



UNIVERSITI TEKNOLOGI MARA

CSC441: MULTIMEDIA TECHNOLOGY & APPLICATIONS

Course Name (English)	MULTIMEDIA TECHNOLOGY & APPLICATIONS APPROVED
Course Code	CSC441
MQF Credit	3
Course Description	Multimedia presentation has become essential tools in business, training and education. Multimedia development involves various types of media which are based on traditional methods as well as incorporating the newer forms of digital techniques and digital technology. In almost every multimedia product, there are aspects of traditional inputs which can provide guidelines but sometimes these traditional persuasions can hinder innovative needs in the methodology and approaches in the aspect of design and implementation. The course is intended to provide an integrated foundation from the historical perspective, the technologies involved, forms of media representation and the techniques available for usage on the various media involved. The subject also offers a thorough overview of multimedia which includes systems of representation, technical issues, information design and recent advances in multimedia technology.
Transferable Skills	<ul style="list-style-type: none">- Critical Thinking and Problem Solving Skills- Communication Skills- Teamwork Skills- Information Management and Life Long Learning
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Identify and use various multimedia elements and equipment. CLO2 Demonstrate the various technological issues involved in the use of various media CLO3 Organize a multimedia project.
Pre-Requisite Courses	No course recommendations
Topics	
1. Overview of Multimedia Computing 1.1) Historical Context & Terminology- 1.2) Delivery 1.3) Non-linearity & Interactivity 1.4) Social and Ethical Considerations 1.5) Enabling Technologies	
2. Elements of Multimedia 2.1) Text - Character Sets, Fonts, Text in Graphics, Layout, Text Layout using HTML & CSS 2.2) Graphics - Vector Graphics & Bitmapped Graphics, Combining Vectors & Bitmaps, Layers & File Formats, Vector Graphics, Fundamentals, Shapes, Transformation & Filters, 3D Graphics 2.3) Bitmapped Images, Resolution, Image Compression, Image Manipulation, Geometrical Transformation, Colour, Colour & Science, RGB Colour, Other Colour Models, Channels & Colour Correction, Consistent Colour 2.4) Sound - The Nature of Sound, Digitizing Sound, Processing Sound, Compression, Formats, MIDI, Combining Sound & Picture 2.5) Animation - Captured Animation & Image Sequences, 'Digital Cel' & Sprite Animation, Key Frame Animation, Web Animation & Flash, Motion Graphics, 3D Animation, Virtual Reality 2.6) Video - Digitizing Video, Streamed Video, Video Standard, Introduction to Video, Compression, Quick Time, Editing & Post-Production	

3. Multimedia Design & Development Process

- 3.1) Structure & Navigation in Hypermedia
- 3.2) Non-linear Time-Based Structures
- 3.3) Design Problems of the WWW
- 3.4) Accessibility
- 3.5) Web Design Issues
- 3.6) Conservatism & Progress

4. Multimedia Environment, Hardware & Applications

- 4.1) 1. Multimedia domain and areas of use
- 4.2) 2. Multimedia development and system support tools
- 4.3) 3. Multimedia applications

5. Multimedia Authoring Tools and Software

- 5.1) 1. Introduction to Multimedia Authoring Tools
- 5.2) 2. Types of Authoring Tools - Icon, Card, Time based
- 5.3) 3. Cross Platform

6. Multimedia and the Internet

- 6.1) 1. Internet History
- 6.2) 2. Multimedia and the Web
- 6.3) 3. Developing Multimedia for the Web
- 6.4) 4. Text, Image, Animation, Audio and Video for the Web

7. Practical Sessions

- 7.1) Adobe Photoshop
- 7.2) Adobe Premiere
- 7.3) Sound Edit / MIDI Sequencer / Sound Forge XP
- 7.4) Infini-D, etc
- 7.5) Macromedia Director / Macromedia Flash

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1 (10%) to assess knowledge in multimedia elements	10%	CLO1
	Assignment	Assignment 2 (10%) to assess critical thinking in various technological issues	10%	CLO2
	Assignment	Assignment 3 (10%) to assess interpersonal skill in organizing a multimedia project	10%	CLO3
	Final Test	Final Test (20%) to assess critical thinking in various technological issues	20%	CLO2
	Group Project	Group Project (40%) to assess interpersonal skill in organizing a multimedia project	40%	CLO3
	Quiz	Quiz (10%) to assess knowledge in multimedia elements	10%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> • Tay Vaughan 2014, <i>Multimedia: Making It Work, Ninth Edition</i>, 9 Ed., 13, McGraw-Hill Education [ISBN: 0071832882] • Barbara Barbosa Neves, Frank Vetere 2019, <i>Ageing and Digital Technology</i>, Springer [ISBN: 981133692X]
	Reference Book Resources	<ul style="list-style-type: none"> • Marc van Lieshout, Tineke M. Egyedi, Wiebe E. Bijker 2018, <i>Social Learning Technologies</i>, 2 Ed., 12, Routledge [ISBN: 1351791664] • Olive Marsh 2017, <i>Multimedia Technology and Applications</i>, 4 Ed., 15, Larsen and Keller Education [ISBN: 1635491916] • Management Association, Information Resources 2017, <i>Digital Multimedia: Concepts, Methodologies, Tools, and Applications</i>, 2 Ed., 14, IGI Global [ISBN: 1522538232] • Ivan Vidal 2019, <i>Multimedia Networking Technologies, Protocols, & Architectures</i>, 1 Ed., 10, Artech House Publishers [ISBN: 1630813788]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	