Te Hoe Rorohiko
Department of Computing

Graduate Diploma in Information and Communication Technologies

Bachelor of Information and Communications Technology

Course outline for

Software Engineering 2

BCPR280

Semester One, 2019

Introduction - Kōrero whakatuwhera

This outline contains important information about the delivery and assessment of this course. Read it carefully and if there is anything you do not understand please ensure you ask a staff member listed below for clarification.

Please refer to your **programme handbook** for all programme related information, for example programme structure and regulations, grade scale and assessment regulations.

Academic staff - Kā pouako

The following staff are directly involved with the delivery of this course:

Name	Role	Phone	Office	Office hours	Email address
Amit Sarkar	Tutor	940 8495	N213	Friday 12-2pm in X213	Amit.Sarkar@ara.ac.nz
Dr Luofeng Xu	Tutor	940 8394	N220	Friday PM in X205	Luofeng.Xu@ara.ac.nz

Timetable - Wātaka

For timetable information for this course, please refer to…

- Tribal – through the student portal
- Moodle – look in Department of Computing Student Info > Topic 6 Timetables
- Noticeboards – level 2 of N-block or C-block

Course descriptor - Whakamāramataka

Course Code	BCPR280	*Contact Hours*	56
Credits	15	*Other Directed Hours*	0
Level	6	*Total Supervised Hours*	56
Unit Standard	-	*Self Directed Hours*	94
		Total Learning Hours	150
Pre-requisites	BCSE102		
Restrictions	BCPR230, BCPR221		

Aims

- To introduce students to software engineering processes and practices which assist in delivering high quality software at agreed cost and schedule.
- For students to apply the Personal Software Process.
- For students to demonstrate the knowledge, understanding and skills necessary to both develop and maintain commercially relevant programs, and follow them through to implementation.
- To have the student finish a sizeable software project and create a portfolio containing examples of their work.

Learning Outcomes

On completion the student will be able to:

1. Evaluate and compare different software life-cycle models and software construction steps.
2. Evaluate software design quality.
3. Systematically debug and test programs to the systems level.
4. Maintain existing programs and update documentation.
5. Collect and interpret software metrics.
6. Describe and use common Design Patterns, Algorithms and programming language Idioms.
7. Design and code programs and user interfaces which conform to recognised standards.

Assessment

No	Assessment Type	Pass Criteria	Weighting	Outcomes Assessed
1	PSP Assignments		25%	1-7
2	Portfolio Assessment		25%	1-7
3	Presentation	50%	50%	1-7
To pass this course, students must gain an average of at least 50% across all assessments, and gain at least 50% in the Presentation.				

Learning and Teaching Strategies

Lectures, PowerPoint presentations, practical workshop laboratories, and individual assistance as required in the workshops

NZQA Level Descriptors

The following descriptors outline what is expected of students studying a course at the specified level.

	Level 4	Level 5	Level 6	Level 7
Knowledge	Broad operational and theoretical knowledge in a field of work or study	Broad operational or technical and theoretical knowledge within a specific field of work or study	Specialised technical or theoretical knowledge with depth in a field of work or study	Specialised technical or theoretical knowledge with depth in one or more fields of work or study
Skills	Select and apply solutions to familiar and sometimes unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Select and apply a range of solutions to familiar and sometimes unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Analyse and generate solutions to familiar and unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Analyse, generate solutions to unfamiliar and sometimes complex problems Select, adapt and apply a range of processes relevant to the field of work or study
Application [of knowledge and skills]	Self-management of learning and performance under broad guidance Some responsibility for performance of others	Complete self-management of learning and performance within defined contexts Some responsibility for the management of learning and performance of others	Complete self-management of learning and performance within dynamic contexts Responsibility for leadership within dynamic contexts	Advanced generic skills and/or specialist knowledge and skills in a professional context or field of study

Assessments - Kā Aromatawai

Assessment	Brief	Due On	Weighting
PSP Assignments	Programming and documentation assignments	5 pm, Friday 3 May (Week 8)	25%
Portfolio Assessment	Planning, design, coding, testing, and evaluation of an app of your choice	5 pm, Friday 7 June (Week 13)	25%
Presentation	Individual portfolio presentation of what you have learnt on this course with supporting evidence	TBA on Moodle	50%

Assessment tasks - Kā tūmahi aromatawai

Teaching staff will provide you with specific details of what is required for each assessment in advance of the due date. This information may be uploaded to the appropriate course area in Moodle or be given to you in the form of a handout. Staff may also provide additional information, advice and tips regarding assessments during timetabled class sessions, so you are encouraged to attend class regularly.

Assessment criteria / Marking schedule - Kā paearu

Nearer the time of each assessment, teaching staff will provide you with information on the assessment criteria that will be applied and/or how marks will be awarded.

See the BCPR280 course area on Moodle.

Course schedule - Maramataka

Week	Commencing	Topic
1	25 February	Introduction, JavaScript
2	4 March	JavaScript foundation test, PSP
3	11 March	AngularJS/ReactJS/VueJS, PSP
4	18 March	AngularJS/ReactJS/VueJS, PSP
5	25 March	AngularJS/ReactJS/VueJS, Bootstrap
6	01 April	AngularJS/ReactJS/VueJS, Bootstrap
7	8 April	AngularJS/ReactJS/VueJS, Node.js, Help with PSP assignment
Term break – Monday 15 April – Friday 26 April (Includes Easter Holiday 19 - 22 April and Anzac Day Thursday 25 April)		
8	29 April	AngularJS/ReactJS/VueJS, Help with PSP assignment **PSP DUE 25%**
9	06 May	Node.js, JavaScript
10	13 May	Node.js, testing framework Help with the Portfolio assignment
11	20 May	Node.js, testing framework Help with the Portfolio assignment
12	27 May	AngularJS/ReactJS/VueJS, Node.js Help with the Portfolio assignment
No Classes Monday 3 June – Queen's Birthday Holiday		
13	03 June	AngularJS/ReactJS/VueJS, Help with the Portfolio assignment **PORTFOLIO ASSIGNMENT DUE 25%**
14	10 June	Presentation preparation
15	17 June	**Study week**
16	24 June	**Exam week**
17	01 July	**Exam Week** **PRESENTATION DUE 50%**

Note: Students will be notified in advance if there are any changes to the course schedule.