

**Arab Academy for Science and Technology and Maritime Transport
Computer Science Curriculum
Course Syllabus**

Course Code: CS454	Course Title: Multimedia Acquisition and Communications	Classification: E	Coordinator's Name: Dr. Abeer Bader	Credit Hours: 3
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Pre-requisites: <ul style="list-style-type: none"> • CS244 (Advanced Programming Applications) • CE231 (Introduction to Networks) 	Co-requisites: None	Schedule: Lecture: 2 hours Tutorial-Lab: 2 hours		
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Office Hours:

Course Description:

This course introduces students to the necessary protocols for supporting multimedia communication through network such as the real time streaming protocol, real time control protocol and real time protocol. The students will be able to acquire and capture voice and video in real time and setting up their network for transmission. Different methods of source coding are also introduced.

Textbook:

Silva M., *Multimedia Communications and Networking*' 1st Edition, CRC Press.

References:

King N. Ngan, Chi W. Yap and Heng T. Tan, *Video Coding for Wireless Communication Systems*.

Course Objective/Course Learning Outcome:	Contribution to Program Student Outcomes:
Write Socket Programming.	
Understand and simulate real time streaming protocol.	(SO1) Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
Understand real time protocol.	(SO2) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
Write code to play multimedia files via networks.	(SO6) Apply computer science theory and software development fundamentals to produce computing-based solutions.

<p>Build JMF architecture.</p>	
<p>Course Outline:</p> <ol style="list-style-type: none">1. Introduction2. Text Overview3. Graphics And Image Data Processing4. Fundamental Concepts in video5. Basics of Digital Audio	<ol style="list-style-type: none">6. Quantization of Audio7. Lossless Compression Algorithms8. Image Compression Standards9. Intro to Multimedia Networks10. Multimedia Network Applications
<p>Grade Distribution:</p> <p>7th Week Assessment (30%)</p> <p>12th Week Assessment (20%)</p> <p>Year Work (10%)</p> <p>Final Exam (40%)</p>	

Policies:

Attendance:

AASTMT Education and Study Regulations (available at aast.edu)

Academic Honesty:

AASTMT Education and Study Regulations (available at aast.edu)

Late Submission:

Late submissions are graded out of 75% (1 week late), 50% (2 weeks late), 25% (3 weeks late), 0% (more than 3 weeks late)