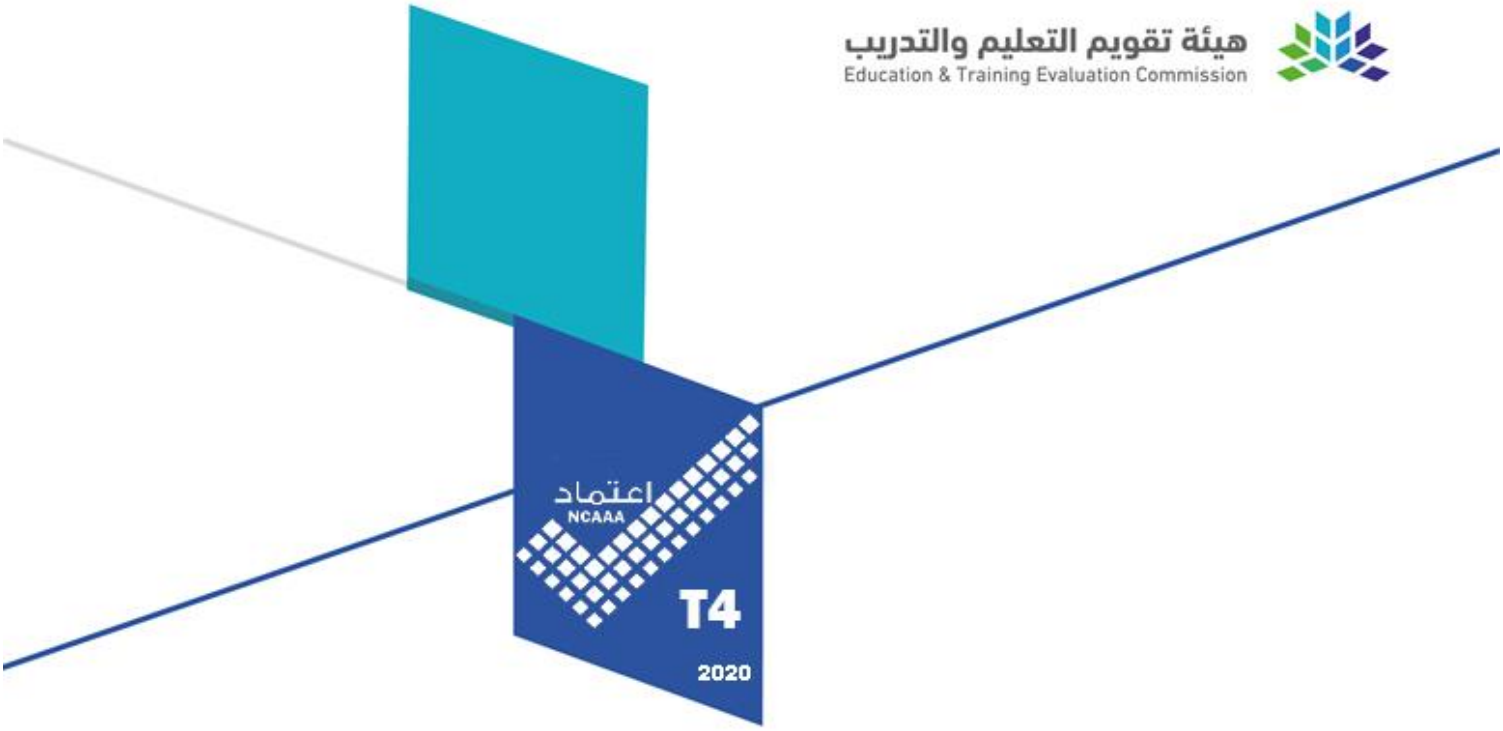
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	Network Programming
Course Code:	CSI 532
Program:	B.Sc.
Department:	Computer Science and Information
College:	College of Science AL Zulfi
Institution:	Al Majmaah University

Table of Contents

A. Course Identification

1. Credit hours:	
2. Course type **a.** University ☐ College ☐ Department ☐ Others ☐ **b.** Required ☐ Elective ■	
3. Level/year at which this course is offered:	**10th /**
4. Pre-requisites for this course (if any)**:** Advanced Computer Networks :CSI 431	
5. Co-requisites for this course (if any)**:** None	

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	48	80 %
2	**Blended**	6	10 %
3	**E-learning**	6	10 %
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	20
3	**Tutorial**	10
4	**Others** (specify)	
	Total	60

B. Course Objectives and Learning Outcomes

1. Course Description

Introduction to various aspects of computer network programming. Fundamental concepts are covered, including host TCP/IP configuration, TCP/IP addressing, socket programming, data presentation issues, the client/server programming model, and HTTP. This course is directed at developing traditional and multithreaded client/server applications in both the TCP/IP and UDP/IP domains. This course also addresses how programs in distributed systems can make use of OS service

2. Course Main Objective

1. Increasing the ability of the students to implement the methods and practices that are presented in the course.
2. Formative exams during the term with a feedback to the students, so these examinations can be used as a method of learning..
3. Using group discussion through the internet with course attending students.
4. Updating the materials of the course to cover the new topics of the field. 5. Help students to develop their knowledge about the topics that are presented in the course.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	the basic concepts associated with network programming	K1
1.2	the role of a protocol in controlling the communication between hosts in a network	K2
1.3	the advantages of multithreaded applications	K3
2	**Skills :**	
2.1	distinguish between transport layer protocols	S1
2.2	design a new simple protocol	S2
2.3	recognize the significance of flexibility, extendibility, simplicity, and efficiency in protocol design and implementation	S2
3	**Values:**	
31	use Java I/O streams and Java exception handling primitives	C1
3.2	implement practical network protocols, for clients and servers, using Java networking API	C2

C. Course Content

No	List of Topics	Contact Hours
1	Networking Revision	4
2	Java Overview	12
3	Internet Addressing	4
4	Socket programming	12
5	The User Datagram Protocol	8
6	Multithreaded Applications	12
	Implementing application protocol	8
Total		60

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	the basic concepts associated with network programming	Lectures, Individual presentations & Brainstorming exercises	Quiz , Mid Exam , Assignment, Final Exam, Individual demonstrations.
1.2	the role of a protocol in controlling the communication between hosts in a network		
1.3	the advantages of multithreaded applications		
2.0	**Skills**		
2.1	distinguish between transport layer protocols	Lectures, Individual presentations & Brainstorming exercises	Quiz , Mid Exam , Assignment, Final Exam, Individual demonstrations.
2.2	design a new simple protocol	Lectures, Individual presentations & Brainstorming exercises	Quiz , Mid Exam , Assignment, Final Exam, Individual demonstrations.
2.3	recognize the significance of flexibility, extendibility, simplicity, and efficiency in protocol design and implementation		
3.0	**Values**		
31	use Java I/O streams and Java exception handling primitives	Lectures, Individual presentations & Brainstorming exercises	Quiz , Mid Exam , Assignment, Final Exam, Individual demonstrations.
3.2	implement practical network protocols, for clients and servers, using Java networking API		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes		10 %
2	Mid Exams		30 %
3	Assignments		10 %
4	Group Discussion, Presentation		10 %
5	Final Exam		40 %

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Fiach Reid," Network Programming in .NET", Elsevier Digital Press: ISBN: 1-55558-315-6. (2004)
Essential References Materials	Bob Quinn, David K. Shute , "Windows Sockets Network Programming: Text", Addison wesley Advanced Windows Series, Prentice Hall, 2011, ISBN: 0768682320, 9780768682328
Electronic Materials	• http://nptel.ac.in/courses.php?branch=Comp• http://cs.mcgill.ca/~jpineau/comp424/schedule.html
Other Learning Materials	Videos and presentations are available with instructor

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms and Labs as those that are available at college of science Az Zulfi
Technology Resources (AV, data show, Smart Board, software, etc.)	Smart Board and required software
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	