

Module Title:	Multimedia, Interaction and Web Technologies
Credits:	10
NFQ Level:	6
Module Delivered In	No Programmes
Teaching & Learning Strategies:	Learning outcomes will be assessed by means of Continuous Assessment (20%) Practical (30%) and Final Examination (50%). The continuous assessment will be made up of project based work in which the student will gain experience by applying the technologies being examined. Other work will involve the student in active research of a topic or technology in question. LO1, LO2 and LO3 will be assessed in research topic 1 and also in class test 1 LO4 will be assessed in research topic 2 and also in class test 2. LO5, LO6, LO7 and LO8 will be assessed in laboratory exercises and also in class test 3. The Final examination will assess all learning outcomes. All topics will be covered in interactive lectures in class.
Module Aim:	To provide the students with the theoretical knowledge and skills necessary to: - Develop and use Multimedia content - Design and develop usable system interfaces - Design and develop usable web sites
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Appreciate the basic concepts and principles of multimedia systems;
LO2	Understand the hardware and software requirements of multimedia systems;
LO3	Appreciate standards for sound, video, graphics and multimedia hardware;
LO4	Evaluate and Design suitable interfaces for software applications;
LO5	Understand the issues involved in publishing on the Web;
LO6	Understand the use of scripting languages to create interactive dynamic Web content;
LO7	Appreciate Internet security needs and solutions;
LO8	Design fit for purpose Web sites.
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Section 1: Multimedia Systems

1. Introduction to multimedia systems: Basic concepts; Terminology. 2. Multimedia hardware requirements. Current standards. 3. Multimedia Elements: The use of text, sound, graphics, animation and video. 4. Sound formats: Waveform, MIDI, MP3. 5. Graphics formats: Vector Graphics and Bitmapped Graphics. 6. Video formats: AVI, QuickTime, MPEG. 7. File size and data compression: RLE, Huffman, JPEG, GIF, MPEG, MP3, Others. 8. Multimedia Production Tools: Animation Tools; Drawing Tools; Sound Editing Tools (Waveform and MIDI); Web Production Tools; Video Editing Tools including: Dreamweaver; Flash; Photoshop; Imageready; Illustrator; Director; Authorware; Soundforge; Premiere. 9. Multimedia Applications: Preparation; Design; Design Team; Distribution.

Section 2: Human Computer Interfaces

10. Interacting with computers. What is HCI? The importance of the user interface. Who is involved in interface development? Understanding the user needs. 11. Human issues: Vision, cognitive psychology, cognitive processing, problem solving. How the limitations on human memory impact on the design of computer interfaces. 12. Usability engineering, usability specification, usability problems, cost-benefit analysis. 13. Types of interface: Linguistic Manipulation v Direct Manipulation. Use of metaphor, use of icons. Menu systems. Principles of good interface design (consistent, natural etc). Approaches to designing a user interface: Empirical, predictive modelling, cognitive and anthropomorphic (human-human). 14. Evaluating user interfaces by applying usability testing and by using the principles of good design. 15. HCI standards. European Computer Manufacturer's Association (ECMA). International Standards Organisation (ISO).

Section 3: Web Technologies

16. Internet based multimedia. How the Internet is structured, organized and administered. Hypertext and Hypermedia systems. HTML and DHTML. 17. Publishing on the Web. Web page design and construction. The difference between print and web design. 18. Approaches to interface and navigation design for the Web. Factors affecting web page usability. 19. Introduction to scripting and scripting languages: JavaScript, VBScript, PHP, PERL etc. Introduction to web servers; Apache Tomcat, IIS. Client side scripting and server side scripting. 20. Introduction to Internet Security. Use of SSL and encryption. 21. E-Commerce: Setting up and running an online business

Assessment Breakdown	%
Continuous Assessment	20.00%
Practical	30.00%
End of Module Formal Examination	50.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Other	No Description		20.00	n/a

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	No Description		30.00	Sem 1 End

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	No Description		50.00	Sem 1 End

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	30 Weeks per Stage	2.00
Laboratory	30 Weeks per Stage	2.00
Estimated Learner Hours	30 Weeks per Stage	2.67
Total Hours		200.00

