COMP3760

Enterprise Systems Integration

Session 2, Online-scheduled-weekday 2023

School of Computing

Contents

General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
130cp at 1000 level or above including (COMP2350 or ISYS224) or (COMP2750 or ISYS254) or (COMP2050 or COMP255)

Corequisites

Co-badged status
COMP6760

Unit description
This unit aims to provide an understanding of how information systems can be integrated into the overall business layer of an organisation. The unit focuses on methods and techniques to enhance the alignment of information systems with business strategy, objectives and processes. Issues covered include: process modelling, corporate modelling, workflow modelling, business process re-engineering, enterprise resource planning, business-to-business integration and supply chain management. Various technical approaches to tackling integration problems are discussed.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: utilise knowledge needed to integrate new systems and processes of an organisation

ULO2: comprehend the principles involved in strategic planning. for IT

ULO3: competently use various modelling techniques to describe information flows and processes in an organisation.

ULO4: competently express structures in XML (eXtensible Markup Language) to web enable business applications.

ULO5: appreciate and code with the Web Services Description Language (WSDL) and Business Process Execution Language (BPEL).

General Assessment Information

Late Assessment Submission Penalty

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following university standard late penalty applied. Please see https://students.mq.edu.au/study/assessment-exams/assessments for more information.

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11:55 pm. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Assessments where Late Submissions will be accepted

In this unit, late submissions will accepted as follows:

• Assignment 1 - YES, Standard Late Penalty applies

• Assignment 2 - YES, Standard Late Penalty applies

• Assignment 3 - YES, Standard Late Penalty applies

Assessment tools and submission

Marking rubrics are used for assignments

Assignments are submitted on iLearn and Turnitin

Assessments are marked as soon as practicable - typically within a couple of weeks.

The exam may take place via a pink paper or online. Where a special consideration for an exam has been submitted and accepted a supplementary exam is available some weeks after the initial exam.

To pass this unit you must:

- Achieve a total mark equal to or greater than 50%.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment 1	10%	No	18th August
Assignment 3	20%	No	20th October
Exam	50%	No	6-24th November
Assignment 2	20%	No	15th September

Assignment 1

Assessment Type [1]: Report
Indicative Time on Task [2]: 10 hours
Due: **18th August**
Weighting: **10%**

A report on eBusiness principles

On successful completion you will be able to:

- utilise knowledge needed to integrate new systems and processes of an organisation
- comprehend the principles involved in strategic planning. for IT

Assignment 3

Assessment Type [1]: Practice-based task
Indicative Time on Task [2]: 20 hours
Due: **20th October**

Weighting: **20%**

Group assignment implementing an eBusiness solution. These will be peer moderated and marks assigned individually within the group. Groups will be self-selecting. If individuals have not allocated themselves to a group within a set time, people will be allocated to a group by the lecturer.

On successful completion you will be able to:

- utilise knowledge needed to integrate new systems and processes of an organisation
- competently use various modelling techniques to describe information flows and processes in an organisation.
- competently express structures in XML (eXtensible Markup Language) to web enable business applications.
- appreciate and code with the Web Services Description Language (WSDL) and Business Process Execution Language (BPEL).

Exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 40 hours
Due: **6-24th November**
Weighting: **50%**

Examination on potentially all material covered in the unit.

On successful completion you will be able to:

- utilise knowledge needed to integrate new systems and processes of an organisation
- comprehend the principles involved in strategic planning. for IT
- competently use various modelling techniques to describe information flows and processes in an organisation.
- competently express structures in XML (eXtensible Markup Language) to web enable business applications.
- appreciate and code with the Web Services Description Language (WSDL) and Business Process Execution Language (BPEL).

Assignment 2

Assessment Type [1]: Design Task
Indicative Time on Task [2]: 20 hours
Due: **15th September**
Weighting: **20%**

Business Process Modelling

On successful completion you will be able to:

- utilise knowledge needed to integrate new systems and processes of an organisation
- comprehend the principles involved in strategic planning. for IT
- competently use various modelling techniques to describe information flows and processes in an organisation.

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

CLASSES

Each week you should attend three hours of lectures. The two hours on the Tuesday will be standard lecture format. The third hour of lecture on the Wednesday will act as a SGTA (Small Group Learning Activity). There will also be a practical class covering the technology - modelling tools, XML etc..

For details of days, times and rooms consult the timetables webpage.

Lectures commence in **week 1**.

Note that the **practical** classes commence in **week 2**.

You should have selected a practical class enrollment. It will not particularly matter if you do not attend the practical you are enrolled in as practical attendance is not compulsory, but should be useful to you.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Textbook

A recommended **eText** for COMP3760/6760 (around which some of the course is based) is:

- Papazoglou, M., Ribbers, P., (2010) *e-Business: Organizational and Technical Foundations* John Wiley & Sons Ltd. Chichester West Sussex U.K.

There are a few more books you may wish to acquire, these are not compulsory but potentially helpful.

- Busch, P., (2008) *Tacit Knowledge in Organizational Learning* IGI Global U.S.A.
- Chaffey, D., (2019) *Digital Business and E-Commerce Management* 7th Ed. Pearson Harlow U.K.
- Papazoglou, M., (2012) *Web Services & SOA: Principles and Technology* 2nd Ed. Pearson Harlow U.K.

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

echo360

Digital recordings of lectures are available. We will record with echo360. Read instructions here.

Technology

Technology used will include IBM BP Modeller, Adonis etc. Students are also expected to make use of MS Word, MS Excel and MS Powerpoint and editing software to undertake XML and BPEL.

Discussion Boards

When groups are chosen for the group assignment, you will have the opportunity to discuss issues amongst yourselves on iLearn.

Methods of Communication

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

COVID Information

For the latest information on the University's response to COVID-19, please refer to the Coronavirus infection page on the Macquarie website: https://www.mq.edu.au/about/coronavirus-faqs. Remember to check this page regularly in case the information and requirements change during semester. If there are any changes to this unit in relation to COVID, these will be communicated via iLearn.

Unit Schedule

Week	**Lecture - Monday 3-5pm**	**Text**	**Practicals** Zhang, Tsang
1 Busch	Introduction to eBusiness and planning for eBusiness	Papazoglou and Ribbers chapters 1, 2	No practical
2 Busch	Information modelling for eBusiness and BPM	chapter 12	Introduction to modelling
3 Busch	eBusiness models and relationships	chapters 3, 4	Introduction to ADONIS 1

4 Busch	Governance structures and eMarkets	chapters 5, 8	**Assignment 1 (10%) due 18th August** ADONIS practical 2
5 Busch	Knowledge management	Busch (2008)	ADONIS practical 3
6 Busch	eBusiness technological infrastructure	chapter 6	ADONIS practical 4
7 Zhang	XML EDI and Middleware EDI concepts and standards Middleware concepts, architecture and systems	chapters 7, 14	Introduction to XML
	Mid Semester Break: 9-24th September		**Assignment 2 (20%)** due **15th September**
8 Zhang	Loosely coupled eBusiness solutions Concept of software as a service Web services Web service architecture	chapter 19	XML, Middleware
9 Zhang	Workflow systems Workflow concepts Workflow elements Workflow modeling Workflow verification	chapter 18	Business solutions, Workflow systems
10 Zhang	Enterprise Application Integration (EAI) Concepts Technologies	chapter 17	Assignment work
11 Zhang	Leveraging legacy applications	chapter 16	**Group assignment (20%) due 20th October**
12 Zhang	Business protocols Why are business protocols and standards needed XML technology stack for eBusiness integration RosettaNet Electonic business XML	chapter 20	XML
13 Busch, Zhang	**Revision for the exam**		

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Late Assignment Submission policy: Late work will be accepted with a penalty of 10% of the marks for the assignment per day submitted late. Hence, an assignment submitted five days late will get at most half the marks. If you cannot submit on time because of illness or other

circumstances, please contact the lecturer **before** the due date.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

This year Mr. Yang Zhang joins us as a lecturer replacing Prof. Jian Yang, while Yang also remains a practical demonstrator. Lecture notes are also updated as is the SGTA material.

Mr. Arthur Tsang joins us as an practical instructor.

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Grading

Standards

Four standards, namely HD, D, CR, P summarize as many different levels of achievement. Each standard is precisely defined to help students know what kind of performance is expected to deserve a certain mark. The standards corresponding to the learning outcomes of this unit are given below:

	L.O. #1

Criteria for L.O. #2				
undertaking SWOT analysis	a limited understanding of what SWOT is and how it works, perhaps making a few simple mistakes	competent analysis of SWOT for a given organisation listing a few each of S, W, O and T factors	good SWOT analysis, with some recourse to the literature providing similar examples in the case of other organisations	outstanding SWOT analysis with comprehensive recourse to the literature
Criteria for L.O. #3				
using modelling software	limited use of BP Modeller showing some understanding of the tool	competent use of BP Modeller showing understanding of the software and ability to use it effectively, perhaps making some basic mistakes	good understanding of the software, modelling workflows proficiently and using tool appropriately without any significant mistakes	excellent understanding of the software, modelling workflows proficiently and using tool appropriately at an expert level
workflow modelling to improve workflow effeciency	limited understanding of workflow modelling, some obvious mistakes	competent understanding of workflow modelling, some trivial mistakes still in evidence, but generally an understanding of what is taking place and why	some incorporation of the literature beyond just compentent understanding of workflow modelling	an excellent grasp of workflow modelling, also drawing on the literature widely to exemplify in the case of further examples how workflow modelling has aided other organisations as well
Criteria for L.O. #4				

understanding how use of code such as XML will enable ecommerce	limited understanding of what XML actually is and does, however showing some understanding of how XML enables ecommerce	competent understanding of XML, limited recourse to the literature, perhaps just relying on the textbook or lecture notes	good understanding of the role of XML, with some recourse to examples in the literature, beyond just knowledge of XML from the lecture notes	outstanding understanding of the role XML plays, with comprehensive recourse to the literature providing further examples beyond what was asked for in the assignment
competence in XML	basic competence in coding, shows obvious and basic mistakes in coding	proficient but perhaps ineffecient coding in XML, still displaying some mistakes, parameters names obtuse and commenting limited	proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently	outstanding coding in XML, with code effeciencies clearly displayed, all parameters using meaningful names, code well commented
Criteria for L.O. #5				
understanding how WSDL and BPEL enable ecommerce	limited understanding of what WSDL and BPEL actually is and do, however showing some understanding of how they enables ecommerce	competent understanding of WSDL and BPEL, limited recourse to the literature, perhaps just relying on the textbook or lecture notes	good understanding of the role of WSDL and BPEL, with some recourse to examples in the literature, beyond just knowledge of WSDL and BPEL from the lecture notes	outstanding understanding of the role WSDL and BPEL play, with comprehensive recourse to the literature providing further examples beyond what was asked for in the assignment
competence in WSDL and BPEL	basic competence in coding, shows obvious and basic mistakes in coding	proficient but perhaps ineffecient coding in WSDL and BPEL, still displaying some mistakes, parameters names obtuse and commenting limited	proficient coding in WSDL and BPEL, perhaps a few trivial mistakes still in evidence, but generally codes quite competently	outstanding coding in WSDL and BPEL, with code effeciencies clearly displayed, all parameters using meaningful names, code well commented

For each task, those standards translate into a mark and the different component marks are added up. You will then be given a grade that reflects your achievement in the unit. The following description of the different grades is still in draft form and therefore not official as yet

- **Fail (F)**: does not provide evidence of attainment of all learning outcomes. There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; and incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.
- **Pass (P)**: provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; and communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes.

- **Credit (Cr)**: provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; plus communication of ideas fluently and clearly in terms of the conventions of the discipline.
- **Distinction (D)**: provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.
- **High Distinction (HD)**: provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application.

The final mark for the unit will be calculated by combining the marks for all assessment tasks according to the percentage weightings shown in the assessment summary.

Changes since First Published

Date	Description
04/10/2023	"Tutorial" replaced by SGTA (Small Group Teaching Activity)

Unit information based on version 2023.02 of the Handbook