



The University of Southern Queensland

## Course specification

<b>Description: Advanced Java Programming</b>						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIS	3007	54519	2, 2006	ONC	1.00	Toowoomba

<b>Academic group:</b>	FOBUS
<b>Academic org:</b>	FOB005
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	020103

### STAFFING

Examiner: Mustafa Ally  
Moderator: Srecko Howard

### REQUISITES

Pre-requisite: CIS3001

### RATIONALE

Object oriented programming is becoming a widespread methodology for the development of business and Internet applications. This course extends your Java programming skills towards the design and development of distributed, Web based, enterprise object oriented systems. While these will involve learning a number of advanced Java technologies, the emphasis is still on the production of robust well-designed applications and components that meet industry requirements and standards.

### SYNOPSIS

This course extends the basic language skills taught in the introductory Java course to cover more advanced Java based technologies. Students will gain further experience in object oriented program design through the development of systems that exploit many leading-edge technologies and techniques (for example, Design Patterns, JavaBeans, JDBC, JAX, SOAP, Security, servlets, JSPs, EJBs). Case studies will be used to demonstrate the use of these features while developing practical design and programming skills that will provide a solid foundation for the future. This course will provide you with the skills to design and develop professional solutions to real business applications.

### OBJECTIVES

The course objectives define the student learning outcomes for a course. The assessment item(s) that may be used to assess student achievement of an objective are shown in parentheses after each objective. On successful completion of this course, students should be able to:

1. apply advanced object-oriented programming and design techniques (Assignment, Examination)

2. demonstrate an understanding of technologies used in J2EE Enterprise applications (Assignment, Examination)
3. develop and utilise design patterns (Assignment)
4. develop distributed, Web-based, enterprise systems (Assignment)
5. develop and integrate reusable components (Assignment)
6. appreciate the process of developing applications for Intranet/Internet Environments (Assignment, Examination).

## TOPICS

	Description	Weighting (%)
1.	Design Methodologies, Design Patterns, and Development Techniques	10.00
2.	Introduction to Enterprise Systems and Web Applications	10.00
3.	XML and Related Technologies	10.00
4.	Remote Procedure Calls (JAX, SOAP)	10.00
5.	Servlets and JSP	10.00
6.	UI Components (Faces)	10.00
7.	Enterprise Java Beans	10.00
8.	Database Connectivity and Security	10.00
9.	Messaging Services (JMS)	10.00
10.	Case Studies	10.00

## 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).

The software accompanying the textbook should be adequate for most of the student's requirements for this course. However, students are free to use equivalent products.

CIS3007 study package available from the USQ Bookshop.

Bodoff, S, Armstrong, E, Ball, J, Carson, DB, Evans, I, Green, D, Haase, K & Jendrock, E 2004, *The J2EE tutorial*, 2nd edn, Addison Wesley, Boston, Massachusetts.

(The accompanying CD-ROM includes the tutorial examples (binary and source code) and the J2EE Software Development Kit, Enterprise Edition 1.4 (J2EE 1.4 SDK), which contains the Sun Java System Application Server Platform Edition 8, Java 2 Software Development Kit (J2SE SDK), and BluePrints sample applications. As at 10 January 2006, SUN Microsystems has made available a softcopy of this textbook online at <http://java.sun.com/docs/books/j2eetutorial/>. Students utilising this resource should be aware that it is their responsibility to download all the resources required for this course.)

Lahey, H (ed) *Information systems developers handbook: a road map for students*, University of Southern Queensland, Toowoomba, Queensland.

(This handbook is available on the USQ website at <http://www.usq.edu.au/faculty/business/departments/infosys/isdhandbook.htm>)

## 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.

Deitel, HM, Deitel, PJ & Santry, SE 2002, *Advanced Java 2 platform: how to program*, Prentice Hall, Upper Saddle River, New Jersey.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessment	40.00
Laboratory or Practical Classes	14.00
Lectures	28.00
Private Study	70.00
Tutorials	14.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
ASSIGNMENT	100.00	30.00	23 Oct 2006
3 HOUR EXAMINATION	180.00	70.00	END S2 (see note 1)

### NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date after the timetable has been finalised.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:  
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and 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 satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)
- 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 submit all of the weighted assessment items, achieve at least 50% in the assignment, achieve at least 50% in the examination, and at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:  
The final grades for students will be assigned on the basis of the aggregate of the weighted marks 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) Assignments must be submitted in the drop box located at the Faculty of Business reception area on level 4 of L-Block by 5:00PM on the due date. (ii) Students must retain a copy of each assignment submitted for assessment. This must be produced within 24 hours 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 before the due date or include 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) 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.
- 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'. Any work not prepared in accordance with these guidelines may be subject to penalty or requirement for resubmission.

- 4 Make-up work: Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the Examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study.
- 5 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 Learning resources: Prescribed texts and materials (see above); recommended reference materials (see above); printed Introductory Book\*, Study Book/s\*, and Book/s of Selected Readings\*; and course Website accessible via USQConnect. \*part of the study package available from the USQ Bookshop
  - 2 E-mail and Internet Access: Students will require access to e-mail and Internet access to USQConnect for this course.
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