The University of Jordan
School of Engineering
Department of Computer Engineering
Summer Term – A.Y. 2022-2023

Course:	Wireless Networks – 0907524 (3 Credit Hours)
Catalog Data:	Introduction and Basics Review; Transmission Fundamentals; Basic Communication Networks; Protocols and the TCP/IP Suite; Wireless Communication Technology; Antennas and Propagation; Signal Encoding Techniques; Spread Spectrum; Coding and Error-Control Techniques; Wireless Networking; Satellite Communications; Cellular Wireless Networks; Cordless Systems; Wireless Local Loop; Mobile IP; Wireless Access Protocol; Wireless LANs; Wireless LAN Technology; Wi-Fi; IEEE 802.11 Wireless LAN Standard; Bluetooth; IEEE 802.15; WIMAX; Wireless Sensor Networks; Mobile Ad-Hoc Networks (MANET); Additional Modern and Important Topics in Wireless and Mobile Computer Networks.
Prerequisites by Course:	CPE 0907322
Prerequisites by Topic:	Students are assumed to have had sufficient knowledge in Computer Networks and Communication Systems Design.
Textbook:	William Stallings, *Wireless Communications* & *Networks*, Prentice-Hall.
References:	T. S. Rappaport, *Wireless Communications: Principles and Practice*, 2nd edition, Prentice-Hall. J. H. Schiller, *Mobile Communications*, 2nd edition, Addison-Wesley.
Website:	MS Teams
Schedule & Duration:	8 Weeks, 40 lectures, 75 minutes each (including exams).
Minimum Student Material:	Text book, class handouts, instructor keynotes, calculator, access to a personal computer and internet.
Minimum College Facilities:	E-Learning platform, classroom with whiteboard and projection display facilities, library and computational facilities.
Course Objectives:	By the end of this course, the students should be familiar with the technical fundamentals, and the various hardware and software – based techniques that are used in the modern wireless and mobile computer networking.
Course Outcomes (ILOs):	1. The ability to understand the fundamentals of wireless networks 2. The ability to analyze wireless network systems 3. The ability to design modern wireless systems
Course Topics:	1. Introduction and Basics Review 2. Transmission Fundamentals 3. Basic Communication Networks 4. Protocols and the TCP/IP Suite 5. Antennas and Propagation 6. Signal Encoding Techniques 7. Spread Spectrum

8. Coding and Error-Control Techniques
9. Satellite Communications
10. Cellular Wireless Networks
11. Cordless Systems
12. Wireless Local Loop
13. Mobile IP
14. Wireless Access Protocol
15. Wireless LAN Technology
16. Wi-Fi
17. IEEE 802.11 Wireless LAN Standard
18. Bluetooth
19. IEEE 802.15
20. WIMAX
21. Wireless Sensor Networks
22. Mobile Ad-Hoc Networks (MANET)

Computer Usage: Practical aspects are covered using WMCN simulations and examples.

Attendance: Class attendance will be taken every class and all of the university's polices and regulations will be enforced in this regard.

Assessments: Coursework and Exams.

Grading policy:

Course Work	20%
Midterm Exam	30%
Final Exam	50%

Instructors: Prof. Dr. Anas N. Al-Rabadi
E-mail: an321dy@yahoo.com
Office Hours: S. T. Th. 11:00 – 12:00
        By Arrangement with Instructor

Class Time and Location: S. M. T. W. Th. 09:45 – 11:00 (CPE 001)