COURSE OUTLINE

Department/ Faculty:	Software Engineering/Computing	**Page:**	1 of 6
Course code:	SCSJ, SCSB, SCSR,SCSV 3104	**Academic Session/Semester:**	20202021/1
Course name:	APPLICATION DEVELOPMENT	**Pre/co requisite (course name and code, if applicable):**	-
Credit hours:	4		

Course synopsis	Application Development is a comprehensive service learning course which requires student to solve a real community problem by developing an application. Students will learn how to practice design thinking, adopting Agile development methodology. This involves an iterative process starting from community engagement, requirement elicitation and analysis, design solution, application construction and iterative verification process. Students are required to do reflection on the outcome of the project. In this course students should be able to develop their soft skills such as leadership, team collaboration, documentation process and communication skill.			
Course coordinator (if applicable)	Dr Mohd Adham Isa			
Course lecturer(s)	**Name**	**Office**	**Tel**	**E-mail (@utm.my)**
	Dr Mohd Adham Isa (P)			
	PM Dr Mohd Yazid Idris			
	Dr. Muhammad Iqbal Tariq bin Idris			
	Assoc. Prof. Dr. Shahida binti Sulaiman			
	Prof. Dr. Mohd Shafry bin Mohd Rahim			
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Prepared by:	Certified by:
Name: Mohd Yazid Idris (Course Owner)	Name: PM. Dr. Siti Zaiton Hashim (Head of Department)
Signature:	Signature:
Date: 23 August 2017	Date:

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Mapping of the Course Learning Outcomes (CLO) to the Programme Learning Outcomes (PLO), Teaching & Learning (T&L) methods and Assessment methods:

No.	CLO	PLO (ICGPA CODE)	Weight (%)	*Taxonomies and **generic skills	T&L methods	***Assessment methods
CLO1	Identify community problem, analyze requirement, and propose solution in a well-structured proposal.	PLO2 (TE)	45		L, SL	PR
CLO2	Work in a team to develop an application based on the standard of software application development process.	PLO7 (TW)	20		SL	PR, App, Report
CLO3	Demonstrate communication skill on community engagement and presentation	PLO8, PLO10 (AD,ES)	15,20		SL	CE, Peer, Pr

L – Lecture; SL-Service Learning ; PR – Project ; CE- Community Engagement

Peer – Peer Assessment ; Pr – Presentation; Report; App – Working Application

Details on Innovative T&L practices:

No.	Type	Implementation
1.	Service Learning	Conducted through a process of involving students in community service activities combined with facilitated means for applying the experience to their academic and personal development. It is a form of experiential education aimed at enhancing and enriching student learning in course material.

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Weekly Schedule:

Week 1	**Chapter 0: Introductory to Course** **Chapter 1: Development Methodology** Introduction to Application Development, Design Thinking Overview of Agile Dev Methodology, Agile Scrum, Terminology Process Deliverable, Teamwork and Responsibilities, Log Book
Week 2	**Chapter 2: Community Service and Problem Solving** Problem Identification, Feasibility Study, Objectives : **Proposal**
Week 3	**Chapter 3: Project Planning** Job Scope, Resource Planning and Milestone, Proposal Preparation, Backlogs and Sprint: **Project Plan**
Week 4	**Iteration 1 / Sprint #1** Requirement Elicitation and Analysis, Backlogs List and Responsibilities, Prototype Design, Community Feedback, Development & Documentation: **First Deliverables and Report**
Week 5	
Week 6	**MID-SEMESTER BREAK**
Week 7	**Iteration 2 / Sprint #2** Requirement Elicitation and Analysis, Backlogs List and Responsibilities, Prototype Design, Community Feedback, Development & Documentation: **Second Deliverables and Report**
Week 8	
Week 9	**Iteration 3 / Sprint #3** Requirement Elicitation and Analysis, Backlogs List and Responsibilities, Prototype Design, Community Feedback, Development & Documentation: **Third Deliverables and Report**
Week 10	
Week 11	**Iteration 4 / Sprint #4** Requirement Elicitation and Analysis, Backlogs List and Responsibilities, Prototype Design, Community Feedback, Development & Documentation: **Fourth Deliverables and Report**
Week 12	
Week 13	**Project Integration and Completion** Final Integration, Validation and Verification, Documentation Completion Reflection
Week 14	
Week 15	Showcase Day: **Final Working App, Report, Presentation**

Transferable skills (generic skills learned in course of study which can be useful and utilised in other settings):

Community Engagement
Agile Development
Adaptability and Enterprise Skills
Teamworking

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Student learning time (SLT) details:

Distribution of student Learning Time (SLT) Course content outline	Guided Learning (Face to Face)		Teaching and Learning Activities		TOTAL SLT
			Guided Learning Non-Face to Face	Independent Learning Non-Face to face	
CLO	**L**	**SL**			
CLO 1	18h	20h		20h	**58h**
CLO 2	7h	15h		17h	**39h**
CLO 3	9h	11h		12h	**32h**
Total SLT	**34h**	**46h**		**49h**	**129h**

Continuous Assessment		PLO	Percentage	Total SLT
1	Proposal	TE	5	**2h**
2	Project Planning	TE	5	**2h**
3	Iteration 1 (Deliverables and Report)	TE,TW,AD	15	**4h**
4	Iteration 2 (Deliverables and Report)	TE,TW,AD	15	**4h**
5	Iteration 3 (Deliverables and Report)	TE,TW,AD	15	**4h**
6	Iteration 4 (Deliverables and Report)	TE,TW,AD	15	**4h**
8	Peer Assessment	TW	5	**2h**
Final Assessment			Percentage	Total SLT
9	Working Application	TW,ES	10	**3h**
10	Final Report	TE,ES	10	**3h**
11	Final Presentation	ES	5	**3h**
Grand Total SLT				**160h**

Special requirement to deliver the course (e.g: software, nursery, computer lab, simulation room):

Agile Tool

Learning resources:

Agile for Dummies, Scot W. Ambler, Matthew Holitza, IBM, Wiley 2012.

Essential Scrum: A Practical Guide to the Most Popular Agile Process, Kenneth S. Rubin, 2012

Online
http://elearning.utm.my

Academic honesty and plagiarism:

Assignments are individual tasks and NOT group activities (UNLESS EXPLICITLY INDICATED AS GROUP ACTIVITIES) Copying of work (texts, lab results etc.) from other students/groups or from other sources is not allowed. Brief quotations are allowed and then only if indicated as such. Existing texts should be reformulated with your own words used to explain what you have read. It is not acceptable to retype existing texts and just acknowledge the source as a reference. Be warned: students who submit copied work will obtain a mark of **zero** for the assignment and exams and disciplinary steps may be taken by the Faculty. It is also unacceptable to do somebody else's work, to lend your work to them or to make your work available to them to copy.

Other additional information (Course policy, any specific instruction etc.):

1. Attend **Participation is compulsory** and will be taken in every lecture and meeting session. Students with less than 80% total participation were unable to present their project.
2. Students are required to behave and follow the dressing regulation and etiquette which has been stated in University ruling while in class, in lab, and in exam hall.
3. Any form of plagiarisms is **NOT ALLOWED**. Students who are caught cheating for copying other student's assignment/lab exercise will get zero mark.
4. Exercises will be given in class and some may be taken for assessment. Students who do not take the exercise will lose the marks for the exercise.
5. Demo and presentations will not be given, except to students who are sick and submit medical certificate which is confirmed by UTM panel doctors. Make up exam can only be given within one week from the initial date of exam.
6. Iteration Demo must be shown on the due dates. Some points will be deducted for the late demo.

			AP	TW	AD	ES	
No	Assessment	**%Total**	**CLO 1**	**CLO2**	**CLO3**		**%Total**
1	Proposal	**10**	**10**				**10**
2	Iteration 1 (Deliverables and Report)	**15**	**5**	**5**		5	**15**
3	Iteration 2 (Deliverables and Report)	**15**	**10**	**5**			**15**
4	Iteration 3 (Deliverables and Report)	**15**	**10**	**5**			**15**
5	Iteration 4 (Deliverables and Report)	**15**	**10**	**5**			**15**
6	Peer Assessment	**5**				**5**	**5**
7	Working Application	**10**				**10**	**10**
8	Final Report	**10**			**10**		**10**
9	Final Presentation	**5**			**5**		**5**
Overall Total		**100**	45	20	15	20	**100**