

## **FAKULTI INFORMATIK & KOMPUTERAN**

1.	Name of Course :	Web Application Development												
	Course Code :	CSD23503												
2.		This course covers the fundamental of web technologies in association with web application development. Students will learn related aspects such as information architectures and how to build secure web applications by taking into account common security vulnerabilities. Students will be required to build multiple webpages and implement website design that interacts with a database, which will include server-side applications. At the end of the course, students are expected to be able to develop web based systems for real applications.												
	staff :	DR. WAN MOHD AMIR FAZAMIN BIN WAN HAMZAH FATIMAH BINTI GHAZALI DR. MOHD KAMIR BIN YUSOF PROF. MADYA DR. SUHAILAN BIN SAFEI												
	Semester and Year offered :		Sem	ester		2	Year	2						
5.	Credit Value :	3												
	Prerequisite/co- requisite: (if any)													
7.	Course Learning Outcor	nes (CLO):A	t the end of	the course th	ne students w	vill be able to	):							
	CLO1	Solve web-based application problems by incorporating client-server programming and database. (C4,MQF2)												
	CLO2	Build web-based applications using client-server programming and database. (P4,MQF3a)  Demonstrate entrepreneur values in the web-based application design . (A3,MQF4b)												
	CLO3	Demonstrate	e entreprene	eur values irri	THE WED-Dase	ей аррпсато	ii desigii . (As	,MQF4D)						
8.	Mapping of the Course	apping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment :												
	Course Learning				1		M	1QF					Teaching	
	Outcomes (CLO)	MQF1	MQF2	MQF3a	MQF3b	MQF3c	MQF3d	MQF3e	MQF3f	MQF4a	MQF4b	PLO12	Methods	Assessment
	CLO 1		/										Lecture, Case Study, e- Learning	Test 1; Test 2;
	CLO 2			/									Lecture, Lab activities, e- Learning	Web Development Project
	CLO 3										/		Lecture, Discussion, Demonstration, e-Learning	Web Development Project
	Indicate the relevancy between the CLO and PLO by ticking "/" the appropriate relevant box.  (This description must be read together with Standards 2.1.2 , 2.2.1 and 2.2.2 in Area 2 - pages 16 & 18)													
9.	Transferable Skills (if ap	plicable)					1	Cognitive Skil	ls/ Higher Or	der Thinking	(MQF2)			
	(Skills learned in the course of study which can be useful and utilized in other settings)  2				Practical Skills (MQF3a)									
		3				3	Enterpreneurial Skills (MQF4b)							
	4					4								
4.5	Division to		/a. =1				5							
10.	Distribution of Student	Learning Tin	ne (SLT)											
		Teaching and Learning Activities												
										Guided Lea		Guided		

		Course Content Outline	CLO*	L	Т	P	0	Learning (NF2F) eg: e-Learning	Independent Learning (NF2F)	SLT
			CLO1, CLO3	1	0	0	0	2	8	11
	<ul><li>2.0 Web Technologies</li><li>2.1. The role of HTTP and</li><li>2.2. Constraints involved i</li><li>2.3. Develop a web applic</li></ul>		CLO1, CLO2	1	0	1	1	2	9	14
	3.2. A graphic file type for	ics of digital media (colour depth, compression, codec, and server requirements a given set of image characteristics. leploying and serving media content.	CLO1, CLO2	1	0	2	1	2	10	16
		nming and general-purpose programming. nhance the user experience of a web application.	CLO1, CLO2	1	0	2	1	2	11	17
	<ul><li>5.2. Advantages and disact</li><li>5.3. Collaboration tools.</li></ul>	ols and technologies for web development. Ivantages of development frameworks for web development.	CLO1, CLO2	2	0	4	0	3	14	23
	6.2. Authentication, secur 6.3. Types of vulnerabilities	lels including same-origin policy and thread models in web security. e certificates, and secure communication can be used in web sessions. es and attacks in web applications. reb application and defend against common attacks.	CLO1, CLO2	1	0	1	0	2	8	12
	7.0 Deployment to the we 7.1 Commercial Application 7.2 Webserver configuration 7.3 Virtual hosts	on / Web Hosting	CLO2, CLO3	2	0	2	0	2	10	16
				9	0	12	3	15	70	
									Total	109
		Continuous Assessment	Percentage (%)		F2F			NF2F		SLT
	1	CLO1: Test 1 (Short Essay)	20		1			1		2
	2	CLO1: Test 2 (Problem Based Question)	40		0.5			1		1.5
					1.5					
									Total	3.5
		Final Assessment	Percentage (%)		F2F			NF2F		SLT
	1	CLO2: Web Development Project (Demonstration)	30		1.5			3		4.5
	2	CLO3: Web Development Project (Presentation)	10		0.5			1		1.5
					2					
									Total	6
	**Please tick (V) if this sa	urse is Latihan Industri/ Clinical Placement/ Practicum/ WBL using 2-weeks, 1 credit form	uula.					GRAND	TotalGL(F2F)  TOTAL SLT	42.5 <b>118.5</b>
		cture, T = Tutorial, P= Practical, O= Others, F2F=Face to Face, NF2F=Non F						1		
	*Indicate the CLO based Identify special requirer deliver the course (e.g.: nursery, computer lab, s room, etc)	software,								
12	References (include req		, & Zambon, G. (20 lications (3rd ed.). <i>i</i>		g Jakarta EE W	/eb Developm	ent: Using JSP	, JSF, MySQL,	and Apache Tomca	t for Building Java

13 Other additional information :	1. Manelli, L. (2017). Developing a Java Web Application in a Day: Step by Step Explanations with Eclipse, Tomcat, MySQL - A complete Java Project with Source Code (Java Web Programming) (Volume 2) (2nd ed.). CreateSpace Independent Publishing Platform.  2. Murach, J., & Urban, M. (2014). Murach's Java Servlets and JSP (3rd ed.). Mike Murach & Associates.

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Week	Date	Topic
1	10 Mac - 14 Mac 2024 Ahad 4 - 5pm Rabu 11 - 1pm	<ul> <li>1.0 Introduction to Web Application Development</li> <li>1.1. The world-wide-web and web application</li> <li>1.2. Growth and changes in web applications over time.</li> <li>1.3 Entrepreneur mind for web application development in industry environments</li> </ul>
2	17 Mac - 21 Mac 2024 Ahad 4 - 5pm Rabu 11 - 1pm	<ul><li>2.0 Web Technologies</li><li>2.1. The role of HTTP and HTTPS in the context of web applications.</li><li>2.2. Constraints involved in state management</li><li>2.3. Develop a web application</li></ul>
3	24 Mac - 28 Mac 2024 Ahad 4 - 5pm Rabu 11 - 1pm	3.0 Digital media 3.1. Compare characteristics of digital media (colour depth, compression, codec, and server requirements) 3.2. A graphic file type for a given set of image characteristics 3.3. Metaphors issues in deploying and serving media content
4	31 Mac - 4 April 2024 Ahad 4 - 5pm Rabu 11 - 1pm	<ul> <li>4.0 Information architecture</li> <li>4.1. Contrast web programming and general-purpose programming.</li> <li>4.2. Principles of UXD to enhance the user experience of a web application.</li> <li>4.3. Design and architecture of a web system.</li> </ul>
5	7 April - 11 April 2024 Ahad 4 - 5pm Rabu 11 - 1pm	5.0 Web development 5.1. Industry-standard tools and technologies for web development. 5.2. Advantages and disadvantages of development frameworks for web development. 5.3. Collaboration tools.
	14 April - 18 April 2024	
6	21 April - 25 April 2024 Ahad 4 - 5pm Rabu 11 - 1pm	<ul> <li>6.0 Vulnerabilities</li> <li>6.1. Browser security models including same-origin policy and thread models in web security.</li> <li>6.2. Authentication, secure certificates, and secure communication can be used in web sessions.</li> <li>6.3. Types of vulnerabilities and attacks in web applications.</li> <li>6.4. Method to secure a web application and defend against common attacks</li> </ul>
7	28 April - 2 Mei 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
8	5 Mei - 9 Mei 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
9	12 Mei - 16 Mei 2024 Ahad 4 - 5pm Rabu 11 - 1pm	

10	19 Mei - 23 Mei 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
11	26 Mei - 30 Mei 2024 Ahad 4 - 5pm Rabu 11 - 1pm	7.0 Deployment to the webserver 7.1 Commercial Application / Web Hosting 7.2 Webserver configuration 7.3 Virtual hosts
12	2 Jun - 6 Jun 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
13	9 Jun - 13 Jun 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
	16 Jun - 20 Jun 2024	
14	23 Jun - 27 Jun 2024 Ahad 4 - 5pm Rabu 11 - 1pm	
	30 Jun - 30 Jun 2024 1 Julai - 22 Julai 2024	

CLO		Assessment
CLO1, CLO3	INSTALLATION APACHE NETBEAN 19, REGISTER WEB HOSTING	CLO1 - TEST 1 CLO3 - PRESENTATION PROJECT REGARDING TO ENTREPRENEUR (FINAL)
CLO1, CLO2	HTML	CLO1 - TEST 1, TEST2 CLO2 - PROJECT (FINAL)
CLO1, CLO2	BOOTSTRAP	CLO1 - TEST 1 CLO2 - PROJECT (FINAL)
CLO1, CLO2	JAVASCRIPT	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)
CLO1, CLO2		CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)
	Midterm Break	
CLO1, CLO2	JAVASCRIPT - VALIDATION	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)
	JSP	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)
	JSP	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)
	JSP	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)

	JSP	CLO1 - TEST 1, TEST 2 CLO2 - PROJECT (FINAL)				
CLO2, CLO3	JSP	CLO2 - PROJECT (FINAL) CLO3 - PRESENTATION PROJECT REGARDING TO ENTREPRENEUR (FINAL)				
	JSP					
	JSP					
	024 (Ahad - Selasa) Raya					
19 - 20 Jun 2	19 - 20 Jun 2024 (Rabu - Khamis) Cuti Khas PdP					
	SUBMIT PROJECT AND PRESENTATION VIDEO					
Ulangkaji						
PEPERIKSAAN AKHIR						

Notes
28 Mac 2024 (Khamis) Nuzul Quran
10 - 11 April 2024 (Rabu - Khamis) Raya Aidil Fitri
1 Mei 2024 (Rabu) Hari Pekerja

22 Mei 2024 (Rabu) Wesak	
3 Jun 2024 (Isnin) Hari Keputeraan YDP Agong	
7 Julai 2024 (Ahad) Awal Muharram	