



T-104
2022

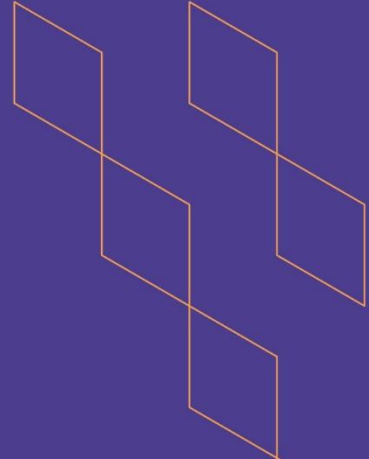
Course Specification





T-104
2022

Course Specification



Course Title: Web Programming 2
Course Code: 2333 CSA
Program: Web and Mobile Application Development
Department: NA
College: Applied College
Institution: King Khalid University
Version: 1
Last Revision Date: 6 August 2023



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A. General information about the course:

Course Identification

1. Credit hours: 3

2. Course type

a. University College Department Track Others

b. Required Elective

3. Level/year at which this course is offered: 3rd Level

4. Course general Description:

This course focuses on applying object-oriented techniques in the design, development, and integration of server-side enterprise applications using technologies such as servlets, Java Server Faces language and its Tag Library Documentation Generator to implement java codes as advance topics, and java data base connectivity and its jars. Topics include web applications, multi-tier architecture, model-view-controller architecture, Managed Beans commands and annotations, JSF life cycle, sessions, cookies, Http Servlet Response, http Servlet Request, faceless, and security. There will be principle, techniques and tools of object-oriented modeling, design, implementation for some part.

5. Pre-requirements for this course (if any): 1332CSA

6. Co- requirements for this course (if any):

7. Course Main Objective(s):

- Students will learn different kinds of servers and what is the best for their projects including class fish server, tomcat server, web logic and more.
- Encourage students to use internet to look for related websites, computer software, and references for websites platforms and languages.
- Updating the materials of the course to cover the new topics of the field.
- Increasing the ability of the students to implement a complete WEB based system that are presented in the course.

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	64	100
2.	E-learning		
	Hybrid		
3.	<ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4.	Distance learning		





2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	32
2.	Laboratory/Studio	32
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	Total	64



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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Apply object-oriented techniques in design, development, and integration of server-side enterprise application.	K1	Lectures + Lab	Exams, Assignments, Quizzes
1.2	Explain the roles of major components in multi-tier architecture.	K2	Lectures + Lab	Exams, Assignments, Quizzes
1.3	Describe the major pieces involved in the development of server-side based application including but not limited to database and security	K2	Lectures + Lab	Exams, Assignments, Quizzes
2.0	Skills			
2.1	Be able to create a complete dynamic website and deploy it on the internet.	S3	Lectures + Lab	Exams, Assignments, Quizzes
2.2	Use the JSF's rich tools and libraries for creating a CRUD application which involves steps respectively.	S1	Lectures, Lab, group discussion	Exams, Assignments, Quizzes
2.3	Write a well-defined java code using the object-oriented programming basics to handle fields attributes, connections, methods, and exceptions for any project.	S1 S2	Lectures, Lab, group discussion	Exams, Assignments, Quizzes
3.0	Values, autonomy, and responsibility			
3.1	Be able to work on teams or individuals to make a web-application project having significant purpose.	V1 V2	Lectures, Lab, Case Study, Groupwork	Exams, Assignments and presentation
3.2	Present a given website ideas to classmate.	V3	Lab, Groupwork, Presentation	Exams, Assignments and presentation



C. Course Content

No	List of Topics	Contact Hours
1	● Present a given website ideas to classmate.	4
2	● View – 1 review (Client UI).	4
3	Understanding (MVC)Model-View-Controller design pattern. Understanding NetBeans IDE and how-to setup its environment.	6
4	N-tier architecture and Application Lifecycle Phases.	4
5	Oracle SQL and NetBeans IDE setup.	6
6	● Persistence (SQL).	4
7	● View – 2 (Server generated UI using JSF tags).	6
8	Java ramp up. ● Object Oriented concepts.	6
9	● Concepts of Java Beans and JSF annotations.	6
10	● Integration – 1 (State management).	6
11	● Integration – 2 (Services).	6
12	● Headers, Listeners, Filters, Security.	6
Total		64

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz 1	4	5
2.	Midterm Exam 1	7	10
3.	Practical Assessment	1 to 16	30
4.	Midterm Exam 2	12	10
5.	Quiz 2	14	5
6.	Final Exam	After week 16	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	<ul style="list-style-type: none"> Practical JSF in Java EE 8 Web Applications in Java for the Enterprise, by Michael Müller, 2018. ISBN-13: 978-1484230299 Internet & World Wide Web How to Program, 5/e, Harvey M. Deitel and Paul J. Deitel © 2012, 1000pp., ISBN: 978-0-13-215100-9.
Supportive References	<ul style="list-style-type: none"> HTML and CSS: Design and Build Websites by Duckett, J.2011 JavaScript and jQuery interactive front-end web development.pdf Mastering-JavaScript-High-Performance, by Chad R.Adams, 2015. JavaScript and JQuery Interactive Front-En - Jon Duckett. JSF-2.0-Programming-Cookbook.
Electronic Materials	<ul style="list-style-type: none"> https://docs.oracle.com/cd/E17802_01/j2ee/javaee/javaserverfaces/2.0/docs/pdl/docs/facelets/index.html http://www.w3schools.com
Other Learning Materials	<ul style="list-style-type: none"> NetBeans IDE Oracle SQL.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<ul style="list-style-type: none"> Lecture Room with a capacity of More than 30 Chairs and Tables for Students and 1 Teacher's Table and Chair and 1 Projector/Screen. Laboratories with at least 25 Computers for students and 1 for Lab Instructor and Lab Assistant with Computer Table/Chair with the same number and 1 Projector/Screen.
Technology equipment (projector, smart board, software)	<ul style="list-style-type: none"> Laboratories computer with NetBeans IDE.





Items	Resources
	<ul style="list-style-type: none"> Projectors, Computer for Theory Classes and Practical Sessions. Internet connection.
Other equipment (depending on the nature of the specialty)	<ul style="list-style-type: none"> Overhead projector Computer for individual students Internet access Networked laboratory systems

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of students assessment	Course Teacher	Direct
Quality of learning resources	Program Supervisor, Quality Unit	Direct
The extent to which CLOs have been achieved	Course Teacher	Direct
Other	Course Teacher, Quality Unit	Direct

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	

