Menoufiya University
Faculty of Computers and Information
Department of Computer Science

جامعة المنوفية
كلية الحاسبات والمعلومات
قسم علوم الحاسب

COURSE SPECIFICATION

(MULTIMEDIA)

Programme(s) on which the course is given	IT and CS
Major or Minor element of programs	Major
Department offering the program	Computer Science
Department offering the course	Information Technology
Academic year / Level	4th Year / 1st Semester

A- Basic Information

Title	Multimedia				Code	IT451	
Credit Hours	Lecture	3	Tutorial	-	Practical	3	
	Total				6		

B- Professional Information

1- Overall aims of course

- Understand the mean of multimedia and how to use it.
- Understand each multimedia components formats and processing operation.
- Understand the problems of multimedia sources transmission, and the need to compression.
- Understand the different types of compression.

2- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding

a5 Recognize and appreciate the professional and ethical responsibilities of the practicing computer professional including understanding the need for quality.

a6 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.

b- Intellectual skills

b5 Integrate and evaluate information and data from a variety of sources.

b6 Be creative in the solution of problems and in the development of

designs.

c- Professional and practical skills

c6 Use appropriate computer-based design support tools

c7 Apply computer science skills in a commercial or industrial environment.

d- General and transferable skills

d1 Display an integrated approach to the deployment of communication skills.

d2 Use IT skills and display mature computer literacy.

3- Contents

Topic	No. of Hours	Lecture	Tutorial/ Practical
1 Introduction	9	3	6
2 Digitization Principles • Analog Signals • Encoders and Decoders • Quantization • HTML Language	12	3	9
3 Sound • The Nature of Sound • Digitizing Sound • Quantization • Dithering • Processing Sound • Noise Gate • Compression • Masking • MPEG Audio • MIDI Audio • Sound Waves • RIFF File Structure • Pulse Code Modulation	18	9	9
4 Video • Human Perception of color. • NTSC and PAL Systems • Digital sampling • HDTV format • SIF format • Higher resolution of CIF • QCIF format • Moving pictures • Video Digitization • Video Artifacts • Video Compression • Preparing Video for Multimedia Delivery • Streamed Video & Video Conference	15	9	6
5 Multimedia Communication	21	9	12

Basics • Introduction • Transmission Media • Sources of Signal Impairment • Asynchronous Transmission • Synchronous Transmission • Error Detection Method • Multimedia Editing Softwares			
6 Optical Communication Basics • Introduction • Optical Networks for Multimedia Applications • Types of optical fiber cables • Problems of Optical Networks • Laser compression	3	3	---
7 Animation • Sequence of image files • Animated GIF • key frame animation • Motion graphics • 3-D animation • Hybrid Forms of Animation • Applications	6	6	---
Total number of Hours for the course	**84**	**42**	**42**

4- Teaching and learning methods

4.1 Lectures
4.2 Practical experiments in the laboratory.
4.4 Exercises and tutorials.
4.4 Research assignments.
4.5 Project.

5- Student assessment methods

5-a Methods

5.a.1 Reports, assignments, and exercises to assess knowledge and understanding.
5.a.2 Regular oral, practical and written quizzes to assess intellectual skills.
5.a.3 Practical projects, final practical and oral exams to assess professional skills.
5.a.4 Reports, assignments, and discussions to assess general and transferable skills.
5.a.5 Final written exam to assess knowledge and understanding.

5-b Assessment schedule

Assessment 1	5th week.	Mid term exam
Assessment 2	8th week.	

Assessment 3	10th week.	
Assessment 4	16th week (Oral and practical)	
Assessment 5	17th -18th weeks (final written exam)	

5-c Weighting of assessments

Semester work	10%
Mid-term examination	10%
Oral / Practical examination.	20%
Final-term examination	60%
Total	100%

6- List of references

6-a Course notes

There are lectures notes prepared in the form of a book authorized by the department

6-b Essential books (text books)

None

6-c Recommended books

[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] Fred T. Hofstetter, Patricia Fox ,Multimedia Literacy, McGraw-Hill Companies 1997

6-d Periodicals, Web sites, … etc

http://www.webstyleguide.com/multimedia/applications.html

7- Facilities required for teaching and learning

- Multimedia laboratory prepared to serve the course with computers, Softwares and multimedia devices.
- Digital Multimedia devices like as digital video camera, scanner, digitizers, etc.
- Multimedia Softwares to edit and combine the multi media sources. Data-show, screen, and laptop computer to facilitate the teaching process

Course coordinator:

Dr.Kamel Ali Arram

Head of Department:

Prof. Mohiy M. Hadhoud

Date: / /