



**Future Academy**  
**Higher Future Institute for Specialized Technological Studies**

**Course Specification**

1- Course information:	
Course Code:	CSC 358
Course Title:	Multimedia
Year/level	3 <sup>rd</sup>
Academic Programs	Computer Science Program (B.Sc.)
Contact hours/ week	(Theoretical 2 hrs – Practical 2 hrs ) Total = 4 hrs

2- Course aims:
<p><b>This Course is designed to:</b></p> <p>Prepare developers and software engineers specialized in digital multimedia technology with awareness of key ethical issues affecting multimedia systems and their responsibilities as multimedia professionals. Produce qualified and well-educated graduates who are knowledgeable in computer systems, hardware and software, and who are able to put their theoretical knowledge into practice by producing large-scale multimedia systems and applications. Expose students to the various components of multimedia systems, and the appropriate tools and techniques to analyze, design, and construct multimedia information systems, such that they are capable to apply multimedia solutions to functional, inter-organizational, operational, managerial, and executive problems and opportunities.</p>

**3- Intended learning outcomes of the course (ILOs):**

**a- Knowledge and understanding:**

**On successful completion of this course, the student should be able to:**

- a1. recognize and appreciate the professional and ethical responsibilities of the practicing computer professional including understanding the need for quality.
- a2. know and understand the principles and techniques of a number of application areas informed by the research directions of the subject, such as artificial intelligence, databases and computer graphics.
- a3. understand the current and underlying technologies that support computer processing and inter-computer communication.

a4. recognize the principles and techniques of a number of application areas informed by the research directions of multimedia.

#### **b- Intellectual skills:**

**On completing this course, the student should be able to:**

- b1. Illustrate a set of alternative solutions for a given problem associated with their results for multimedia systems.
- b2. Select appropriate methodologies and techniques for a given problem solution and setting out their limitations, restrictions and errors for multimedia systems.
- b3. Analyze different solutions using well-defined criteria for multimedia systems.
- b4. Classify methods, techniques and algorithms used in for multimedia systems.

#### **c- Professional and practical skills:**

**At the end of this course, the student will be able to:**

- c1 Use appropriate computer-based design support tools.
- c2 Deploy effective supporting tools to implement and test multimedia systems.
- c3 Apply effective information to learn multimedia programming languages and different supporting tools.
- c4 Use human computer interaction principles in the construction and evaluation of user interfaces for wide ranges of applications for multimedia systems.

#### **d- General and transferable skills:**

**On successful completion of this course, the student should be able to:**

- d1 Display an integrated approach to the deployment of communication skills.
- d2 Use IT skills and display mature computer literacy.

### **4- Course contents**

	Topics/units	Number of hours		ILO's
		Lecture hours	Practical hours	
1)	Introduction to Multimedia and concepts of data representation, lossy and lossless data.	2	2	
2)	Basics of Digital Text, Audio, Image, and Video	2	2	
3)	Text data: concepts, creation, editing	2	2	
4)	Image creation & editing	2	2	
5)	Planning and Costing for Multimedia development projects: scheduling, estimating, RFPs	2	2	

6)	Developing Multimedia: design, creativity, content, team work, etc	2	2	
7)	Editing and authoring tools	2	2	
8)	Mid Term	2	2	
9)	Content and talent acquisition: Content acquisition, ownership and talent acquisition	2	2	
10)	Content Based Media Retrieval	2	2	
11)	Multimedia and Human Computer Interfaces	2	2	
12)	Multimedia project delivery	2	2	
13)	Multimedia project delivery continue	2	2	
14)	Revision	2	2	

## 5- Teaching and learning methods

Methods	ILO's																			
	a 1	a 2	a 3	a 4	a 5	b 1	b 2	b 3	b 4	b 5	c 1	c 2	c 3	c 4	c 5	d 1	d 2	d 3	d 4	d 5
<b>Lectures</b>	√		√			√	√				√	√				√				
<b>Practical sections</b>						√	√				√	√	√	√		√	√			
<b>Self-learning</b>		√			√			√												
<b>Assays and reviews</b>																				
<b>Discussion groups</b>																				

## 6- Teaching and learning methods for Low-achieving students

- Extra teaching hours for those who need help
- More quizzes to assess their ability for understanding the course
- Encourage the team work for those students with other advanced ones to increase their participation and understanding

## 7- Student assessment

Assessment method	Time	Grade weight (%)	ILOs
<b>Written exam</b>		60%	
<b>Practical exam</b>		20%	
<b>Oral exam</b>			
<b>Mid-term exam</b>		10%	

Others		10%	
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## 8- List of references

### 8.1. Student notebooks:

Lecture handouts delivered to students at the end of each lecture.

### 8.2. Essential textbooks:

1. Chapman, Nigel P. Chapman , Digital Multimedia , John wiley ans Sons LTD 2000 .
2. Halsall Fred, Multimedia Communication: Techniques, Standards, and Networks.,Addison wesley 2000.
3. Tay Vaughan, Multimedia: Making It Work, McGraw-Hill, latest edition.

### Recommended textbooks:

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### 8.4. Journals, Periodical and Reports .....etc.

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### 8.5. Websites

**Course Coordinator:** *Assoc. Heba El-Hoseny*

**Head of department:** *Prof. Dr. Yasser F. Ramadan*

**Date of Approval:** 24/7/2024