ITEM	DETAILS	
1. Title of subject	MULTIMEDIA SYSTEMS	
2. Subject code	STC205	
3. Status of subject	Core	
4. Stage	Year 2	
5. Credit Hour	4	
6. Pre-Requisite	STC101 Multimedia	
7. Assessment	**Coursework: 40%** Project – 20% Test 1 – 10% Test 2 – 10% **Final Examination: 60%**	
8. Semester	Semester 2	
9. Objective of subject	To enable students to: ▪ Provide fundamental detail about system, application, component, hardware and multimedia software. ▪ Understand development of multimedia technology and current issues. Understand the development process and implementation of multimedia application and project management process. ▪ Use multimedia authoring tools and other media development software package.	
10. Synopsis of subject	This course is aimed to provide fundamental knowledge about multimedia systems, multimedia applications, multimedia components, and multimedia hardwares and softwares. Students will be exposed to the multimedia technology, the process of multimedia system development and current issues in the multimedia technology. Implementations, developments and project management of a multimedia system will be introduced.	
11. Details of subject	**Contents**	**Hours**

Week 1 and 2	**Topic:** 1. **INTRODUCTION TO MULTIMEDIA & MULTIMEDIA DEVELOPMENT PROCESS** • Background • Components & system types • Multimedia system applications. • Requirements • Latest Multimedia technology • Development teams • Methodology • Planning & preparing proposal	8
	Learning Outcomes: At the end of the lessons, students will be able to: ▪ Understand how to use latest Multimedia Technology ▪ Demonstrate the understanding of multimedia and multimedia development process.	
	Further reading for this lesson: Vaughan. (2004). Chapters 1, 2, 3 & 15. Adobe Photoshop. (2004). Lessons 1-11.	
Week 3 and 4	**2. ANALYSIS & DESIGN** • Audience analysis • Content acquisition • Script preparation • Script, • Story boarding • Design consideration • Interface design (HCI) • Metaphor • Navigation • Interactivity	8
	Learning Outcomes: At the end of the lessons, students will be able to: ▪ Demonstrate the understanding of analysis and design of multimedia systems	
	Further reading for this lesson: England & Finney. (2002). Chapters 6-9. Elsom-Cook. (2001). Chapters 4, 5, 6, 12. Adobe Photoshop. (2004). Lessons 12 & 13. Dehaan. (2004). Lessons 1-4.	
Week 5	**3. IMPLEMENTATION & PRODUCTION** • Hardwares • Softwares • Implementation & Testing	4

	Learning Outcomes: At the end of the lesson, students will be able to: ▪ Demonstrate the understanding of implementation & production of multimedia systems.	
	Further reading for this lesson: Vaughan. (2004). Chapters 9, 10, 11, 18. Dehaan. (2004). Lessons 5, 6, 7.	
Week 6	**4. EVALUATION, DELIVERY & PRODUCTION**	4
	Learning Outcomes: At the end of the lesson, students will be able to: ▪ Demonstrate the understanding of evaluation, delivery and production of the multimedia product.	
	Further reading for this lesson: England & Finney. (2002). Chapter 17. Dehaan. (2004). Lessons 8, 9, & 10.	
Week 7 and 8	**5. MULTIMEDIA BUIDING BLOCKS** • Texts, Texts in multimedia • Fonts & Typefaces • Hypertexts & hypermedia • Integrations of text in system • Graphics • Bitmaps vs vector • 2D,3D • Colour • Graphic Format, Integrations of graphics in system	8
	Learning Outcomes: At the end of the lessons, students will be able to: ▪ Demonstrate the understanding of multimedia building blocks such as tests, hypertexts & hypermedia, graphics etc.	
	Further reading for this lesson: Vaughan. (2004). Chapters 4 & 6. Dehaan. (2004). Lessons 11, 12, & 13.	

Week 9 and 10	**6. MULTIMEDIA BUIDING BLOCKS** • Audio • Audio multimedia system • Digital Audio, MIDI Audio • Audio Format, Integrations of audio in system • Animation, Animation principle • Types of animations, Integrations of animation in system • Video, Analog Video, Digital Video • Format & compression • Integrations of video in system	8
	Learning Outcomes: At the end of the lessons, students will be able to: ▪ Understand different types of mulitimedia building blocks such as audio, animation, video etc.	
	Further reading for this lesson: Vaughan. (2004). Chapters 7 & 8. Adobe Premier.	
Week 11	**7. IMAGE, AUDIO & VIDEO COMPRESSION** **Data representation Compression techniques:** • Entrophy Coding ▪ Run-length encoding ▪ Repetition Suppresion ▪ Pattern substitution ▪ Huffman coding • Source Encoding ▪ Transform encoding ▪ Differential encoding ▪ Vector quantization	4
	Learning Outcomes: At the end of the lesson, students will be able to: ▪ Understand data compression techniques ▪ Understand entropy coding and source encoding.	
	Further reading for this lesson: Raghavan & Tripathi. (1998). Chapters 2 & 3. Adobe Photoshop. (2004). Lesson 17-20.	
Week 12	**8. MULTIMEDIA SYSTEM TECHNOLOGY** • Storage I/O devices & interface • RAID Technology • Others storage technology - CD, etc	4
	Learning Outcomes: At the end of the lesson, students will be able to: ▪ Understand RAID Technology. ▪ Use different storage devices for multimedia systems.	

	Further reading for this lesson: Raghavan & Tripathi. (1998). Chapter 4.	
Week 13 and Week 14	**9. MULTIMEDIA SYSTEM ARCHITECTURE** • Multimedia system components • Multimedia system architecture • Multimedia system Taxonomy • Scheduling • Synchronization	8
	Learning Outcomes: At the end of the lessons, students will be able to: ▪ Understand multimedia system components and architecture. ▪ Differentiate between components and architecture of multimedia systems.	
	Further reading for this lesson: Raghavan & Tripathi. (1998). Chapters 7-12.	
	Total	56

12. Text	**Compulsory**	Vaughan, T. (2004). *Multimedia Making It Work* (6th ed.). McGraw-Hill Raghavan, S. V., & Tripathi, S. K. (1998). *Networked Multimedia Systems: Concepts, Architecture, and Design*. Prentice Hall. England, E., & Finney, A. (2002). *Managing Multimedia Project Management for Interactive Media, Book 1 & Book 2* (3rd ed.). Addison – Wesley.
	Reference	Elsom-Cook. (2001*). Principles of Interactive Multimedia*. McGraw-Hill. Dehaan, J. (2004). *Macromedia Flash MX 2004 Training from the Source*. Macromedia Press. Adobe Photoshop. (2004). *CS – Classroom in a Book*. Adobe Press.