



COMP8760

Enterprise Application Integration

Session 1, In person-scheduled-weekday, North Ryde 2025

School of Computing

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General Information

Unit convenor and teaching staff

Convenor, Lecturer

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Contact via email

4 RPD 356

TBA

Credit points

10

Prerequisites

COMP6760

Corequisites

Co-badged status

Unit description

A key technique to integrate business processes both within and between organisations is business process modelling (BPM). This unit thus begins with exploring process modelling with a view to redesigning processes to achieve organisational productivity targets. Various integration technologies from internal application integration to external business-to-business (B2B) integration are covered and include data orientated, application interfaces, message orientated middleware and application servers. The role of Web APIs and RESTful architecture is considered, as well cloud-based infrastructure, platforms and SaaS. We also consider B2B integration with EDI and Web Services, and the role of portals.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Industry, Innovation and Infrastructure

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: Undertake business process modelling to analyse an existing 'As Is' process to

compare and contrast with proposed 'To Be' processes for process improvement and optimisation.

ULO2: Critically analyse and apply available integration technologies to contemporary B2B case studies.

ULO3: Evaluate application integration technologies such as APIs, database integration, application servers, Web Services, REST and business process management systems, to recommend the most suitable technology to organisational senior management.

ULO4: Practice professional etiquette and maturity as individuals and whilst working in a team to deliver IT solutions to the wider enterprise.

ULO5: Demonstrate proficiency in leadership, communication, critical analysis, problem-solving, and creative thinking.

General Assessment Information

Requirements to Pass this Unit:

To pass the unit you need to obtain a grade of 50% or above overall. There are no hurdle assessments.

Late Assessment Submission Penalty:

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation 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. The submission time for all uploaded assessments is **11:55 pm**. A 1-hour grace period will be provided to students who experience a technical concern.

Special Consideration:

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 <https://connect.mq.edu.au>.

Assessments where Late Submissions will be accepted:

- Case Study Modeling and Analysis - YES, Standard Late Penalty applies
- EAI Project (Part A, Part B and Presentation) - NO, unless Special Consideration is granted

We strongly encourage all students to actively participate in all learning activities. Regular engagement is crucial for your success in this unit, as these activities provide opportunities to deepen your understanding of the material, collaborate with peers, and receive valuable feedback from instructors, to assist in completing the unit assessments. Your active participation

not only enhances your own learning experience but also contributes to a vibrant and dynamic learning environment for everyone.

Assessment Tasks

Name	Weighting	Hurdle	Due
Case Study Modeling and Analysis	20%	No	23:55 Sunday 06/04/25 (Week 6)
EAI Project (Part A)	30%	No	23:55 Sunday 25/05/25 (Week 11)
EAI Project (Part B)	10%	No	23:55 Sunday 25/05/25 (Week 11)
Presentation Based on EAI Project	10%	No	Friday 30/05/25 (Week 12, during the class)
Final Examination	30%	No	10/06/25-27/06/25 (Exam Week)

Case Study Modeling and Analysis

Assessment Type ¹: Report

Indicative Time on Task ²: 20 hours

Due: **23:55 Sunday 06/04/25 (Week 6)**

Weighting: **20%**

A case study of the introduction of a new technology into an organisation.

On successful completion you will be able to:

- Undertake business process modelling to analyse an existing 'As Is' process to compare and contrast with proposed 'To Be' processes for process improvement and optimisation.
- Critically analyse and apply available integration technologies to contemporary B2B case studies.

EAI Project (Part A)

Assessment Type ¹: Project

Indicative Time on Task ²: 30 hours

Due: **23:55 Sunday 25/05/25 (Week 11)**

Weighting: **30%**

Students form groups and select a case study based on given requirements as the basis for a

process improvement and optimisation project. Deliverables are a group report..

On successful completion you will be able to:

- Undertake business process modelling to analyse an existing 'As Is' process to compare and contrast with proposed 'To Be' processes for process improvement and optimisation.
- Critically analyse and apply available integration technologies to contemporary B2B case studies.
- Evaluate application integration technologies such as APIs, database integration, application servers, Web Services, REST and business process management systems, to recommend the most suitable technology to organisational senior management.
- Practice professional etiquette and maturity as individuals and whilst working in a team to deliver IT solutions to the wider enterprise.
- Demonstrate proficiency in leadership, communication, critical analysis, problem-solving, and creative thinking.

EAI Project (Part B)

Assessment Type ¹: Reflective Writing

Indicative Time on Task ²: 10 hours

Due: **23:55 Sunday 25/05/25 (Week 11)**

Weighting: **10%**

Based on your group experience in EAI Project (Part A), present an individual reflective report on the group's experience, outlining the successes and failures, what worked well and those aspects that did not.

On successful completion you will be able to:

- Undertake business process modelling to analyse an existing 'As Is' process to compare and contrast with proposed 'To Be' processes for process improvement and optimisation.
- Critically analyse and apply available integration technologies to contemporary B2B case studies.
- Evaluate application integration technologies such as APIs, database integration, application servers, Web Services, REST and business process management systems, to recommend the most suitable technology to organisational senior management.
- Practice professional etiquette and maturity as individuals and whilst working in a team to deliver IT solutions to the wider enterprise.

- Demonstrate proficiency in leadership, communication, critical analysis, problem-solving, and creative thinking.

Presentation Based on EAI Project

Assessment Type **1**: Presentation

Indicative Time on Task **2**: 10 hours

Due: **Friday 30/05/25 (Week 12, during the class)**

Weighting: **10%**

A presentation of the material produced in the group assignment EAI Project (Part A)

On successful completion you will be able to:

- Undertake business process modelling to analyse an existing 'As Is' process to compare and contrast with proposed 'To Be' processes for process improvement and optimisation.
- Critically analyse and apply available integration technologies to contemporary B2B case studies.
- Evaluate application integration technologies such as APIs, database integration, application servers, Web Services, REST and business process management systems, to recommend the most suitable technology to organisational senior management.
- Practice professional etiquette and maturity as individuals and whilst working in a team to deliver IT solutions to the wider enterprise.
- Demonstrate proficiency in leadership, communication, critical analysis, problem-solving, and creative thinking.

Final Examination

Assessment Type **1**: Examination

Indicative Time on Task **2**: 30 hours

Due: **10/06/25-27/06/25 (Exam Week)**

Weighting: **30%**

An exam with questions based on the lecture and reference material presented throughout the course.

On successful completion you will be able to:

- Undertake business process modelling to analyse an existing 'As Is' process to compare

and contrast with proposed 'To Be' processes for process improvement and optimisation.

- Critically analyse and apply available integration technologies to contemporary B2B case studies.
- Evaluate application integration technologies such as APIs, database integration, application servers, Web Services, REST and business process management systems, to recommend the most suitable technology to organisational senior management.

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

Class

Each week you should register for 2 hours of lectures and 1 hour of SGTA class. SGTA starts from Week 2. For details of days, times and rooms consult your timetable.

All classes will be run on campus.

Mandatory Text

Dumas, M., La Rosa, M., Mendling, J. and A Reijers, H., 2018. *Fundamentals of business process management*, 2nd edn, Springer. (Available from our library website: <https://link-springer-com.simsrad.net.ocs.mq.edu.au/book/10.1007%2F978-3-662-56509-4>)

Additional References that are available from the library are:

[Web services, service-oriented architectures, and cloud computing: the savvy manager's guide, second edition - Macquarie University \(mq.edu.au\)](#)

[Cloud Computing and SOA Convergence in Your Enterprise: A Step-By-Step Guide - Macquarie University \(mq.edu.au\)](#)

[The agile architecture revolution how cloud computing, REST-based SOA, and mobile computing are changing enterprise IT - Macquarie University \(mq.edu.au\)](#)

Lecture handouts will list appropriate Web based references and further reading for some of the rapidly evolving technologies discussed in this course. Lecture handouts will be available for download from the unit Website.

Modelling Tool

For consistency with our Dumas textbook, we will be using the Signavio Modelling Tool, which is

available at <https://www.signavio.com/news/process-modeling-platform-for-students-and-researchers/>. We will use the latest BPMN 2.0 modelling notation.

Other technology required is MS Word, MS Visio (or draw.io) and MS PowerPoint. MS Visio is available free of charge from the University collaborative [Microsoft Imagine](#) website.

Website and Access to Unit Material

The web page and content for this unit can be found at iLearn: <https://ilearn.mq.edu.au>. Note that the unit content is not publicly available and requires for you to log in to access.

Method of Communication

We will communicate with you via your university email or through announcements on iLearn. Queries to teaching staff can either be placed on the iLearn discussion board or sent to their university email address from your university email address.

Unit Schedule

The weekly schedule below is tentative. Efforts will be made to adhere to the schedule; however we reserve the right to update it as appropriate.

Week	Topic	Assessment
1	Unit Outline Introduction to Business Process Management and E-Commerce	
2	Lean Methodology Essential Process Modelling	
3	Collaborative Commerce Advanced Process Modelling	
4	B2B Data Integration Process Identification	
5	Web Services Introduction Process Discovery	
6	Services Orientated Architecture Qualitative Process Analysis	Case Study due
7	E-Procurement Processes Quantitative Process Analysis	
Mid Semester Break 12-25th April		

8	Data Orientated Application Integration Process Redesign	
9	Application Interfaces Process Aware Information Systems	
10	Application Infrastructure and Middleware Market Process Implementation with Executable Models BPM and SOA Together	
11	Guest Lecture (Tentative)	EAI Project due
12	Group and Individual Presentations	
13	Revision	

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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 connect.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](#).

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 the [Service Connect Portal](#), 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

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.

Student feedback from the previous offering of this unit was positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

Changes since First Published

Date	Description
06/02/2025	updated presentation assessment due date

Unit information based on version 2025.04 of the [Handbook](#)