University / Academy: Menoufia University

College / Institute: Faculty of Electronic Engineering

Department: Computer Science and Engineering

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Course Specification

1- Course basic information :		
Course Code: CSE 369	**Course Title:** Multimedia and Virtual Reality Systems	**Academic year:** 2011/2012 **Level (3) – Semester : 2**
University requirement	**Teaching hours: Lecture** 3 **Tutorial** 1 **Lab** 2	

2- Aim of the course	
	• To give students a broad grounding in issue surrounding Virtual Reality, Virtual Reality for Education, including VR's devices, systems & application. • To understand and define the multimedia (MM) and the role of & design of MM which incorporate digital audio, graphics and video. • To understand the concepts and representations of sound, pictures and video, data compression and transmission, integration of media, multimedia authoring, and delivery of multimedia.

3- Intended Learning Outcomes:	
A- Knowledge and Understanding:	a2. Basics of information and communication technology (ICT). a3. Characteristics of engineering materials related to the computer science and engineering. a4. Principles of design including elements design, process and/or a system related to specific computer science and engineering. a8. Current engineering technologies as related to computer science and engineering. a15. Principles of Analyzing and design of electronic circuits and components. a16. Related research and current advances in the field of computer software and hardware.
B- Intellectual Skills	b5. Assess and evaluate the characteristics and performance of components, systems and processes. b8. Select and appraise appropriate ICT tools to a variety of engineering problems. b13. Develop innovative solutions for the practical industrial problems.
C- Professional Skills	c1. Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems. c2. Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services. c3. Create and/or re-design a process, component or system, and carry out specialized engineering designs. c13. Design and operate computer-based systems specifically designed for business applications
D- General Skills	d1. Collaborate effectively within multidisciplinary team. d4. Demonstrate efficient IT capabilities. d9. Refer to relevant literatures.
4- Course Contents	Definitions of multimedia - Types of multimedia systems. CD networked etc - Properties and characteristics of individual multimedia components text, speech, image, video - Data transmission, capture, compression, presentation and synchronization - Multimedia Databases, structure organization - Case Studies of multimedia

	applications - Future options for multimedia systems.
5- Teaching and Learning Methods	- Lectures - Tutorials - Laboratory - Research assignments
6- Teaching and Learning Methods for disable students	- NA

7- Student Assessment

a- Assessment Methods	- Weekly Laboratory. - Quizzes. - Mid term, and final exams.
b- Assessment Schedule	- Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no 3 - Mid-Term exam: Week no 8 - Quizz-2: Week no 11 - Lab exam: Week no 14 - Final – term examination: Week no 15
c- Weighting of Assessment	**- Class tutorial and quizzes: 5 %** **- Mid-term examination: 10 %** **- Case study and/or practical exam: 20 %** **- Final – term examination: 60 %** **- Other types of assessment: 5 %** **Total 100 %**

8- List of text books and references:

a- Course notes	Lectures notes prepared in the form of a book authorized by the department.
b- Text books	All the books deal with the topics of MM & VR.
c- Recommended books	• All the Journals, and Magazines, …etc their title deal with any of the following: Multimedia and Virtual Reality. • IEEE Multimedia.
d- Periodicals, Web sites ………etc	All web sites which included all the titles of the course which are mentioned above.

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Definitions of multimedia -	1, 2	a2, a3,a4,a8,	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
Types of multimedia systems. CD networked etc -	3, 4	a2, a3,a4,a8,	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
Properties and characteristics of individual multimedia components text, speech, image, video	5,6	a2, a3,a4,a8,	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
- Data transmission, capture, compression, presentation and synchronization -	7,8	a2, a3,a4,a8, a15,a16	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
Multimedia Databases, structure organization	9,10	a2, a3,a4,a8, a15,a16	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
- Case Studies of multimedia applications	11.12	a2, a3,a4,a8, a15,a16	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9
- Future options for multimedia systems.	13,14	a2, a3,a4,a8, a15,a16	b5,b8,b13	c1,c2,c3,c13	d1,d4,d9

Course coordinator: **Head of Department:**

Dr. Ehab Aziz Khalil   **Prof. Dr. Nawal El-Feshawy**

Date: /   / 2012

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