COMP3760
Enterprise Systems Integration
Session 2, Special circumstances 2021

Department of Computing

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Notice
Some on-campus classes have moved online for the first two weeks of Session, before returning to campus in Week 3. If you are studying a unit outside of the primary Session 2 timetable, please contact your teaching staff team for further details.

Some classes/teaching activities cannot be moved online and must be taught on campus. To find out if you are enrolled in one of these classes/teaching activities, you can check to see if your unit is on the list of units with mandatory on-campus classes/teaching activities.

Your Unit Convenor will provide more information via an iLearn announcement when your iLearn unit becomes available.
## General Information

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Convenor, Lecturer  
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TBD

Practical Demonstrator  
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TBD

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://students.mq.edu.au/important-dates

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

UL01: utilise knowledge needed to integrate new systems and processes of an organisation
UL02: comprehend the principles involved in strategic planning. for IT
UL03: competently use various modelling techniques to describe information flows and processes in an organisation.
UL04: competently express structures in XML (eXtensible Markup Language) to web enable business applications.
UL05: appreciate and code with the Web Services Description Language (WSDL) and Business Process Execution Language (BPEL).

General Assessment Information

Late Submission
No extensions will be granted without an approved application for Special Consideration.

There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. For example, 25 hours late in submission for an assignment worth 10 marks – 20% penalty or 2 marks deducted from the total.

No submission will be accepted after solutions have been posted.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>10%</td>
<td>No</td>
<td>18th August</td>
</tr>
<tr>
<td>Name</td>
<td>Weighting</td>
<td>Hurdle</td>
<td>Due</td>
</tr>
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<tr>
<td>Assignment 2</td>
<td>20%</td>
<td>No</td>
<td>15th September</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>20%</td>
<td>No</td>
<td>20th October</td>
</tr>
<tr>
<td>Exam</td>
<td>50%</td>
<td>Yes</td>
<td>8-26th November</td>
</tr>
</tbody>
</table>

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 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.

Assignment 3
Assessment Type 1: Practice-based task
Indicative Time on Task: 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: Examination  
Indicative Time on Task: 40 hours  
Due: 8-26th November  
Weighting: 50%  
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

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).

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 Learning Skills Unit 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 tutorial. 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.

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. If you do not have a class, or if you wish to change one, you should see the enrollment operators in the E7B courtyard during the first two weeks of the semester. Thereafter you should go to the Student Centre.

REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

Textbook

A recommended textbook for COMP3760/6760 (around which the course is based) is:

• Papazoglou, M., Ribbers, P., (2006) e-Business: Organizational and Technical Foundations John Wiley & Sons Ltd. Chichester West Sussex U.K. There is also a companion website by the publisher at www.wiley.com. This site contains links to example material and more.

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.
UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

echo360

Digital recordings of lectures are available. We will record with either echo360 or zoom. 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.

**Unit Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture - Tuesday</th>
<th>Text</th>
<th>Practical</th>
</tr>
</thead>
</table>
| 1 (Peter) | World of eBusiness  
eBusiness strategy  
- What is eBusiness strategy  
- Strategic positioning  
- Level of eBusiness strategy  
- Strategic alignment | Papazoglou and Ribbers chapters 1, 2 | No practical |
| 2 (Peter) | Business models  
- Pressures forcing business changes  
- Classifications of business models  
eBusiness Relationships | chapters 3, 4 | Introduction to modelling |
| 3 (Peter) | Governance Structures  
Business process modeling  
- Business process modelling methodologies  
- Supply chain operations reference (SCOR) model  
- Model driven architecture (MDA)  
- Business process modelling notation (BPMN) | chapters 5, 12 | Introduction to modelling cont. |
| 4 (Peter) | eBusiness Technological Infrastructure | chapter 6 | Assignment 1 (10%) due 18th August Modelling exercise |
| 5 (Peter) | eMarkets | chapter 8 | Modelling exercise |
| 6 (Peter) | Knowledge Management | Busch (2008) | Introduction to XML |
| 7 (Jian) | XML EDI and Middleware | chapters 7, 14 | XML |
|  | - EDI concepts and standards |
|  | - Middleware concepts, architecture and systems |
| 8 (Jian) | Loosely coupled eBusiness solutions | chapter 19 | XML, Middleware |
|  | - Concept of software as a service |
|  | - Web services |
|  | - Web service architecture |
| 9 (Jian) | Workflow systems | chapter 18 | Business solutions, Workflow systems |
|  | - Workflow concepts |
|  | - Workflow elements |
|  | - Workflow modeling |
|  | - Workflow verification |
| 10 (Jian) | Enterprise Application Integration (EAI) | chapter 17 | Assignment work |
|  | - Concepts |
|  | - Technologies |
| 11 (Jian) | Leverage legacy applications | chapter 16 | Group assignment (20%) due 20th October |
| 12 (Jian) | Business protocols | chapter 20 | XML |
|  | - Why are business protocols and standards needed |
|  | - XML technology stack for eBusiness integration |
|  | - RosettaNet |
|  | - Electronic business XML |
| 13 (Peter/ Jian) | | Revision for the exam |
Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- **Special Consideration Policy** (Note: The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)

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

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

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

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://stu...
Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- 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 Enquiry Service

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

Equity Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

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

The course has Mr. Yang Zhang joining us as a practical demonstrator.

Practicals will take place in the labs and online with Dr. Adnan Mahmood and Mr. Yang Zhang.

Further use will be made of ADONIS as a cloud hosted BPM platform in the practicals this semester.

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:

<table>
<thead>
<tr>
<th>L.O.</th>
</tr>
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<tbody>
<tr>
<td>#1</td>
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<table>
<thead>
<tr>
<th>Criteria for L.O. #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>undertaking SWOT analysis</td>
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<td></td>
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<td></td>
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<td></td>
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</tbody>
</table>

Criteria for L.O. #3
<table>
<thead>
<tr>
<th>Criteria for L.O. #4</th>
<th>understanding how use of code such as XML will enable ecommerce</th>
<th>competence in XML</th>
<th>criteria for L.O. #5</th>
<th>understanding how WSDL and BPEL enable ecommerce</th>
<th>competence in WSDL and BPEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>using modelling software</td>
<td>limited use of BP Modeller showing some understanding of the tool</td>
<td>good understanding of the software, modelling workflows proficiently and using tool appropriately without any significant mistakes</td>
<td>excellent understanding of the software, modelling workflows proficiently and using tool appropriately at an expert level</td>
<td>outstanding competence in WSDL and BPEL, with code efficiencies clearly displayed, all parameters using meaningful names, code well commented</td>
<td>outstanding coding in WSDL and BPEL, with code efficiencies clearly displayed, all parameters using meaningful names, code well commented</td>
</tr>
<tr>
<td>workflow modelling to improve workflow efficiency</td>
<td>limited understanding of workflow modelling, some obvious mistakes</td>
<td>competent understanding of workflow modelling, some trivial mistakes still in evidence, but generally an understanding of what is taking place and why</td>
<td>competent understanding of workflow modelling, some obvious mistakes</td>
<td>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</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>competent use of BP Modeller showing understanding of the software and ability to use it effectively, perhaps making some basic mistakes</td>
<td>some incorporation of the literature beyond just competent understanding of workflow modelling</td>
<td>some incorporation of the literature beyond just competent understanding of workflow modelling</td>
<td>some incorporation of the literature beyond just competent understanding of workflow modelling</td>
<td>some incorporation of the literature beyond just competent understanding of workflow modelling</td>
</tr>
<tr>
<td></td>
<td>good understanding of the software, modelling workflows proficiently and using tool appropriately without any significant mistakes</td>
<td>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</td>
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</tr>
<tr>
<td></td>
<td>limited understanding of XML actually is and does, however showing some understanding of how XML enables ecommerce</td>
<td>proficient but perhaps inefficient coding in XML, still displaying some mistakes, parameters names obtuse and commenting limited</td>
<td>limited understanding of what XML actually is and does, however showing some understanding of how XML enables ecommerce</td>
<td>limited understanding of what XML actually is and does, however showing some understanding of how XML enables ecommerce</td>
<td>limited understanding of what XML actually is and does, however showing some understanding of how XML enables ecommerce</td>
</tr>
<tr>
<td></td>
<td>proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently</td>
<td>proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently</td>
<td>proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently</td>
<td>proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently</td>
<td>proficient coding in XML, perhaps a few trivial mistakes still in evidence, but generally codes quite competently</td>
</tr>
<tr>
<td></td>
<td>outstanding understanding of the role XML plays, with comprehensive recourse to the literature providing further examples beyond what was asked for in the assignment</td>
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</tr>
</tbody>
</table>

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 examination in this unit is a hurdle requirement. You must get a mark of at least 40% in the examination to pass the unit. If you get a mark of at least 30% in your first attempt at the final examination you will be given a second and final attempt.

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.