



Course Code:	1802ICT
Course Name:	Software Development
Semester:	Trimester 3 2017
Program:	Diploma of Information Technology
Credit Points:	10
Course Coordinator:	Dr Seyedali Mirjalili
Document modified:	5 <sup>th</sup> September 2017

### Teaching Team

Your lecturer/tutor can be contacted via the email system on the portal.

Name	Email
Seyedali Mirjalili	<a href="mailto:ali.mirjalili@staff.griffithcollege.edu.au">ali.mirjalili@staff.griffithcollege.edu.au</a>

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### Staff Consultation

Your lecturer/tutor is available each week for consultation outside of normal class times. Times that your lecturer/tutor will be available for consultation will be given in the first week of lectures. A list of times and rooms will be published on the Griffith College Portal under the “myTimetable” link.

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## Prerequisites

There are no prerequisites for this course

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## Brief Course Description

One of the roles of the IT professional is to design and build software systems and integrate them into an organisation. This course develops the skills to gather requirements, then develop/source, evaluate and integrate components into a single system, and finally validate the system. It also covers the fundamentals of software lifecycles, quality, software development processes, project management and the interplay between IT applications and organisational processes and relevant standards and tools.

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## Rationale

A system can be defined as a set of components that interact or depend upon each other, forming an integrated whole. Systems thinking can be used to tackle almost any problem imaginable, in order to identify requirements (systems analysis) and find solutions to meet them (systems design). This course will provide you, as a future business analyst and Information Technology (IT) / Computer Science (CS) professional, with software development and acquisition competencies that will underpin your entire career. You will learn how to plan the development of an information system, analyse and discover requirements, and select optimal design solutions. You will manage the system development processes by adopting an Agile methodology, which is currently a popular project management approach used in industry for software development.

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## Aims

This course aims to develop knowledge and skills necessary for effective software development, by:

- detailing the main software development activities and outlining the skills required to perform them
  - introducing elements of project management relevant to software development / acquisition including Agile development methodologies
  - explaining principles of systems level design.
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## Learning Outcomes

Upon successful completion of this course students will be able to:

1. Demonstrate through the use of project management tools your ability to undertake a risk analysis, cost benefit analysis, estimate a budget and propose a project schedule for an information system or software development project.
  2. Use the Agile methodology to plan typical software development / acquisition activities.
  3. Apply appropriate techniques for requirements specification and process modelling.
  4. Apply techniques to document appropriate system models and software requirements.
  5. Explain techniques for implementation, testing, deployment, maintenance and revision.
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## Texts and Supporting Materials

### **Prescribed textbook:**

Satzinger, J. W., Jackson, R. B., & Burd, S. D. (2016). Systems analysis and design in a changing world. Cengage learning.

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## Organisation and Teaching Strategies

The contact for this course is 48 hours which will consist of 12x 2 hours lectures and 12x2 hours tutorial/workshops. Course delivery will be as follows:

Lectures: delivery of material from the text and/or other sources, necessary to the achievement of the course learning outcomes.

Tutorials: to consolidate and reinforce the lecture material through discussion and activities.

### *Class Contact Summary*

### **Attendance**

Your attendance in class will be marked twice during a four hour class. To receive full attendance, you must be present in the classroom on both occasions. Therefore, you are encouraged to attend and participate in all classes throughout the semester.

### **Participation in Class**

You are expected to actively participate in classes each week.

## Consultant Times

Attendance during consultation times is optional but you are encouraged to use this extra help to improve your learning outcomes.

## Course Materials

Lecture notes will be made available to you on the Learning@Griffith College site on the student portal and you are advised to print these out before each class to help guide you in your study program. You are expected to bring these lecture notes with you to each class so that extra notes can be added. You are also expected to bring your text book and calculator to each class.

## Independent Learning

You are expected to reinforce your learning from class time by undertaking sufficient independent study {approximately 6 hours per week outside of class time} so that you can achieve the learning outcomes of the course.

You are expected to spend 1 hour per credit point per week on course related activities which include attending lectures, tutorials, workshops, reading the recommended texts / lecture notes, research and revision.

## Program Progression

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 [please see Griffith College Policy Library - Program Progression Policy - for more information].

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## Content Schedule

### *Weekly Teaching Schedule*

Week	Topic	Activity	Readings
	Overview of the Software Development Process	Lecture	Chapter 1
	Introductions	Lab	
	Planning a Software Project	Lecture	Chapter 11
	Project Management 1	Lab	
	Project Management and Software Development Tools	Lecture	Chapter 11
	Project Management 1	Lab	
	Analysing Systems Requirements	Lecture	Chapter 2 / 3

	Quiz 1	Lab	
	Object-Oriented Domain Modelling	Lecture	Chapter 4
	Analysis 1	Lab	
	Use Case Modelling	Lecture	Chapter 5
	Analysis 2	Lab	
	Foundations for Design, Software Acquisition	Lecture	Chapter 6
	Quiz 2	Lab	
	Software Architecture, Organisational Context	Lecture	Chapter 7
	Design and Engineering 1	Lab	
	Approaches to Software Development	Lecture	Chapter 10
	Design and Engineering 2	Lab	
	Software Testing, Deployment and Quality Assurance	Lecture	Chapter 14
	Quiz 3	Lab	
	Revision	Lecture	
	Revision	Lab	
	Assignment demonstrations	Lecture	
	Assignment demonstrations	Lab	

## Assessment

This section sets out the assessment requirements for this course.

### *Summary of Assessment*

Item	Assessment Task	Weighting	Relevant Learning Outcomes	Due Date
1	Quiz 1	15%	1,2	Week 4
2	Quiz 2	15%	2,3,4	Week 7
3	Quiz 3	20%	3,4,5	Week 10
4	Assignment - Written Assignment Project Planning, Analysis and Design Report	50%	1,2,3,4	Week 12

#### *Assessment Details*

All assessments in this course are individual assessment.

Quiz 1, Quiz 2, and Quiz 3:

The purpose of the quizzes is to motivate you and assess theoretical understanding of the conceptual material delivered in lectures, and developed through personal study and laboratory experience. The quizzes will be undertaken during your scheduled lab. Attendance at these labs is therefore compulsory. The quizzes will also provide you feedback on how you are progressing in the course.

Assignment:

Details will be provided via the course web site. The marking criteria will be made available via the course web site.

#### *Submission and Return of Assessment Items*

Normally you will be able to collect your assignments in class within fourteen [14] days of the due date for submission of the assignment.

### **Retention of Originals**

You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

#### *Extensions*

To apply for an extension of time for an assignment, you must submit an Application for Extension of Assignment form to your teacher at least 24 hours before the date the assignment is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. Griffith College Medical Certificate]. Please refer to the Griffith College website - Policy Library - for guidelines regarding extensions and deferred assessment.

#### *Assessment Feedback*

Marks awarded for assessment items will also be available on the on-line grades system on the Student Website within fourteen [14] days of the due date.

Feedback on lab milestones will be given in class when the milestone is being marked.

Feedback on the mid-semester quiz will be provided with a breakdown on which multiple choice questions were answered correctly within 2 weeks of the assessment date. When the results are available the correct answers will be given in the lecture.

Feedback on assignments 1 and 2 will be provided electronically as a mark breakdown and comments within 2 weeks of the submission due date.

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## Generic Skills

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills	Taught	Practised	Assessed
Written Communication	Yes	Yes	Yes
Oral Communication	Yes	Yes	Yes
Information Literacy	Yes	Yes	Yes
Secondary Research	Yes	Yes	Yes
Critical and Innovative Thinking	Yes	Yes	Yes
Academic Integrity		Yes	Yes
Self Directed Learning		Yes	
Team Work		Yes	
Cultural Intelligence		Yes	
English Language Proficiency		Yes	

### *Additional Course Generic Skills*

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## Additional Course Information

All course material is available on the course website.

## Teacher and Course Evaluations

Your feedback is respected and valued by your lecturers and tutors. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your

lecturer and tutor or by completing course and lecturer evaluations via Griffith College's online evaluation tool whenever these are available.

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## Academic Integrity

Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of any allegation of academic misconduct made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the [Griffith College Academic Integrity Policy](#); this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Academic Integrity Policy on the Griffith College website – Policy Library.



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