Course Specification
(Bachelor)

Course Title:	MULTIMEDIA APPLICATION
Course Code:	ITEC-241
Program:	Bachelor In Information Technology (BIT)
Department:	Information Technology & Security
College:	College of Engineering & Computer Science
Institution:	Jazan University
Version:	1
Last Revision Date:	20 August 2024

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A. General information about the course:

1. Course Identification

1. Credit hours: (3)

2. Course type

A.	☐University	☐College	■Department	☐Track	☐Others
B.	■Required		☐Elective		

3. Level/year at which this course is offered: (6/ 2nd)

4. Course general Description:

This course is designed to provide the fundamental concepts and techniques of multimedia system components e.g., text, image, sound, animation, and video. Some of the key areas covered by the course are: Multimedia authoring tools, hypertext and hypermedia content creation and delivery, media representations, user interfaces design and development, multimedia skills, animation principle, multimedia project requirements planning, costing, designing, and producing, and recent trends in multimedia. The techniques and tools for producing, designing, and implementing interactive multimedia applications will also be covered. Students will be trained on a range of authoring, editing, and scripting tools for multimedia development.

5. Pre-requirements for this course (if any)**:**

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6. Co-requisites for this course (if any)**:**

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7. Course Main Objective(s):

- **Understand fundamental multimedia building blocks, including Text, Image, Sound, Animation and Video.**
- **Develop the skills required for producing, editing and integrating the multimedia elements using authoring tools.**
- **Create interactive applications, through programming or scripting, particularly for the Web.**

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	64	100%
2	E-learning	NA	

No	Mode of Instruction	Contact Hours	Percentage
3	Hybrid • Traditional classroom • E-learning	NA	
4	Distance learning	NA	

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	NA
4.	**Tutorial**	--
5.	**Others (specify)**	04
Total		64

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods	SOs	PIs
1.0	**Knowledge and understanding**					
1.1	**Understand** the basic concepts of multimedia elements (text, image, audio, video, and animation) and its uses.	K1	• Lectures/ Presentations Media Lecture	Midterm Exam, Assignment, Final Exam	SO 1	PI 1.1
1.2	**Identify** different areas of applications, authoring tools, and terminology in recent multimedia production.	S1	• Lectures/Presentations Media Lecture	Midterm Exam, Assignment, Final Exam	SO 1	PI 1.3
2.0	**Skills**					
2.1	**Explain** various types of multimedia building blocks and its practices in multimedia design.	S1	• Lectures/Presentations Media Lecture	Midterm Exam, Final Exam	SO 2	PI 2.1
2.2	**Develop** skills for selecting and applying	S2	• Lectures/Presentatio	Final Lab, Final Exam	SO 1	PI 1.3

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods	SOs	PIs
	right tools and devices in multimedia production.		ns • Media Lecture • Lab Demonstration			
2.3	**Design** multimedia rich elements and interactive applications through programming or scripting language, particularly for the Web.	S2	• Lectures/Presentations • Media Lecture • Lab Demonstration	Mini-Project, Final Lab, Final Exam	SO 2	2.3
3.0	**Values, autonomy, and responsibility**					
3.1	**Demonstrate** the ability to communicate basic and technical multimedia skills in oral and written form.	V1	• Mini Project	Mini Project	SO3	PI 3.1, PI 3.2

C. Course Content

No	List of Topics	Contact Hours
1.	**Chapter – 1: Introduction to Multimedia** a) What is multimedia? b) Multimedia Types, Terminologies c) Multimedia Authoring Tools, Types of Authoring Tools d) Where to use multimedia? e) Virtual Reality	**3**
2.	**Chapter – 2: Text** a) Importance of using Text in Multimedia b) About Fonts and Faces c) Terminologies-Text & Font d) Choosing Text Font e) Character Sets and Alphabets f) Font Editing and Designing Tools g) Hypertext h) Searching for Word i) Hypermedia Structure	**4**
3.	**Chapter – 3: Images** a) Making Still Images b) Bitmap c) Bitmap Sources	**6**

	d) Bitmap Software e) Vector Drawn f) Vector Drawn VS Bitmap g) Conversion of Bitmap & Vector Drawn h) Color : Computerized Colors i) Methods of Making Colors j) Color Models k) Color Palettes l) Dithering Process m) Image File Formats	
4	**Chapter – 4: Sound** a) Digital Audio b) Quantization Vs Clipping c) Making Digital Audio Files d) Editing Digital Recording e) File Size vs. Quality f) MIDI Audio g) MIDI vs. Digital Audio h) Audio File Formats i) Adding Sound to Your Multimedia Project	**6**
5	**Chapter – 5: Video And Animation** a) Analog Video b) Analog Video Broadcast Standards c) Digital Video d) MPEG, Digital Video Containers, Codec e) Shooting & Editing Video, Chroma Keys f) What is Animation? g) Animation by Computer h) Animation Techniques i) Kinematics & Inverse Kinematics j) Animation File Formats	**6**
6	**Chapter – 6: Making Multimedia- Stages of MM Project And Multimedia Skills** a) The Stages of a Multimedia Project b) Multimedia Skills (Team)	**3**
	REVISION	**2**
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignment	**Week-5**	**10%**

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
2.	Midterm Exam (Chapter-1 and 2)	Week-7,8	15%
3.	Mini-Project	Week-12	15%
4.	Lab Assignment	Week-10	10%
5.	Final Lab Exam	As Scheduled	10%
6.	Final Theory Exam	As Scheduled	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	• Elements of multimedia, 1st Edition By Banerjee, Sreeparna , CRC Press, 2019, ISBN: 9780429433207 • Fundamentals of multimedia, 3rd Edition by Ze-Nian Li, Mark S. Drew, Jiangchuan Liu, Springer, 2021, ISBN: 9783030621230
Supportive References	
Electronic Materials	https://lms.jazanu.edu.sa/webapps/login
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	One lecture room for each section (maximum 25 students at a time) Each Lab should be equipped with minimum of 25 computers.
Technology equipment (projector, smart board, software)	Projector, Smart Board GIMP Software Synfig Studio
Other equipment (depending on the nature of the specialty)	High speed Internet Connection

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Indirect
Effectiveness of Students assessment	Faculty	Direct
Quality of learning resources	Track Leader	Direct

Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	HOD/ QAU	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	DEPARTMENT COUNCIL
REFERENCE NO.	ENGCSCS2406
DATE	19/09/2024