1. General Course Information

1.1 Course Details

Course Code:	1802ICT
Course Name:	Software Development
Trimester:	Trimester 1, 2020
Program:	Diploma of information Technology
Credit Points:	10
Course Coordinator:	Dr. Seyedali Mirjalili
Document modified:	5th February 2020

Course Description

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.

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.

Assumed Knowledge

There are no prerequisites for this course

1.2 Teaching Team

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

Name	Email
Dr. Seyedali Mirjalili	ali.mirjalili@staff.griffithcollege.edu.au

1.3 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 "Support and Services/Teacher Consultation Times" link.

1.4 Timetable

Your timetable is available on the Griffith College Portal at Class Timetable in Student and Services.

1.5 Technical Specifications

All students must have access to a computer or suitable mobile device.

2. Aims, Outcomes & Generic Skills

2.1 Course 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.

2.2 Learning Outcomes

After successfully completing this course you should 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 in an information system or software development project.
3. Apply appropriate techniques for requirements specification and process modelling.
4. Apply techniques to document appropriate system models and software requirements in an information system or software development project.
5. Explain techniques for implementation, testing, deployment, maintenance and revision in an information system or software development project.

2.3 Generic skills

For further details on the Generic Skills please refer to the Graduate Generic Skills and Capabilities policy.

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
Knowledge and skills with critical judgement		✓	
Communication and collaboration skills	✓	✓	✓
Self-directed and active learning skills		✓	
Creative and future thinking skills	✓	✓	✓
Social responsibility and ethical awareness		✓	
Cultural competence and awareness in a culturally diverse environment		✓	

3. Learning Resources

3.1 Required Resources

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

3.2 Recommended Resources

Please refer to the course webpage.

3.3 College Support Services and Learning Resources

The College provides many facilities and support services to assist students in their studies. Links to information about College support resources that are available to students are included below for easy reference.

Digital Library – Databases to which Griffith College students have access to through the Griffith Library Databases.

MyStudy – there is a dedicated website for this course via MyStudy on the Griffith College Portal.

Academic Integrity Tutorial - this tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of breaches of academic integrity, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

Services and Support provides a range of services to support students throughout their studies including personal support such as Counselling; Academic support; and Welfare support.

Jobs and Employment in the Student Hub can assist students with career direction, resume and interview preparation, job search tips, and more.

IT Support provides details of accessing support, information on s numbers and internet access and computer lab rules.

3.4 Other Learning Information

Attendance

You are expected to attend all lectures and tutorials and to actively engage in learning during these sessions. You are expected to bring all necessary learning resources to class such as the required textbook and /or Workbook. In addition, you may BYOD (bring your own device) to class such as a laptop or tablet. This is not a requirement as computer lab facilities are available on campus, however, the use of such devices in the classroom is encouraged with appropriate and considerate use principles being a priority.

Preparation and Participation in Class

In order to enhance learning, prepare before lectures and tutorials. Read the relevant section of your text book before a lecture, and for a tutorial read both the textbook and the relevant lecture notes. If you have been given tutorial exercises, make sure you complete them. Active participation in lectures and tutorials will improve your learning. Ask questions when something is unclear or when you want to bring some issue to your lecturer or tutor's attention; respond to questions to test your knowledge and engage in discussion to help yourself and others learn.

Consultation Sessions

Teachers offer extra time each week to assist students outside the classroom. This is known as 'consultation time.' You may seek assistance from your teacher on email or in person according to how the teacher has explained this to the class. Attendance during consultation time 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 in MyStudy on the Griffith College Portal and you are advised to either print these out and bring them to each class so that extra notes can be added or BYOD (bring your own device) and add extra notes digitally.

Self-Directed Learning

You will be expected to learn independently. This means you must organise and learn the course content even when you are not specifically asked to do so by your lecturer or tutor. This involves revising the weekly course material. It also means you will need to find additional information for some assessment items beyond that given to you in textbooks and lecture notes, and to construct your own response to a question or topic. All of this requires careful planning of your time. Expect to spend, on average, at least 10 hours per week including class time for each of your courses.

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].

Teacher and course Evaluation

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 evaluation tool whenever these are available.

4. Learning and Teaching Activities

4.1 Weekly Learning Activities

Week	Topic	Activity	Readings	Learning Outcomes
1	Overview of the Software Development Process	Lecture Tutorial Workshop	Chapter 1	1
2	Planning a Software Project	Lecture Tutorial	Chapter 11	1,2

		Workshop		
3	Project Management and Software Development Tools	Lecture Tutorial Workshop	Chapter 11	1,2
4	Analysing Systems Requirements	Lecture Tutorial Workshop	Chapter 2 Chapter 3	2,3,4
5	Object-Oriented Domain Modelling	Lecture Tutorial Workshop	Chapter 4	2,3,4
6	Use Case Modelling	Lecture Tutorial Workshop	Chapter 5	2,3,4
7	Foundations for Design, Software Acquisition	Lecture Tutorial Workshop	Chapter 6	2,3,4,5
8	Software Architecture, Organisational Context	Lecture Tutorial Workshop	Chapter 7	2,3,4,5
9	Approaches to Software Development	Lecture Tutorial Workshop	Chapter 10	2,3,4,5
10	Software Testing, Deployment and Quality Assurance	Lecture Tutorial Workshop	Chapter 14	2,3,4,5
11	Other Software development lifecycles	Lecture Tutorial Workshop	Refer to the course webpage	2,3,4,5
12	Revision	Lecture Tutorial Workshop	N/A	1,2,3,4,5

5. Assessment Plan

5.1 Assessment Summary

Item	Assessment Task	Weighting	Learning Outcomes	Due Date
1	Weekly workshops	20%	1, 2, 3, 4, 5	Week 2 to Week 12
2	Quiz 1	10%	1,2	Week 4
3	Quiz 2	10%	2,3,4	Week 7
4	Quiz 3	10%	3,4,5	Week 11
5	Assignment - Written Assignment	50%	1, 2, 3, 4, 5	Week 12

5.2 Assessment Detail

All assessments in this course are individual except the assignment.

Title: Quizzes

Type: Test or quiz
Learning Outcomes Assessed: 1, 2, 3, 4, 5
Due Date: Week 4, Week 7, Week 11
Weight: 10% each (30% in total)
Marked out of: 30
Task Description:
Three in-class quizzes assessing content from the lectures and workshops. 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.
Criteria & Marking:
Quizzes will be held in the computer labs and conducted via the portal. Results will be made available after completion of the quiz.
Submission: Quiz will be conducted through the portal

Title: Assignment
Type: Assignment report
Learning Outcomes Assessed: 1, 2, 3, 4, 5
Due Date: Week 12
Weight: 50%
Marked out of: 50
Task Description:
Details will be made available on the course website.
Criteria & Marking:
Details for the assignment and marking rubrics will be made available on the portal.
Submission: Submitted through the portal and demonstrated in class.

5.3 Late Submission

An assessment item submitted after the due date, without an approved extension from the Course Coordinator, will be penalised. The standard penalty is the reduction of the mark allocated to the assessment item by 5% of the maximum mark applicable for the assessment item, for each working day or part working day that the item is late. Assessment items submitted more than five working days after the due date are awarded zero marks.

Please refer to the Griffith College website - Policy Library > Assessment Policy for guidelines and penalties for late submission.

5.4 Other Assessment Information

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.

Requests for extension

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 Student Medical Certificate]. Please refer to the Griffith College website - Policy Library - for guidelines regarding extensions and deferred assessment.

Return of Assessment Items

1. Marks awarded for in-trimester assessment items, except those being moderated externally with Griffith University, will be available on the Student Portal within fourteen [14] days of the due date. This does

not apply to the final assessment item in this course (marks for this item will be provided with the final course result).

2. Students will be advised of their final grade through the Student Portal. Students can review their exam papers after student grades have been published (see relevant Griffith College Fact Sheet for allocated times at Support> Factsheets). Review of exam papers will not be permitted after the final date to enrol.

3. Marks for **all** assessment items including the final exam (if applicable) will be recorded in the Moodle Course Site and made available to students through the Moodle Course Site.

The sum of your marks overall assessment items in this course does not necessarily imply your final grade for the course. Standard grade cut off scores can be varied for particular courses, so you need to wait for the official release of grades to be sure of your grade for this course.

6. Policies & Guidelines

Griffith College assessment-related policies can be found in the Griffith College Policy Library which include the following policies:

Assessment Policy, Special Consideration, Deferred Assessment, Alternate Exam Sitting, Medical Certificates, Academic Integrity, Finalisation of Results, Review of Marks, Moderation of Assessment, Turn-it-in Software Use. These policies can be accessed using the 'Document Search' feature within the Policy Library

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 an allegation of a breach of academic integrity being 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 Griffith College website - Policy Library > Academic Integrity Policy

Reasonable Adjustments for Assessment – The Disability Services policy

The Disability Services policy (accessed using the Document Search' feature with the Policy Library) outlines the principles and processes that guide the College in making reasonable adjustments to assessment for students with disabilities while maintaining academic robustness of its programs.

Risk Assessment Statement

There are no out of the ordinary risks associated with this course.

Note: For all Diploma level programs, Griffith College acknowledges content derived from Griffith University.