Course Specification
(Bachelor)

Course Title:	**Multimedia Information Systems**
Course Code:	**434CIS-3**
Program:	Information Systems
Department:	**Information Systems Department**
College:	College of Computer Science and Information Systems
Institution:	**Najran University**
Version:	*Course Specification Version Number*
Last Revision Date:	*Pick Revision Date.*

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
3 (2, 1, 0) [Theory, Lab, Tutorial]					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level 7/ Year 4)					
4. Course General Description:					
This course introduces multimedia concept, multimedia information system, multimedia components such as graphics, image, text, video, sound and animation. Calculation of storage size of image ,audio and video with different colour black & white, colour map or gray scale and true color, and interested in digital media, read on to discover career and education opportunities available in this growing specialty, Compression, Optical Memory Media, Programming, Resources and Quality of Service, Media Server, Documents, Semantics (Ontology and Metadata), Synchronization, Design, Application, Learning, and User Interfaces					
5. Pre-requirements for this course (if any)**:**					
6. Co-requisites for this course (if any)**:**					
7. Course Main Objective(s):					
To introduce the concepts of multimedia, Multimedia Information System and to understand how Multimedia Information System is affecting Labor marking , business enterprises , governments, consumers, and people in general.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	75	100%
2	E-learning		
3	Hybrid		

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

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	15
5.	**Others (specify)**	
Total		75

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Define Multimedia Information System, devices ,applications ,authoring , Data compression ,Quality of Service , and multimedia network.**	**K1**	**Class lectures (Showing and delivering PPT presentation in the class), and lecture notes, are designed to achieve the course objectives.**	**Quiz ,midterm exam ,Final exam**
1.2				
2.0	**Skills**			
2.1	**Calculate storage size of image ,audio and video**	**S1,S4**	**Class lectures (Showing and delivering PPT presentation in**	**Quiz ,midterm exam ,Final exam ,Practical and lab**

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
			the class), and lecture notes, are designed to achieve the course objectives.	assessment, Final lab exam Project
2.2	Solve simple compression using Huffman Coding Algorithm	S2 , S4	Class lectures (Showing and delivering PPT presentation in the class), and lecture notes, are designed to achieve the course objectives.	Quiz ,midterm exam ,Final exam ,Practical and lab assessment, Final lab exam Project
2.3	Create Macromedia Flash, animations and learning interactions	S1 , S2 , S4	Class lectures (Showing and delivering PPT presentation in the class), and lecture notes, are designed to achieve the course objectives.	Quiz ,midterm exam ,Final exam ,Practical and lab assessment, Final lab exam Project
3.0	**Values, autonomy, and responsibility**			
3.1	Develop leadership and teamwork skills in the implementation of the concept of multimedia in small project.	V1,V2	• Class lectures(Showing and delivering PPT presentation in the class). • Labs • Showing software installation during lab • Group discussion	Create Macromedia Flash, animations and learning interactions
3.2	Appraise the self-learning and judgement skills	V3	• Class lectures(Showing and	Create Macromedia Flash,

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
	regarding professional behavior and immoral practices.		**delivering PPT presentation in the class).** • **Labs** • **Showing software installation during lab** • **Group discussion**	**animations and learning interactions**
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Multimedia Technology	4 Hrs
2.	Multimedia system, Multimedia Components	4 Hrs
3.	Graphic and image Data Representation	4 Hrs
4.	Multimedia Data Basics	6 Hrs
5.	Type extensions of (Image , Video , Audio)	6 Hrs
6.	Data Compression Method and Classification	8Hrs
7.	Apply run_lingth coding and huffman coding	7 Hrs
8.	Compression presentation and Method (image ,Audio ,Video)	6 Hrs
9.	ATM Network and QoS	6 Hrs
10.	Multimedia Authoring Concepts and Tools	6 Hrs
Total		**75**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	**Quizzes**	**TBA**	**10%**
2.	**Assignments**	**3th week**	**5.5%**
3.	**Mid Term Exam-I**	**6th week**	**20%**
4.	**Mid Lab Exam and Lab Report**	**TBA**	**8.5%**
5.	**Project/Presentation/Research**	**TBA**	**6%**
6.	**Final Lab Exam**	**11th week**	**10%**

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
7.	Final Exam	12th and 13th week	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	R. Steinmetz; K. Nahrstedt: Fundamentals of Multimedia, Vol. 1: Media Coding and Content Processing. Prentice Hall: 2021 ISBN : 978-3-030-62123-0
Supportive References	•R. Steinmetz; K. Nahrstedt: Fundamentals of Multimedia, Vol. 1: Media Coding and Content Processing. Prentice Hall: 2016, ISBN: 0-13-031399-8 •Prabhat K. Andleigh, Kiran Thakrar ,Multimedia Systems Design, lasts editions •N. Chapman; J. Chapman: Digital Multimedia. (2nd ed.), Wiley 2004, ISBN: 0-470-85890-7. •K. R. Rao; Z. S. Bojkovic; D. A: Milovanovic: Multimedia Communication Systems: Techniques, Standards, and Networks. Prentice Hall 2002, ISBN: 0-13-031398-X Pete Bettinger, Michael G Wing, latest edition, Geographic Information System 2003
Electronic Materials	R. Steinmetz; K. Nahrstedt: Fundamentals of Multimedia, Vol. 1: Media Coding and Content Processing. Prentice Hall: 2020, ISBN: 0-13-031399-8
Other Learning Materials	R. Steinmetz; K. Nahrstedt: Fundamentals of Multimedia, Vol. 1: Media Coding and Content Processing. Prentice Hall: 2016, ISBN: 0-13-031399-8

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	ClassRoom & Laboratory
Technology equipment (projector, smart board, software)	data show multimedia system , PCs Headset and Microphone system.
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of Students assessment	Instructor	Direct
Quality of learning resources	Instructor	Indirect
The extent to which CLOs have been achieved	Program Leaders	Direct, Indirect
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	17th Department Council
REFERENCE NO.	14460810-0976-00017
DATE	10/02/2025