



## Course Specifications

<b>Course Title:</b>	Mobile Networks
<b>Course Code:</b>	503553-3
<b>Program:</b>	Bachelor in Computer Engineering
<b>Department:</b>	Department of Computer Engineering
<b>College:</b>	College of Computers and Information Technology
<b>Institution:</b>	Taif University

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## A. Course Identification

<b>1. Credit hours:</b> 3
<b>2. Course type</b>
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b. Required <input type="checkbox"/> Elective <input checked="" type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> 10/5
<b>4. Pre-requisites for this course (if any):</b> Computer Networks (503443-4)
<b>5. Co-requisites for this course (if any):</b> NONE

## 6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

## 7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	<b>Total</b>	45

## B. Course Objectives and Learning Outcomes

<p><b>1. Course Description</b></p> <p>This course covers the mobility issues of wireless networks. Cellular networks, ad hoc networks; access protocols; radio and network resource management; quality of service; mobility and location management; routing; mobile-IP; current wireless technologies for personal, local and satellite networks will be covered in the course..</p>
<p><b>2. Course Main Objective</b></p> <ul style="list-style-type: none"> <li>To study the technical issues and stateoftheart techniques in the operation and management of mobile networks</li> <li>To learn the engineering principles and system evaluation methods used in the design of mobile networks</li> </ul>

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
<b>1</b>	<b>Knowledge and Understanding</b>	
1.1	Identify and define the mobile IP concept	K1
1.2	Describe and recognize between the various conventional and adhoc networks	K1
1.3		
1...		
<b>2</b>	<b>Skills :</b>	
2.1	An ability to design mobile management schemes user applications	S1
2.2	Analyze the security issues related to mobile networks	S3
2.3		
2...		
<b>3</b>	<b>Values:</b>	
3.1	Describe emerging wireless networks	V1
3.2		
3.3		
3...		

### C. Course Content

No	List of Topics	Contact Hours
1	Introduction of Wireless Communications and Network	4
2	Mobile Networking Mobile IP	4
3	Ad Hoc Networks	4
4	Ad Hoc Routing protocols	4
5	Mobile Data and resource Management	4
6	Location Dependency/Awareness	5
7	Mobile Applications/Services	5
8	Satellite Networks	5
9	Security Issues	5
10	Revisions	5
11		
12		
13		
14		
15		
<b>Total</b>		45

### D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding</b>		
1.1	Identify and define the mobile IP concept	Lecture Discussion	Written Exams Quizzes Assignments



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Describe and recognize between the various conventional and adhoc networks	Lecture Discussion	Written Exams Quizzes Assignments
...			
<b>2.0</b>	<b>Skills</b>		
2.1	An ability to design mobile management schemes user applications	Lecture Discussion Brainstorming Problem Solving	Written Exams Quizzes Assignments
2.2	Analyze the security issues related to mobile networks	Lecture Discussion Brainstorming Problem Solving	Written Exams Quizzes Assignments
...			
<b>3.0</b>	<b>Values</b>		
3.1	Describe emerging wireless networks	Discussion Brainstorming Self-Learning	Assignments
3.2			
...			

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments	Continues	5%
2	Midterm Exam	7	20%
3	Project	14	15%
4	Quizzes	Continues	10%
5	Final Exam	16	50%
6			
7			
8			

\*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 :**

- Teaching staff provide at least 6 office hours for students to help them in the course as well as in any other academic issues.
- Consultation can also be done 24 hours/ 7days through university Edugate (Tawasol)

## F. Learning Resources and Facilities



## 1. Learning Resources

<b>Required Textbooks</b>	Schiller, Jochen, “Mobile communications” Pearson Education 2003
<b>Essential References Materials</b>	Martin Sauter, “From GSM to LTE: An Introduction to Mobile Networks and Mobile Broadband” Wiley
<b>Electronic Materials</b>	
<b>Other Learning Materials</b>	

## 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	Traditional Classrooms, Laboratories
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	White Board, Datashow, software
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Extent of achievement of course learning outcomes	Students	Indirect (Survey)
Effectiveness of teaching and assessment	Students	Indirect (Survey)
Extent of achievement of course learning outcomes	Faculty	Course Report

**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	Computer Engineering Council / Curriculum Committee
Reference No.	16
Date	04/02/2019

