Course number and name: 440CIS-3 Multimedia Technology

Credits and contact hours: 3 crs.; 5hrs (2hrs theory, 2hrs Lab and 1 hr. Tutorial)

Instructor's or Course Coordinator's name: Shah Musad

Text book, Title, Author, and Year: R. Steinmetz; K. Nahrstedt: Fundamentals of Multimedia, Vol. 1: Media Coding and Content Processing. Prentice Hall: 2002, ISBN: 0-13-031399-8
Tay Vaughan Multimedia Making It Work New York Chicago San Francisco Lisbon London 2010

e. **Supplemental Materials:**
- 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

Specific Course Information

f. **Catalog Description:** This course introduces multimedia Concept, multimedia components such as graphics, image, text, video, sound and animation. Ability to Calculate 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. Introduction of Geographical information System GIS

g. **Pre-requisites or Co-requisites: None**

h. **Required, Elective, or Selected elective:** Required

Specific Goals for the Course

b. **Specific Outcomes of the Instruction:**
- Understand basic multimedia concepts, devices ,applications, authoring compression , Quality of Service ,Multimedia network and GIS concept the current trends in multimedia
- Calculate storage size of image ,audio and video (Black and white, color map or gray scale and true color)
- Solve simple compression using Huffman coding Algorithm
- Create Macromedia Flash, animations and learning interactions
- Apply the leaned concept of multimedia in small project**.**

c. Students Outcomes Addressed by the Course: a, b, c, i, j, k

Brief List of Topics to be Covered
- Introduction to Multimedia Technology
- Multimedia system ,Multimedia Components
- Multimedia Data Basics
- Graphic and image Data Representation and file extensions
- Compression Using Run-length and Haffman Code
- Compression presentation and Method (image ,Audio ,Video (
- ATM Network and QoS 2
- Data Access (DSL ,Mobile Telecommunication (1G,2G,3G…..5G))
- Optimal Memory – Media Server
- Multimedia Authoring Concepts and Tools 2
- Access Networks and Techniques (UMTS(
- Software throw server / Client and concept of GIS and GPS