

COURSE OUTLINE

Department/ Faculty:	Software Engineering/Computing	Page:	1 of 6
Course code:	SCSV3263	Academic Session/Semester:	20192020/2
Course name:	Multimedia Web Programming	Pre/co requisite (course name and code, if applicable):	-
Credit hours:	3		

Course synopsis	Web environment provide a wide selection of technologies and components for online application development. Basic view elements (HTML and CSS), server-side logic (CGI, Servlet, Server Pages Technologies), client-script logic (JavaScript), data communication and interoperability (AJAX, JSON, XML), 2D/3D graphic system (X3DOM, SVG) and various components provided by proprietary software vendors are now commonly used in Web-based system development. This course will expose the students to the concepts and hands-on experiences on how to fully integrate and exploit all of these components into single application to provide full-featured "Rich Internet Application" (RIA) to the clients.			
Course coordinator (if applicable)				
Course lecturer(s)	Name	Office	Telephone	E-mail
	Mohd Razak bin Samingan	N28-207-19	017-7470079	mrazak@utm.my

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	Able to explain the concepts and ideas behind the creation of current existing web technologies and components.	PLO1 (KW)	10	C3	Lecture, active learning	FE
CLO2	Able to handle and manipulate web components as a single entity of software library or tool.	PLO1 (KW), PLO2 (AP)	70	C3	Lab work	Q, LA, LT, FE
CLO3	Design the architecture to compose various web components into single system for the purpose of RIA web application development.	PLO2 (AP), PLO3 (PS)	13	C3	Project-based learning	LA, AS, PR

Prepared by:	Certified by:
Name: Mohd Razak bin Samingan (Course Owner)	Name: PM. Dr. Siti Zaiton Mohd Hashim (Head of Department)
Signature:	Signature:
Date: 24 August 2017	Date:

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CLO4	Work in a team to develop web application that can deliver RIA type application to the clients.	PLO4 (CS), PLO7 (TW)	7	CS3, TW1	Project-based learning	PR, PD
Refer *Taxonomies of Learning and **UTM's Graduate Attributes, where applicable for measurement of outcomes achievement *** L – Lecture, T – Tutorial, P – Practical, O - Others Q – Quiz, LA – Lab, AS – Assignment, PR – Project Report, PD – Project Demo; LT – Lab Test; FE – Final Exam						

Details on Innovative T&L practices:

No.	Type	Implementation
1.	Active learning	Conducted through in-class activities
2.	Project-based learning	Conducted through case study assignment. Tasks are given in sequential steps throughout the semester. Students in a group of 3 are given case studies that require multimedia and web development knowledge involving the design of RIA type of application. The RIA type application produced must comply to the given case study specifications.

Weekly Schedule:

Week 1	Introduction (Web 2.0 & RIA) Motivation; The Evolution of WEB Technology; Features of WEB 1.0, 2.0 and 3.0; WEB Architecture
Week 2	HTML & CSS (Revision) Basic HTML Structure; HTML's Core Elements; CSS for Content & Presentation Separation; Inline, Embedded, and Linked CSS Implementations; CSS Selectors, Properties, Box Model, and Positioning
Week 3	JavaScript Programming Basic Structure; Internal & External Source Code; Code Execution; Event Handler; Keywords, Variable, and Function; HTML DOM & Built-in Object Control; New Object Creation
Week 4	
Week 5	AJAX Introduction; Benefits; Sending Request and Handling Response via AJAX; Example of AJAX implementation
Week 6	MID-SEMESTER BREAK
Week 7	JQuery Introduction; Accessing jQuery Library; Basic Structure: Selector, Action, and Task; Anonymous Function; Selector Elements; Selector Actions (Events)
Week 8	JSON & XML Basic Structure; JSON vs XML; JSON Client-Server Implementation; XML, XSLT, and HTML; XML Client-Server Implementation
Week 9	

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Week 10	Web Graphics (Raster and Vector) Graphics MIME-type; Web Graphics File Format (GIF, PNG, JPEG); Graphics Library for Web (GD and PerlMagick); Vector Graphics using SVG; On the Fly Raster and Vector Graphic
Week 11	X3DOM
Week 12	Google APIs (Graph, Map, etc.)
Week 13	PROJECT PROGRESS DISCUSSION
Week 14	PROJECT PRESENTATION AND DEMO
Week 15	PROJECT PRESENTATION AND DEMO

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

Technical documentation review
Team working

Student learning time (SLT) details:

Distribution of student Learning Time (SLT) Course content outline					Teaching and Learning Activities		TOTAL SLT
	Guided Learning (Face to Face)				Guided Learning Non-Face to Face	Independent Learning Non-Face to face	
CLO	L	T	P	O			
CLO 1	4h					6h	10h
CLO 2	6h	4h	10h	5h		47h	72h
CLO 3	2h	2h	3h			13h	20h
CLO 4						8h	8h
Total SLT	12h	6h	13h	5h		74h	110h

Continuous Assessment		PLO	Percentage	Total SLT
1	Quiz 1	PLO2 (AP)	2	1h
2	Quiz 2	PLO2 (AP)	2	1h
3	Lab 1	PLO2 (AP)	3	1h
4	Lab 2	PLO2 (AP)	3	1h
5	Assignment 1	PLO2 (AP), PLO3 (PS), PLO7(TW)	7	Inclusive in CLO 2
6	Assignment 2	PLO2 (AP), PLO3 (PS), PLO7(TW)	13	Inclusive in CLO 2
7	Lab Test	PLO2 (AP)	20	3h
8	Project	PLO2(AP), PLO3(PS), PLO4(CS),	20	Inclusive in CLO 3

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		PLO7(TW)		
Final Assessment			Percentage	Total SLT
1	Final Examination	PLO1(KW), PLO2(AP)	30	3h
Grand Total SLT				120h

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

Linux/Unix Web hosting account

Learning resources:

Text book (if applicable)

Freeman E. T. , Robson E., Head First JavaScript Programming: A Brain-Friendly Guide (1st Edition), O'Reilly Media, 2014. ISBN-13: 978-1449340131

Duckett J., JavaScript and JQuery: Interactive Front-End Web Development (1st Edition) , Wiley, 2014. ISBN-13: 978-1118531648

Main references

Deitel et. al., Internet and World Wide Web How To Program (5th Edition), Pearson, 2011. ISBN-13: 978-0132151009

Additional references

Web3D Consortium, Open Standards for Real-Time 3D Communication, <http://www.web3d.org/>

Official X3DOMdDocumentation, <http://doc.x3dom.org/>

HTML, CSS, Javascript, AJAX, JQuery, JSON, and SVG tutorials, <http://www.w3schools.com/>

Online

<http://elearning.utm.my>

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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. Attendance is compulsory and will be taken in every lecture session. Student with less than 80% of total attendance is not allowed to sit for final exam.
2. Students are required to behave and follow the University's dressing regulation and etiquette all the time.
3. Exercises and tutorial will be given in class and some may be taken for assessment. Students who do not do the exercise will lose the coursework marks for the exercise.
4. Assignments must be submitted on the due dates. Some points will be deducted for late submissions. Assignments submitted three days after the due date will not be accepted.
5. Make up exam will not be given, except to students who are sick and submit medical certificate confirmed by UTM panel doctors. Make up exam can only be given within one week of the initial date of exam.

			PLO1		PLO2		PLO3	PLO4	PLO7		
No.	Assessment	% total	CLO1	CLO2	CLO2	CLO3	CLO3	CLO4	CLO4	Total	
1	QUIZ 1	2		1	1					2	
2	QUIZ 2	2		1	1					2	
3	LAB 1	3		1	2					3	
4	LAB 2	3		1	2					3	
5	ASSIGNMENT 1	7			4	3				7	
6	ASSIGNMENT 2	13			7	6				13	
7	LAB TEST	20			20					20	
8	FINAL EXAM	30	10		20					30	
9	PROJECT (REPORT)	5					3		2	5	
10	PROJECT (DEMO)	15			5	5		5		15	
Overall Total		100	10	4	62	14	3	5	2	100	
			14		76		3	5	2		

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