Course Specification
(Bachelor)

Course Title:	Internet Technologies
Course Code:	515CCS-3
Program:	Bachelor of Science in Computer Science
Department:	Department of Computer Science
College:	Computer Science and Information Systems
Institution:	Najran University
Version:	2.0
Last Revision Date:	August 2022

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A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
3 (2, 2, 1) [Theory, Lab, Tutorial]					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level 9/Year 5)					
4. Course General Description:					
Study the history and fundamentals of the Internet, Common web applications, types of web pages, and web publishing and learn about Internet protocols (HTTP, TCP/IP and FTP), Client/Server Architecture and the MVC approach in Website design. Programming with HTML, XHTML, cascading style sheets (CSS), and JavaScript, client and server-side scripting, develop dynamic web applications with PHP or ASP and MySQL. Finally, evaluating websites and applications and learning about web privacy and various security issues					
5. Pre-requirements for this course (if any)**:**					
None					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					
Use a variety of strategies and tools to create websites. Create standards-based websites that are accessible and usable by a full spectrum of users. Gain skills and training for an entry-level position in the field of Web Design. Learn to develop and maintain Web sites for a corporation or our own small business.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	75	100%

No	Mode of Instruction	Contact Hours	Percentage
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	15
5.	**Others (specify)**	
Total		75

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Understand fundamentals of internet, common web applications, their types, web security and privacy issues and social and commercial issues of web apps.	K_1, K_2	TS: 1-Interactive Lectures using PowerPoint slides and explaining the essential points in more detail with the help of whiteboard. TS: 2- Encouraging the students to use the online links to know the concepts in detail. TS: 3 – Recall the topics discussed in the last lecture by asking questions to the students. TS: 4 – Motivating students to be active	**Indirect:** - Students CLO Survey **Direct:** - Quizzes. - Assignment. - Midterm exam (Exam consists of multiple-choice questions, true/false, fill in the blanks, and theoretical questions.) - Final Exam

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
			during class by asking questions regularly during the lecture. TS: 5 – Associating the topics in with the course learning outcomes (CLO).	
1.2	Recognize browsing tools, web development tools and web publishing.	K_1, K_3	TS: 1-Interactive Lectures using PowerPoint slides and using the whiteboard to explain the essential points in more detail. TS:2- Engaging the students in problem-based learning through Tutorials TS: 3- Encouraging the students to use the online links to know the concepts in detail. TS: 4 – Recall the topics discussed in the last lecture by asking questions to the students. TS: 5 – Motivating students to be active during class by asking questions regularly during the lecture. TS: 6 – Associating the topics in each chapter with the CLO.	**Indirect:** - Students CLO Survey **Direct:** - Quizzes. - Midterm exam (Each exam consists of multiple-choice questions, true/false, fill-in-the-blanks, and theoretical questions.) - Final Exam
1.3	Explain Internet protocols (HTTP, TCP/IP and FTP) and File/server, database server and 3-tier Client/Server Architecture.	K_1	TS: 1-Interactive Lectures using PowerPoint slides and using the whiteboard to explain the essential points in more detail. TS: 2- Giving students tutorial related to the topic. TS: 3- Encouraging the students to use the online links to know the concepts in detail.	**Indirect:** - Students CLO Survey **Direct:** - Quizzes. - Midterm exam (Each exam consists of multiple-choice questions, true/false, fill in the blanks, and theoretical questions.)

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
			TS: 4 – Recall the topics discussed in the last lecture by asking questions to the students. TS: 5 – Motivating students to be active during class by asking questions regularly during the lecture. TS: 6 – Associating the topics in each chapter with the CLO.	- Final Exam
2.0	**Skills**			
2.1	Design a web page using MVC and other design approaches.	S_2, S_4	TS: 1- Lab Demonstrations TS: 2- Implementation of system calls and scheduling algorithms in the UNIX environment. TS: 3- Fixing and explaining the problems faced by the student during the lab session. TS: 4- Group Discussions	**Indirect:** - Students CLO Survey **Direct:** - Quizzes - Assignments - Mid Lab Exam - Final Lab Exam
2.2	Develop dynamic web application with PHP or ASP and MySQL and programming with HTML, XHTML, cascading style sheets (CSS), and JavaScript, client, and server-side Scripting language.	S_1, S_3	TS: 1- Lab Demonstrations TS: 2- Lab experiments. TS: 3- Fixing and explaining the problems faced by the student during the lab session. TS: 4- Homework TS: 5- Group Discussions	**Indirect:** - Students CLO Survey **Direct:** - Quizzes - Mid Lab Exam - Final Lab Exam
2.3				
2.4				
3.0	**Values, autonomy, and responsibility**			
3.1	Evaluate a web site related reliability, availability, and security	V_1		

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
3.2				

C. Course Content

No	List of Topics	Contact Hours
1.	The Overview and Fundamentals of the internet technologies, web applications and web related issues	5
2.	Web Publishing	5
3.	Internet protocols (HTTP, TCP/IP, and FTP)	10
4.	Client/Server Architecture	5
5.	File server and Database server Architecture	10
6.	MVC Design Approach and 3-tier Architecture	5
7.	Web design with CSS, HTML, XHTML, and javascript basics	10
8.	Web programming with PHP or ASP	10
9.	Linking web to DB with MySQL	5
10.	Web evaluation, security, and privacy issues	10
Total		**75**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes	3rd week to 12th weeks	15%
2.	Assignments or mini project (presentation)	5th week	5%
3.	Mid Term Exam	9th week	20%
4.	Mid Lab Exam	10th week	10%
5.	Final Lab Exam	14th week	10%
6.	Final Exam	16 or 17th week	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	1. Douglas E. Comer, Computer Networks and Internets with Internet Applications, Publisher: Prentice Hall, 5th Edition.
Supportive References	1. Deitel & Deitel, Internet & World Wide Web: How to Program, Prentice Hall, 5th Edition. 2. Robert W. Sebesta, Programming the World Wide Web, Addison-Wesley, Latest Edition. 3. Hugh E. Williams and David Lane, Web Database Applications with PHP, and MySQL, O'Reilly & Associates. 4. David Powers, PHP Solutions: Dynamic Web Design Made Easy Note: Handouts will be distributed in class, when appropriate, to cover some of the course topics.
Electronic Materials	http://www.w3schools.com/
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture Rooms with 30 seats and a whiteboard or a smartboard.
Technology equipment (projector, smart board, software)	Desktop/ Laptop computer Multimedia Projector
Other equipment (depending on the nature of the specialty)	A File cabinet to keep Class Stuff, Markers, papers and student Files, and a printer to print program screenshots.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Collecting students' suggestions to facilitate more during the class.	Students	Verbal discussion
Student's questionnaire once during the semester about course learning outcomes.	Students	Indirect Survey
Achievement percentage of course learning outcomes, direct evaluation using CLO assessment sheet	Course Instructor	Direct evaluation using CLO achievement calculation
Teaching strategies	Quality unit	Indirect
Assessment methods	Quality unit	Indirect

Assessment Areas/Issues	Assessor	Assessment Methods
Instructor performance	Quality unit	Indirect
Course content	Quality unit	Indirect

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Computer Science Departmental Council
REFERENCE NO.	14440203-0185-00002
DATE	1st Sep, 2022