رانكۆى پۆليتەكنيكى هەولێر
ERBIL POLYTECHNIC UNIVERSITY

(Multimedia Processing) Course Catalogue

2023-2024

College	**Khabat Technical Institute**
Department	**Information Technology**
Module Name	**Multimedia Processing**
Module Code	**MUP302**
Semester	**3rd**
Credit	**6**
Module type	**Core**
Weekly hours	**4**	
Weekly hours (Theory)	**(2) hr Class**	**(55) hr Workload**
Weekly hours (Practical)	**(2) hr Class**	**(95) hr Workload**
Lecturer (Theory)	**Sozan Sulaiman Maghdid**
E-Mail	**sozan.maghdid@epu.edu.iq**
Lecturer (Practical)	**Aram Jawdat Agha**
Email	**aram.agha@epu.edu.iq**

Course Book

- **Course overview:**

     Multimedia Technologies is an indispensable part of modern computing environments. This course will explain the technologies underlying digital images, videos and audio contents, including various compression techniques and standards, and the issues to deliver multimedia content over the Internet.

- **Course objective:**

The course is designed for:

1. Program students who want to broadening their knowledge by including multimedia studies.

2. Visiting program students looking for a foundation from which to pursue advanced topics in multimedia studies.

3. Professional developers who want a technical foundation for developing applications with distributed multimedia components.

4. Networks professionals who needs to manage multimedia delivery service.

- **Student's obligation**
  - Students attending classes regularly.
  - Group work.
  - Doing assignments.
  - Class activities.

- **Forms of teaching**
       Lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters.

- **Assessment scheme**

8% Quiz
5%Homework
2% Activity
10%Semenair
10%Report
10% Project
10%Report Lab

10% Mid. Theory exam

15% Mid. practical exam

20% final practical

20% final theory

- **Specific learning outcome:**

Upon successful completion of this course, you should be able to:

1. Identify the essential features of graphics/image data types, file formats, and color models in images and video.
2. Explain the technical details of multimedia data representations.
3. Perform a comparative analysis of the major methods and algorithms for multimedia data compression.
4. Explain the technical details of popular multimedia compression standards.
5. Configure and manage multimedia content delivery platforms.

- **Course Reading List and References:**

1. **Fundamentals of Multimedia ,** *by Ze-Nian Li and Mark S.Drew , 2004 by Pearson Education International.*
2. **ADOB FLASH PROFESSIONAL CS5 (CLASSROOM IN ABOOK) ,** *The official training workbook from Adob system ,* *www.adobepress.com* .

Course topics (Theory)	Week	Learning Outcome
Multimedia Introduction	1	Identify the essential Elements of multimedia
Text Basics	2	Technical detail of multimedia elements & Manage
Images & Graphics Introduction	3	Technical detail of multimedia elements & Manage
Images & Graphics I	4	Technical detail of multimedia elements & Manage
Color Basics	5	Technical detail of multimedia elements & Manage
Color II	6	Technical detail of multimedia elements & Manage
Audio	7	Technical detail of multimedia elements & Manage
Animation Basics	8	Technical detail of multimedia elements & Manage
Animation I	9	Technical detail of multimedia elements & Manage
Video I	10	Technical detail of multimedia elements & Manage
Video II	11	Technical detail of multimedia elements & Manage

Data compression	12	Analysis of the major methods and algorithms for multimedia data compression.

Course topics (Practical)	Week	Learning Outcome
Introduction. Starting flash ; **Exploring the Flash Screen ;** **Stage and Work Area .**	1	Identify the flash program
Properties window ; **Working with graphics ;** **Timeline .**	2	An application on the program using operating tools
Introduction to motion editor ; **Creating frame and key frame ;** **Giving the shape an action .**	3	An application on the program using operating tools
Creating and working with a text box ; **Using Alignments ;** **Using position and size .**	4	An application on the program using operating tools
Using fill and stroke ; **Testing the scene ;** **Working with symbols .**	5	An application on the program using operating tools
Using snap in an object ; **Object browsing ;** **Using library .**	6	An application on the program using operating tools
Layers Properties.	7	An application on the program using operating tools
Importing movie ; **Sound and image in to library ;** **Using sounds .**	8	An application on the program using operating tools
Creating symbols (Movie Clip) ; **Creating symbols (Graphic) .**	9	An application on the program using operating tools
Creating symbols (Button) ; **Creating button motion (up , over , down , hit) .**	10	An application on the program using operating tools
Giving button an action ; **Giving button a sound ;** **Exporting (swf) or (exe) file .**	11	An application on the program using operating tools
Final project	12	Application of all operating tools of the program to implement a project

- Examinations (question design):

1- Define the following:

Image file size:……………………………………………………………………………

Answer:

(File size is approximately equal to number of pixels * bit depth)

2- *Put the word (**True**) or (**False**) to the following sentences:-*

A (*.png) extension in image is 24 bit images compressed using lossy compression. (……)

Answer:

(False)

3- Fill the spaces for the following sentences:-

The Primary colors consist of (1................**2** ....**3**..............)

Answer:
(Red, Yellow and Blue)

4- *Choose the right answer in the following sentences:-*

If the screen resolution is (1280 * 1024) how much DPI:
a-106.67   b- 105.67   c- 66.67   d-68.67
Answer:
(a)

5- Answer accurately following topics and be brief:

A-Where are used Text elements?
B- What types of thermal colors are used in color schemes?
Answer:

A- Menus for Navigation ; Interactive Buttons ; Fields for Reading ; HTML Documents and Symbols and Icons .

B- The color circle can be divided into warm and cool colors based on the Color Temperature.

- **Extra notes:**

Making the topics covered in the semester compatible with reality of the educational . Covering more than 80% of the prescribed subjects to improve the scientific level of students and preserve the standardization of diploma programs.

- **External Evaluator**

I have been reviewed this course book, its perfect and feet for this subject in the level of institute student, so I have no suggestion.

Didar Rashad Qadir

Assistant Lecture (Khabat Technical Institute) Information technology department

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