Course Specifications

Course Title:	**Multimedia Technology**
Course Code:	**IT 321**
Program:	**Computer Science & Information**
Department:	
College:	
Institution:	

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A. Course Identification

1. Credit hours: **3 (2+2)**
2. Course type **a.** University ☐ College ☐ Department ■ Others ☐ **b.** Required ■ Elective ☐
3. Level/year at which this course is offered: 10th
4. Pre-requisites for this course (if any)**:** CSI 425
5. Co-requisites for this course (if any)**:** Nil

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**		80%
2	**Blended**		10%
3	**E-learning**		10%
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	
Other Learning Hours*		
1	**Study**	
2	**Assignments**	
3	**Library**	
4	**Projects/Research Essays/Theses**	
5	**Others** (specify)	
	Total	

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course covers the design and implementation of the technologies used to implement interactive multimedia applications such as streaming video playback, video conferencing, interactive television, video editing, and hypermedia authoring. Fundamentals of human perception, digital media representations, compression and synchronization are covered. Implementation technologies including hardware architectures for media processing (e.g., processor, bus, and input/output devices), OS support, multimedia systems services, network architectures and protocols, and distributed programming services are also discussed.

2. Course Main Objectives:

- **Introduction and Usage of Multimedia:**
  Define the Multimedia technology and the broad foundation of multimedia and human-computer interaction that defines the root and usage of Multimedia
- **Interaction Technologies and Devices:**
  The study of the interactive technologies and devices that is essential for multimedia design.
- **Compression Technologies for Multimedia:**
  lossless and Lossy Compression i.e. JPEG compression and Huffman coding, Learning the basis of compression algorithms that have made multimedia possible.
- **Multimedia in the form of Text, graphs, Images, Audio, video:**
  Understanding the type of multimedia that is prevalent today. Almost used in each application i.e. from engineering to economics.
- **Computer Graphics and Image Editing:**
  The basics of Computer Graphics and Image editing are taught in this module.
- **Audio-Visual Media: Video and Animation:**
  The production and use of works that involved audio and video. 2D and 3D animations and movies.
- **Multimedia Design:**
  Introduced to using adobe flash to make animations and program them using action script.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Understand possible uses and applications of multimedia.	
1.2	Understand the basic forms of multimedia contents including digital images, audio, video, animations etc.	
1.3	Understand the basic tools and technologies that are involved in Multimedia Design.	
1.4	Explain the core issues that are involved in Multimedia Design.	
2	**Skills :**	
2.1	Design and implement multimedia contents in various forms. Be able to design and generate animations.	
2.2	Work in a group and learn time management. Learn how to search for information through the library and the internet.	
2.3	Present a short report in a written form and orally using appropriate	

CLOs		Aligned PLOs
	scientific language.	
3	**Competence:**	
3.1	Communicate with the teacher, ask questions, solve problems, and use computers. Use Information technology and computer skills to gather information about a selected topic.	
3.2	Operate questions during the lecture, work in groups, and communicate with each other and with me electronically, and periodically visit the sites I recommended.	

C. Course Content

No	List of Topics	Contact Hours
1	Introduction and Usage of Multimedia.	6
2	Interaction Technologies and Devices.	6
3	Compression Technologies for Multimedia.	6
4	Multimedia in the form of Text, Images, Audio and video.	6
5	Computer Graphics and Image Editing.	6
6	Audio-Visual Media: Video and Animation.	6
7	Multimedia Design.	6
Total		42

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Understand possible uses and applications of multimedia.	- Lectures - Lab demonstrations - Case studies -Individual presentations	- Written Exam - Homework assignments - Lab assignments - Class Activities - Quizzes
1.2	Understand the basic forms of multimedia contents including digital images, audio, video, animations etc.		
1.3	Understand the basic tools and technologies that are involved in Multimedia Design.		
2.0	**Skills**		
2.1	Explain the core issues that are involved in Multimedia Design.	- Lectures - Lab demonstrations - Case studies -Individual presentations	-Written Exam -Homework assignments -Lab assignments -Class Activities -Quizzes
2.2	Design and implement multimedia contents in various forms.		
2.3	Be able to design and generate animations.		
3.0	**Competence**		
3.1	Work in a group and learn time management.	- Small group discussion -Whole group	-Homework assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.2	Learn how to search for information through library and internet.	discussion -Brainstorming Presentation	-Lab assignments -Class Activities -Quizzes
3.3	Present a short report in a written form and orally using appropriate scientific language.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Communicate with teacher, ask questions, solve problems, and use computers.	-Small group discussion -Whole group discussion -Brainstorming Presentation	-Written Exam -Homework assignments -Lab assignments -Class Activities -Quizzes
4.2	Use Information technology and computer skills to gather information about a selected topic.		
4.3	Operate questions during the lecture, work in groups, and communicate with each other and with me electronically, and periodically visit the sites I recommended.		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First written mid-term exam	6	15%
2	Second written mid-term exam	12	15%
3	Presentation, class activities, and group discussion	Every week	10%
4	Homework assignments	After every chapter	10%
5	Practical exam	15	10%
6	Final written exam	16	40%
7	**Total**		100%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

1. 6-office hours per week in the lecturer schedule.
2. The contact with students by the following E-mail address:

fatma_harby@yaho.com

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	McGloughlin, Multimedia Concepts and Practice, Prentice Hall , 2001.
Essential References Materials	Katherine Ulrich, Macromedia Flash MX 2004 for Windows and Macintosh: Visual Quick Start Guide, Peachpit Press, 2003

Electronic Materials	https://www.coursera.org/
Other Learning Materials	Video and presentations that are available with the instructor.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- Class Rooms - Computer Labs - Library
Technology Resources (AV, data show, Smart Board, software, etc.)	- Smart Board, projector, internet, and whiteboard.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	None

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Student Feedback on Effectiveness of Teaching	-Analysis of student's results. -Observation during work. -Students evaluations. -Colleagues evaluations. -Evaluation questionnaire filled by the students. -Interview a sample of students enrolled in the course to take their opinions.	
Other Strategies for Evaluation of Teaching by the Program/Department Instructor	- Self-assessment. - External evaluation. - Periodic review of course (the Commission of study plans).	
Processes for Improvement of Teaching	-Taking into account the recommendations yielded from the internal review of the course. -Guidelines about course teaching provided by the by study plans commission. -Department Guidelines about faculty member performance on the basis of direct observation. -Training and development. -Workshops to improve the educational process.	

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Processes for Verifying Standards of Student Achievement	Instructors of the course working together with Head of Department to adopt a unique process of the evaluation.	
Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement	-Comparison of the course to its counterparts offered in similar departments. - Periodic revision of course description by faculty member. - Periodic revision of course description by the study plans and schedules Commission. -Update learning resources related to the course to ensure that the course is kept up with developments in the field. -Make use of statistical results of course evaluation made by students to improve and develop the course. -Giving the opportunity for students to express their opinions about what is taught and receive suggestions and study their effectiveness.	

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	