COMP8750

Information Systems Design and Management

Session 2, Special circumstance 2020

Department of Computing

Contents

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Notice

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to timetable viewer. To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
ITEC602 or COMP6770

Corequisites

Co-badged status
COMP7750 - Information Systems Design and Management

Unit description
This unit focuses on enterprise management information systems and the technologies used in their design, implementation and maintenance. The alignment of information systems with business strategy and the socio-technical aspects of systems development are explored. Systems discussed include ERP, CRM, Business Intelligence and Groupware. The nexus between social media, cloud computing, mobile devices and big data is considered. A case study analysing the business rationale for an enterprise systems project is conducted.

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: Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.

ULO2: Analyse the functionality and business context for major enterprise systems including ERP, BI, CRM and Enterprise 2.0, and recommend appropriate investments based on the specific business context.

ULO3: Use your understanding of the nexus of mobile, cloud, social and big data trends to an enterprise IT strategic plan to generate opportunities from these developing technologies

ULO4: Critically evaluate contemporary and emerging enterprise IT technologies to establish a watching brief for an IT department within a major enterprise.

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

Name	Weighting	Hurdle	Due
Weeky Quiz	10%	No	weeks 3 - 12
Case for IT Capital Project	10%	No	week 4
ERP Analysis	10%	No	week 7
Strategic IT Initiatives	20%	No	week 12
Final Examination	50%	No	TBA

Weeky Quiz

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 0 hours
Due: **weeks 3 - 12**
Weighting: **10%**

Student will complete a weekly quiz - solutions submitted online.

On successful completion you will be able to:

- Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.
- Analyse the functionality and business context for major enterprise systems including ERP, BI, CRM and Enterprise 2.0, and recommend appropriate investments based on the specific business context.
- Use your understanding of the nexus of mobile, cloud, social and big data trends to an enterprise IT strategic plan to generate opportunities from these developing technologies
- Critically evaluate contemporary and emerging enterprise IT technologies to establish a watching brief for an IT department within a major enterprise.

Case for IT Capital Project

Assessment Type [1]: Project
Indicative Time on Task [2]: 22 hours
Due: **week 4**
Weighting: **10%**

Justification for IT Capital Projects - This is an individual assignment which considers a series of IT capital projects and uses non-financial models to prioritise these projects for the given business context. Eight contemporary IT capital projects are suggested. Each project has good financial returns and is useful to the business, but only 3 to 4 projects can be funded. Nonfinancial models are used to prioritise the projects.

On successful completion you will be able to:

- Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.

- Analyse the functionality and business context for major enterprise systems including ERP, BI, CRM and Enterprise 2.0, and recommend appropriate investments based on the specific business context.
- Use your understanding of the nexus of mobile, cloud, social and big data trends to an enterprise IT strategic plan to generate opportunities from these developing technologies
- Critically evaluate contemporary and emerging enterprise IT technologies to establish a watching brief for an IT department within a major enterprise.

ERP Analysis

Assessment Type [1]: Essay
Indicative Time on Task [2]: 25 hours
Due: **week 7**
Weighting: **10%**

An Individual assignment which considers a detailed real world case study about a failed ERP implementation and provides guidance based on course material on how this company should now proceed. This real company in Taiwan failed with their first wave ERP upgrade. Students are to identify the reasons for this failure and consider a series of different go forward strategies based on the latest available technology.

On successful completion you will be able to:
- Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.
- Analyse the functionality and business context for major enterprise systems including ERP, BI, CRM and Enterprise 2.0, and recommend appropriate investments based on the specific business context.
- Critically evaluate contemporary and emerging enterprise IT technologies to establish a watching brief for an IT department within a major enterprise.

Strategic IT Initiatives

Assessment Type [1]: Report
Indicative Time on Task [2]: 40 hours
Due: **week 12**
Weighting: **20%**

This is a group assignment. Students start with a contemporary IT major initiative e.g. ERP upgrade, BI, CRM, AI, Cloud, KM, Mobile and IoT. Then, a suitable company is selected and a

high level business plan is submitted for the proposal identifying the business context,expected business benefits, a possible technical solution and major risks. Each student is allocated a segment of the report. One deliverable is the group report and the second deliverable is an individual presentation on the component that the student was allocated. Each of these two deliverables counts towards 10% of the final grade.

On successful completion you will be able to:

- Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.
- Use your understanding of the nexus of mobile, cloud, social and big data trends to an enterprise IT strategic plan to generate opportunities from these developing technologies

Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 13 hours
Due: **TBA**
Weighting: **50%**

This is an exam with short and long answer questions based on the lecture and reference material presented throughout the course.

On successful completion you will be able to:

- Analyse the business value of information systems to assist in the justification of an IT investment based on the delivery of specific business benefits.
- Analyse the functionality and business context for major enterprise systems including ERP, BI, CRM and Enterprise 2.0, and recommend appropriate investments based on the specific business context.
- Use your understanding of the nexus of mobile, cloud, social and big data trends to an enterprise IT strategic plan to generate opportunities from these developing technologies

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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

Mode of delivery is a Hybrid mode. COMP8750 is taught via lectures (via Zoom live and recorded for revision purposes) and the tutorial session component is expected to be online via Zoom.

There is one class per week that will consist of three (3) hours (Lecture 2 hours + Tutorial 1 hour). The timetables portal is available here: http://timetables.mq.edu.au

Recommended Texts:

he following text is recommended, especially for students without an extensive IT background: **K. C. Laudon and J. P. Laudon "Management Information Systems: Managing The Digital Firm" 15th Edition, Pearson, 2016.**

This book is available from the University Co-op Bookstore, plus an eBook. If unsure about the value of this text, I suggest you first borrow a copy from the library and make your own assessment. I will be referencing the 15th and most up to date edition, however, earlier editions are quite similar.

The following books are suggested as recommended reading. Copies of these books are available from the library.

Sumner, M, "Enterprise Resource Planning" Prentice Hall, 2005

Magal, S.R. and Word, J., "Integrated Business Processes with ERP Systems", Wiley, 2012.

Turban, E., Sharda, R, Delen, D and King, D, "Business Intelligence: A Managerial Approach" 3rd Edition, Pearson, New International Edition, 2014

Lectures will list appropriate Web based references and further reading for some of the rapidly evolving technologies discussed in this course. These additional references will be available for download through the class website.

Unit Material

A student folder with all the lecture notes and electronic references will be available for download through the class web site on iLearn at: https://ilearn.mq.edu.au/

All assignments are accessed from iLearn and submitted through iLearn.

Assignments 1, 2 and 3 are Turnitin assignments, submitted through iLearn, but sent to Turnitin for plagiarism checking. Students should allow up to 24 hours to receive Turnitin feedback reports.

Late assignments: Late submission of assignments will attract the usual 10% penalty per day or part thereof.

All assignments are to be submitted through the iLearn class website.

Supplementary Final Exam

If you receive special consideration for the final exam, a supplementary exam will be scheduled in December 2020. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. Approved applicants will receive an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

Unit Schedule

Week	Topic	Reference
1 Steve	Course Introduction Business Value of Information Systems Financial Metrics for IS Investments Strategic Alignment	Gartner Laudon & Laudon Henderson and Venkatraman
2 Matt	ERP Implementation Issues ERP Modules: Sales and Marketing ERP Modules: Accounting and Finance *Hand out Assignment One (Individual Assignment) 'Justification for IT Capital Projects'*	Sumner
3 Matt	ERP Modules: Production and Materials ERP Modules: Human Resources Postmodern ERP Strategies	Sumner Gartner
4 Matt	Ch04 - Ethical and Social Issues in Information Systems Ch05 - IT Infrastructure and Emerging Technologies ***Assignment One - Due*** *Hand out Assignment Two "ERP Analysis"*	Laudon Laudon
5 Steve	Big Data Analytics Analytics for Marketing	IBM Gartner
6 Steve	Analytics for Industrial Applications Business Led Technology IT of the Future *Hand out Group Assignment "Strategic IT Initiatives"*	IBM Gartner
7 Steve	AI/Fuzzy Logic Ch11 - Managing Knowledge and Artificial Intelligence Top IT Strategic Trends ***Assignment Two Due***	Research Articles Laudon
	Mid semester break 12-27th September	

8 Matt	Customer Relationship Management (CRM) Analytical CRM Social CRM	Laudon & Laudon Gartner Hubspot
9 Matt	Knowledge Management	Gartner
10 Matt	Ch07 - Telecommunications, the Internet, and Wireless Technology	Laudon
11 Steve	Ch13 - Building Information Systems	Laudon
12 Steve	Group Assignment Tutorial Assignment 3 Due (Friday 5pm)	
13 Steve, Matt	**Group Presentations** Examination Revision	
14 Steve	Examination Revision (if required)	

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/study/getting-started/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

Student Support

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

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 Services and 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.

Student Enquiries

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

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

- Revised Lecture Material for all weeks and adapted them for online teaching.
- Matthew Mansour joins Dr Stephen Smith as lecturers from Dr Ian Krycer
- Revised tutorials for face-to-face and/or online classes.
- Reviewed Assessments.
- Incorporated weekly quizzes.

Standards

Standards

Your 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 are given below:

Grade	LO 1 and LO 2	LO 3 and LO 4	
	IT Systems Design	**IT Systems Management**	**Generic Skills**
HD	Apply techniques and knowledge in new contexts, show breadth and depth of understanding of business objectives, context, systems analysis and design. Fully capable support major strategic initiatives with a sound business case and technical solution.	A sound grounding on how major strategic IT systems are managed. Show breadth and depth of understandings on issues in the management of IT systems, including: change management, configuration management and planning, People management, hardware asset management and capacity planning and availability. Able to apply these techniques and knowledge in new contexts.	Demonstrate leadership, creativity, critical thinking and analysis skills. Enthusiastic in acquiring new knowledge in the IS Systems management area. Demonstrate capability in applying new IS management knowledge to solve real-world problems. Conduct team work effectively and play a key role in moving the whole IT team forward.
D	Apply techniques and knowledge in some new contexts, show breadth and depth of understanding across most of the topics including: business objectives, context, systems analysis and design. Largely capable to support major strategic initiatives with a sound business case and technical solution.	A sound grounding in most topics related to how major strategic IT systems are managed. Show breadth and depth of understandings on most issues in the management of IT systems, including: change management, configuration management and planning, People management, hardware asset management and capacity planning and availability. Able to apply these techniques and knowledge in some new contexts.	Demonstrate some leadership occasionally. Show creativity, critical thinking and analysis skills. Have the capability in applying IS systems management knowledge to solve real-world problems. Collaborate with team members well and finish assigned tasks on time and with good quality.
CR	Show breadth of understanding across most of the topics including: business objectives, context, systems analysis and design. Some capability to support major strategic initiatives with a sound business case and technical solution.	Understands some aspects of how major strategic IT systems are managed. Show breadth of understandings on most issues in the management of IT systems, including: change management, configuration management and planning, People management, hardware asset management and capacity planning and availability.	Demonstrate analysis skills in some occasions. Know how to apply IS systems management knowledge to solve some of the real-world problems. Able to finish assigned tasks on time and with good quality most of the time.

| P | Can reproduce definitions and ideas, show some breadth of understanding of the topics including: business objectives, context, systems analysis and design. Some capability to support major strategic initiatives with a sound business case and technical solution. | Can reproduce some definitions and ideas, show some breadth on issues in the management of IT systems, including: change management, configuration management and planning, People management, hardware asset management and capacity planning and availability. | Demonstrate limited analysis skills. Can apply IS systems management knowledge to solve limited real-world problems. Able to finish all assigned tasks on time and with acceptable quality. |

Grading

At the end of the semester, you will receive a grade that reflects your achievement in the unit

- **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.

In this unit, your final grade depends on your performance in each part of the assessment. For each task, you receive a mark that combines your standard of performance regarding each

learning outcome assessed by this task. Then the different component marks are added up to determine your total mark out of 100. Your grade then depends on this total mark and your overall standards of performance.

Obtaining a grade higher than a Pass (P) in this unit will require a student to obtain (in addition to the above):

- the required total number of marks (Credit - 65, Distinction - 75, High Distinction - 85).