetts.

Summers, J & Smith, B 2004, *Communication skills handbook: how to succeed in written and oral communication*, John Wiley & Sons, Milton, Queensland.
(revised & updated edition)

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Booch, G, Rumbaugh, J & Jacobson, I 1999, *The unified modeling language user guide*, Addison-Wesley, Reading, Massachusetts.

Brown, DW 2002, *An introduction to object-oriented analysis: objects and UML in plain English*, 2nd edn, John Wiley & Sons Inc, New York.

Bruegge, B & Dutoit, AH 2000, *Object-oriented software engineering: conquering complex and changing systems*, Prentice Hall, Upper Saddle River, New Jersey.

Dennis, A & Wixom, BH 2000, *Systems analysis and design: an applied approach*, John Wiley & Sons Inc, New York.

Fowler, M & Scott, K 2000, *UML distilled*, 2nd edn, Addison-Wesley, Reading, Massachusetts.

Hawryszkiewycz, I 2001, *Introduction to systems analysis and design*, 5th edn, Prentice Hall, Frenchs Forest, New South Wales.

Henderson-Sellers, B & Unhelkar, B 2000, *OPEN modeling with UML*, Addison-Wesley, New York.

Hoffer, JA, George, JF & Valacich, JS 2001, *Modern systems analysis and design*, 3rd edn, Pearson Education, Harlow.

Kendall, KE & Kendall, JE 2001, *Systems analysis and design*, 5th edn, Prentice Hall, Upper Saddle River, New Jersey.

Kruchten, P 2000, *The rational unified process: an introduction*, 2nd edn, Addison-Wesley, Reading, Massachusetts.

Maciaszek, LA 2001, *Requirements analysis and system design: developing information systems with UML*, Pearson Education, New York.

Oestereich, B 2002, *Developing software with UML: object-oriented analysis and design in practice*, 2nd edn, Addison-Wesley, Boston, Massachusetts.

Rumbaugh, J, Jacobson, I & Booch, G 1999, *The unified modeling language reference manual*, Addison-Wesley, Boston, Massachusetts.

Satzinger, JW & Orvik, TU 2001, *The object-oriented approach: concepts, system development, and modeling with UML*, Course Technology, Cambridge, Massachusetts.

Stevens, P & Pooley, R 2000, *Using UML: software engineering with objects and components*, Addison-Wesley, Harlow.

Valacich, JS, George, JF & Hoffer, JA 2001, *Essentials of systems analysis and design*, Prentice Hall, Upper Saddle River, New Jersey.

Whitten, JL, Bentley, LD & Dittman, KC 2001, *Systems analysis and design methods*, 5th edn, Irwin/McGraw-Hill, Boston, Massachusetts.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Private Study	50.00
Project Work	120.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
ASSIGNMENT 1	100.00	15.00	11 Apr 2005 (see note 1)
ASSIGNMENT 2	100.00	15.00	23 May 2005 (see note 2)
EXAM PART A (MULTI-CHOICE)	35.00	25.00	END S1 (see note 3)
EXAM PART B (WRITTEN)	65.00	45.00	END S1

NOTES

1. Software requirements specification.
2. Software design description.
3. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date for Exam (Parts A and B) after the timetable has been finalised. The total working time for Exam (Parts A and B) is 3 hours.

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
If you are an international student in Australia you are advised to attend all classes at your campus. Failure to attend may infringe the conditions of your student visa. For all other students, there are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

2 Requirements for students to complete each assessment item satisfactorily:
To complete the assignments satisfactorily, students must obtain at least 50% of the marks available for the assignments in aggregate. To complete the examination satisfactorily, students must obtain at least 50% of the marks available for the examination.

3 Penalties for late submission of required work:

If students submit assignments after the due date without prior approval then a penalty of 20% of the total marks available for the assignment may apply for each working day late.

4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must attempt all of the summative assessment items, achieve an aggregated mark of at least 50% in the total marks allocated for the assignments, achieve at least 50% in the examination, and at least 50% of the available weighted marks for the summative assessment items.

5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks (or grades) obtained for each of the summative assessment items in the course.

6 Examination information:
This is a restricted examination. Candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the examination for this course are (i) Writing materials: non-electronic and free from material which could give the student an unfair advantage in the examination; (ii) Translation dictionaries: with the Examiner's approval, candidates may, take an appropriate non-electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.

7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the next examination period.

8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL http://www.usq.edu.au/corporateservices/calendar/part5.htm. Students should also read the Faculty of Business Guide to Policies and Procedures of the Faculty which can be found at the URL http://www.usq.edu.au/handbook/current/buspolproc.html.

ASSESSMENT NOTES

1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within five days if required by the Examiner. (iii) The Examiner may grant an extension of the due date of an assignment in extenuating circumstances. Students may apply for an extension through the DEC before the due date or by including an application with the submitted assignment after the due date. Such applications should be in writing and include supporting documentary evidence. The authority for granting extensions rests with the relevant Examiner. (iv) The Examiner will normally only accept assessments that have been written, typed or printed on paper-based media. (v) Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the Examiner to negotiate such special arrangements. (vi) In the event that a due date for an assignment falls on a local public holiday in their area, such as a Show holiday, the due date for the

assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the Examiner's convenience.

2 Course Weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper. The examination may test material already tested in assignments.

3 Guidelines for Assignments: Unless otherwise directed by the Examiner, all written and oral assignments submitted by students must conform to the guidelines laid out in the 'Communication skills handbook: How to succeed in written and oral communication' and the 'Information systems developers handbook: A road map for students'. Any work not prepared in accordance with these guidelines may be subject to penalty or requirement for resubmission.

4 Deferred Work: Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded: IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).

OTHER REQUIREMENTS

1 E-mail and Internet Access: Students will require access to e-mail and Internet access to USQConnect for this course.
