**COM 429:       MULTIMEDIA TECHNOLOGIES**

**CONTACT HOURS: 4HRS**

**1.0 COURSE PURPOSE**

To equip learner with a comprehensive understanding with multimedia standards, tools and systems; extensive practices from multimedia capturing, processing, transmitting, content representing to retrieval.

**2.0 COURSE LEARNING OUTCOMES**

At the end of the course, the learner should be able to:

(a)    Students will be able to gain valuable hands-on experience in multimedia production and design.

(b)   Handle Issues in effectively representing, processing, and retrieving multimedia data will also be addressed

(c)    Describe multimedia standards and related human issues

(d)   Analyze a computer system and relate to multimedia applications.

(e)    Design and implement a multimedia application of moderate complexity

(f)     Build a solid background in multimedia for your academic researches or industrial applications.

**3.0 COURSE CONTENT**

Introduction to Multimedia Technology- Computers, communications and entertainment. Framework for multimedia systems; Multimedia devices; presentation devices and the user interface, Multimedia presentation and authoring. Digital representation of sound and transmission; Brief survey of speech recognition and generation; Digital video and image compression; JPEG image compression standard. MPEG motion video compression; DVI technology; Time-based media representation and delivery. Multimedia software environments; Limitations of workstation operating systems; Multimedia system. OS support for continuous media application; Media stream protocol; Multimedia file systems and information representation; Data models for Multimedia and Hypermedia information. Application of Multimedia intelligent Multimedia System. Desktop VR; reality OS; Distributed virtual environment system; Virtual environment displays and orientation tracking; Visually coupled system requirements; Intelligent VR software systems. Application of environments in various fields, such as medical, entertainment manufacturing, business, education.

**4.0 LEARNING AND TEACHING METHODOLOGY**

Lectures, Tutorials and Laboratory Exercises

**5.0. INSTRUCTIONAL MATERIAL AND EQUIPMENT**

Audio-visual’s devices, computers/internet services, journals, newspapers, chalk/pens and white boards, flip charts and learning centers.

**6.0 COURSE ASSESSMENTS**

The course will be assessed as follows:

Continuous Assessment Tests                                    20%

Practical Based Assessment                                       10%

Final Examination                                                      70%

TOTAL                                                                       100%

**6.0 COURSE TEXTBOOK AND JOURNAL**

**i.**            Li, Z & Drew, M.S. “Fundamentals ***of Multimedia”*** Pearson-Prentice Hall, 2004.

**7.0 RECOMMENDED TEXTBOOKS AND JOURNAL FOR FURTHER READING**

                                i.            Vaughan, T. “Multimedia ***Making It Work***“6th Edition, Osborne-McGraw Hill, 2003.

                              ii.            Weinmann, E. & Lourekas, P. “***Photoshop CS2 For Windows & Macintosh: Visual Quickstart Guide***”, Peachpit Press, 2005.

                            iii.            Mennenoh, D. “***Macromedia Director MX 2004: Training from The Source***”, Macromedia Press, 2005.