

Module (Course Syllabus) Catalogue 2024-2025

College/ Institute	Erbil Technical Engineering College	
Department	Information System engineering	
Module Name	Multimedia System	
Module Code	MUS404	
Degree	Technical Diploma <input type="checkbox"/>	Bachelor <input checked="" type="checkbox"/>
	High Diploma <input type="checkbox"/>	Master <input type="checkbox"/> PhD <input type="checkbox"/>
Semester	4	
Qualification	PhD	
Scientific Title	Lecturer	
ECTS (Credits)	6	
Module type	Prerequisite <input type="checkbox"/>	Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>
Weekly hours	4	
Weekly hours (Theory)	(2) hr Class	(24) Total hrs Workload
Weekly hours (Practical)	(2) hr Class	(24) Total hrs Workload
Number of Weeks	15 weeks	
Lecturer (Theory)	Omar Shirko Mustafa	
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Lecturer (Practical)	Soran Noori	
E-Mail & Mobile NO.	soran.noori87@gmail.com 07504479072	
Websites		

Course Book

<p>Course Description</p>	<p>Multimedia is content that uses a combination of different content forms such as text, audio, images, animations, video and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.</p> <p>Multimedia can be recorded and played, displayed, interacted with or accessed by information content processing devices, such as computerized and electronic devices, but can also be part of a live performance. Multimedia devices are electronic media devices used to store and experience multimedia content. Multimedia is distinguished from mixed media in fine art; for example, by including audio it has a broader scope. The term "rich media" is synonymous with interactive multimedia.</p>
<p>Course objectives</p>	<ul style="list-style-type: none"> • Develop vocabulary related to multimedia. • Investigate the key principles in internet safety, security, and privacy. • Utilize hardware to manipulate various types of media (e.g., cameras, microphones, graphic tablets). • Determine appropriate software application for task 5 Use organizational skills to plan multimedia products (e.g., storyboarding, outlining, scripting, task delegation). • Apply design principles used in multimedia productions. • Create text using typography principles. • Evaluate and determine hardware and software required for multimedia use. • Identify a variety of presentation software (e.g., Prezi, Empress, PowerPoint, Open Office Impress, Apple Keynote, NXPowerlite). • Identify components of effective electronic presentations. • Design linear and non-linear presentations (e.g., interactive game). • Import files into a presentation (e.g., text, images, audio, video). • Apply advanced editing techniques (e.g., build, effects, timing, animation, transitions). • Export presentation to various formats (e.g., .ppt, .jpg, .html). • Deliver a presentation using professional standards and techniques. • Create frame-by-frame animations. • Create reusable symbols (e.g., button, movie, graphic). • Apply motion and shape tweens. • Modify bitmaps (trace bitmap, convert to symbol). • Use layers and object modification techniques (e.g., transform, alpha transparency, filters). • Add interactivity to animations with buttons, menus, and scripting. • Explore advanced animation techniques (e.g., 3D). • Compare and contrast audio formats common size and quality (e.g., .mp3, .wav, .midi). • Rip and import audio from a variety of sources (e.g., CD/DVD, video, Internet) • Create original audio (e.g., voice, instrument) • Mix audio (e.g., layering, trimming, level adjustments)

- Apply effects to audio (e.g., noise reduction, amplify, echo)
- Export audio files based on delivery method
- Apply editing techniques
- Develop pre-production documents (e.g., storyboard, shot list)
- Apply basic filming techniques (e.g., camera angles, camera movement, lighting, sound)
- Access, capture, and import a variety of file sources converting file types, if necessary (e.g., audio, video, graphics).
- Arrange video clips, audio clips, titles and still images on timeline
- Manipulate clips (e.g., link/unlink, adjust transparency, set properties, trim, adjust speed/duration)
- Apply special effects, transitions, key frame/motion settings, animations, filters, and text
- Synchronize audio with video
- Apply advanced editing techniques (e.g., split screen format, chromakey, audiopan)
- Evaluate sources for playing completed video (e.g., hardware, software, web applications)
- Apply codec (compression) appropriate for the media delivery .
- Export video for a variety of media outlets (e.g., broadcast, web)
- Author DVD.
- Demonstrate ability to listen/read and follow directions.
- Demonstrate proofreading and spell check of written media.
- Demonstrate appropriate use of grammar while delivering presentations.
- Demonstrate ability to format written communications to include numbers, and punctuation.
- Demonstrate ability to function as a team member.
- Demonstrate ability to research and analyze information from various sources (i.e. written, digital) for use in written or oral presentation.
- Compare copyright and patent laws for multimedia between educational and workplace settings (e.g., video, text, sound, pictures).
- Demonstrate ethical behavior when designing multimedia applications.
- Identify career/self-employment opportunities in multimedia production.
- Exhibit leadership skills through a student organization (e.g., FBLA, PBL).
- Interact with industry professionals (e.g., guest speakers, field trips, job shadowing).
- Use help tools (e.g., technical manual, on-line help, technical support).
- Demonstrate mastery through work samples.
- Acquire and import images from a variety of sources (e.g., scanners, cameras, phones).
- Apply appropriate resolution settings for intended use of image.
- Apply appropriate image mode for intended application (e.g., convert RGB, CMYK, grayscale).
- Compose images using layers and selections.
- Edit images (e.g., color, filter, tint, contrast, brightness).
- Manipulate images (e.g., mask, resize, crop, scale, group/ungroup, zoom, pan).
- Create original artwork using illustrative software.

	<ul style="list-style-type: none"> Identify types of files used in multimedia applications (e.g., .gif, .jpg, .ai, .psd, .png, .avi, .wmv) Develop electronic file management systems (project folders, file naming, etc.). Download files from various sources (e.g., audio, images, video, animation). Convert files to various formats (e.g., .flv to .avi, .mov to .wmv, .psd to .jpg). Utilize storage devices (e.g., CD/DVD, portable storage devices). Manage electronic file storage/transfer (online, Bluetooth, etc.). 																																															
Student's obligation	<p>Student's obligation In the Computer application course is:</p> <ul style="list-style-type: none"> Attendance in the all lectures. One or more quizzes in each course. Exam in end of first course and second course. Preparing and presenting one seminar during the theoretical lectures. 																																															
Required Learning Materials	Basic concepts of the multimedia elements such as images, audio, video...etc.																																															
Evaluation	<table border="1"> <thead> <tr> <th>Task</th> <th>Weight (Marks)</th> <th>Due Week</th> <th>Relevant Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Paper Review</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="6">Assignments</td> <td>Homework</td> <td>5</td> <td></td> </tr> <tr> <td>Class Activity</td> <td>2</td> <td></td> </tr> <tr> <td>Report</td> <td>10</td> <td></td> </tr> <tr> <td>Seminar</td> <td></td> <td></td> </tr> <tr> <td>Essay</td> <td></td> <td></td> </tr> <tr> <td>Project</td> <td></td> <td></td> </tr> <tr> <td>Quiz</td> <td>8</td> <td></td> <td></td> </tr> <tr> <td>Lab.</td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>Midterm Exam</td> <td>25</td> <td></td> <td></td> </tr> <tr> <td>Final Exam</td> <td>40</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100</td> <td></td> <td></td> </tr> </tbody> </table>	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	Paper Review				Assignments	Homework	5		Class Activity	2		Report	10		Seminar			Essay			Project			Quiz	8			Lab.	10			Midterm Exam	25			Final Exam	40			Total	100		
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Specific learning outcome:	<ul style="list-style-type: none"> Student will be proficient in digital imaging, interactive production, audio production. Students should be familiar with current trends in multimedia. Student will understand the relationship between Interactive design and learning theories. Student will have an understanding of meaning and media: the evolution of information across a variety of media types. Students will understand how to draft a business plan. Students will have a base knowledge of business practices as they apply to Multimedia. Students will have the ability to produce work in a team-based environment. 																																															
Course References	<ul style="list-style-type: none"> Bernstein, David (2011) The Design and Implementation of Multimedia Software, Jones and Bartlett Learning , Sudbury, MA. (Order from amazon , order from Barnes and Noble , compare at bigwords , 																																															

- compare at CampusBooks4Less , order from Chegg , or search eFollett)
- Chapman, Nigel and Jenny Chapman (2009) Digital Multimedia, John Wiley and Sons , New York, NY.
 - (Order from amazon , order from Barnes and Noble , compare at bigwords , compare at CampusBooks4Less , order from Chegg , or search eFollett)
 - Fluckiger, F. (1995) Understanding Networked Multimedia, Prentice Hall , London.
 - (Order from amazon , order from Barnes and Noble , compare at bigwords , compare at CampusBooks4Less , order from Chegg , or search eFollett)
 - Kay, D.C. and J.R. Levine (1995) Graphics File Formats, McGraw-Hill , New York.
 - (Order from amazon , order from Barnes and Noble , compare at bigwords , compare at CampusBooks4Less , order from Chegg , or search eFollett)
 - Savage, T.M. and K.E. Vogel (2008) An Introduction to Digital Multimedia, Jones and Bartlett Learning , Sudbury, MA.

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Course topics (Theory)	Week	Learning Outcome
Introduction to Multimedia, Elements of Multimedia	Week 1	
Multimedia and Hypermedia, Internet Technology	Week 2	
Overview of Multimedia Software Tools	Week 3	
Making Multimedia	Week 4	
The stages of Multimedia Project	Week 5	
Multimedia Skills	Week 6	
Graphics in Multimedia Applications	Week 7	
Computer Graphic Mode.	Week 8	
Digital Images	Week 9	
Popular File Formats	Week 10	
Midterm Exam	Week 11	
Image Analysis	Week 12	
Virtual Reality (VR) and VR Applications	Week 13	
Multimedia learning	Week 14	
Final Exam	Week 15	
Practical Topics	Week	Learning Outcome
(Introduction to Adobe Flash), (The very Basics)	Week 1	
(The Pencil , The Pen & Eraser tool),	Week 2	
Working with multiple Layer	Week 3	
(Drawing in Flash Part)	Week 4	
(Moving to some Important Concepts)	Week 5	
(Working With Color - Gradients),	Week 6	
(Designing Complex Shapes)	Week 7	

(Working With the Flash Library), (Working Flash text)	Week 8	
(Importing Graphics), (Importing Graphics into Flash)	Week 9	
(Working With the Flash Animation: Frame by frame)	Week 10	
(Saving, Rendering, and Exporting)	Week 11	
(Controlling the Timeline)	Week 12	
Midterm Exam	Week 13	
(Working With Classic Tweening), (Types of tweening)	Week 14	
Final Exam	Week 15	

Questions Example Design

Q1) Choose the correct or best alternative in the following :

A multimedia files

- A) is same as any other regular file
- B) must be accessed at specific rate
- C) stored on remote server cannot be delivered to its client
- D) none of the mentioned

2- A programmer wants to send a large program as an email attachment and wants compress it. Which of the following is correct?

- A. It does not matter if the file is compressed using lossy or lossless compression.
- B. The file must be compressed using lossless compression or the program will become corrupted.
- C. The file must be compressed using lossy compression or the program will become corrupted.
- D. The file must be not be compressed because any form of compression will cause the program to become corrupted.

3- The GIF image can be transferred over the network in

- A) Interlaced image B) Interlaced mode C) Interchange mode D) Interchange

Solution:

B,B and C

Q2) For each of the following statements, indicate whether it is TRUE or FALSE:

1. Exchange Image File: lossless, Vector Graphics and 8-bit color.
2. A very common image file format in which you can control the amount of lostness. It is best for compressing photographic images. → .pdf (Portable Document Format).
3. A software system that links topics on the screen to related information and graphics → hypermedia

Solution:

FALSE, FALSE and FALSE

Extra notes:

External Evaluator

I confirm that the syllabus given in the attached course book is sufficient and covers the required areas needed for the students.

Dr . Dana Farhad Abdulqadir



Lecturer

20/01/2025