Jordan University of Science and Technology
Faculty of Computer & Information Technology
Network Engineering And Security Department

NES460 Multimedia Networking
First Semester 2020-2021

Course Catalog
3 Credit Hours. Multimedia data types: images, video, and audio, multimedia compression technologies such as JPEG, MPEG, and H.264, multimedia protocols including RTP/RTCP and RTSP, Voice-over-IP and its protocols including SIP and H.323, multimedia streaming over best-effort and reservation-based networks, quality-of-service models.

Text Book	
Title	Multimedia Communications
Author(s)	F. Halsall
Edition	1st Edition
Short Name	Halsall's
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Forouzan's	Data Communications and Networking	B. A. Forouzan	5th Edition	
Kurose's	Computer Networking: A Top-Down Approach	J. F. Kurose and K. W. Ross	6th Edition	

Instructor	
Name	**Dr. Moad Mowafi**
Office Location	E1L3
Office Hours	Sun : 11:30 - 13:30 Mon : 13:00 - 14:00 Tue : 11:30 - 13:30 Wed : 13:00 - 14:00

Email	mowafi@just.edu.jo

Class Schedule & Room

Section 1:
  Lecture Time: Mon, Wed : 10:00 - 11:30
  Room: منصة الكترونية
 	
Section 2:
  Lecture Time: Mon, Wed : 11:30 - 13:00
  Room: منصة الكترونية

Teaching Assistant
Hebah Aldahoud(Sections 1, 2)

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
1754150	NES415 Networking Protocols	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Multimedia Data Types	From **Halsall's**
Weeks 2, 3	Image Compression	From **Halsall's**
Weeks 4, 5	Audio and Video Compression	From **Halsall's**
Weeks 6, 7	Video Streaming	From **Forouzan's**, From **Kurose's**
Weeks 8, 9	Real-Time Interactive Protocols (RTP, RTCP, SIP, H323)	From **Forouzan's**
Week 10	Real-time Streaming Protocol (RTSP)	From **Kurose's**
Week 11	Voice-over-IP (VoIP)	From **Kurose's**
Weeks 12, 13	Quality of Service (QoS)	From **Forouzan's**, From **Kurose's**

Mapping of Course Outcomes to Program Student Outcomes	**Course Outcome Weight (Out of 100%)**	**Assessment method**
Identify multimedia data types including images, audio, and video. [1SO1]	15%	Mid Exam, Final Exam
Apply image, video and audio compression algorithms. [1SO1]	25%	Mid Exam, Final Exam
Describe and compare different video streaming approaches. [1SO2, 1SO5]	10%	Final Exam

Understand multimedia protocols including RTP/RTCP and RTSP. [1SO2, 1SO5]	10%	Assignments, Final Exam
Explain the basics of VoIP and VoIP Protocols including SIP and H.323. [1SO2]	15%	Assignments, Final Exam
Describe and compare the different quality of service models. [1SO2, 1SO5]	25%	Assignments, Final Exam

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
40	37.50			22.50		

Evaluation	
Assessment Tool	**Weight**
Mid Exam	30%
Assignments	20%
Final Exam	50%

Policy	
Makeups	Makeup exam should not be given unless there is a valid excuse.
Cheating	Standard JUST policy will be applied.
Attendance	- Excellent attendance is expected. - According to the JUST policy, a student will receive the grade of ZERO (35%) ?failed for absence? if he misses more than 20% of the classes. - Attendance will be taken by calling the names or passing a sign-up sheet. - If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed.
Participation	- Participation in the class will positively affect your performance. - Disruption and side talks will possibly result in dismissal from class. - No eating or chewing gums are allowed in class.

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