

<b>Short Title:</b>	Multimedia Development 2 <b>APPROVED</b>
<b>Full Title:</b>	Multimedia Development 2
<b>Module Code:</b>	DMED H2028
<b>ECTS credits:</b>	5
<b>NFQ Level:</b>	6
<b>Module Delivered in</b>	<a href="#">2 programme(s)</a>
<b>Module Contributor:</b>	Arnold Hensman
<b>Module Description:</b>	<p>This module aims to further increase the learners development skills in multimedia, through the creation of more advanced digital artefacts. Within this context, scripting and coding will be covered in an appropriate detail to allow for a more flexible and controlled approach to creating interactive multimedia applications. Coding structures including scripting, sequence, selection, iteration and modularisation will be covered to give students practical experience in designing and implementing interactive systems. The creation of different multimedia applications such as interactive kiosk systems, two-dimensional computer games, eLearning resources, simulations and basic mobile apps will give participants a hands on overview of the variety of multimedia objects that can be built.</p>
<b>Learning Outcomes:</b>	
<i>On successful completion of this module the learner will be able to</i>	
<ol style="list-style-type: none"> <li>1. Explain the principles involved in designing a multimedia system that incorporates animations, audio, visuals and a range of user interactivity.</li> <li>2. Demonstrate how to simulate simple physical modelling such as sprites, collisions, gravity and object avoidance within games and simulations</li> <li>3. Design and Implement a multimedia system through the appropriate product development life cycle</li> <li>4. Enhance an interactive multimedia system using basic coding structures such as scripting, selection, iteration and modularisation.</li> <li>5. Demonstrate the principles involved in evaluating and testing multimedia systems</li> <li>6. Demonstrate the differences and challenges of developing multimedia systems for mobile devices versus full-size devices.</li> </ol>	

**Module Content & Assessment**

Indicative Content
<p><b>Multimedia system development life cycle</b>            Designing and Structuring assets and objects for multimedia systems. Incorporating the Multimedia Product Development Life Cycle (Planning, Design, Implementation and Testing) Structuring code. Exploring different types of multimedia systems including games, simulations, installations and mobile apps.</p>
<p><b>Physical and vector-based simulated motion</b>            Implementing user control of speed, velocity and acceleration. Modelling motion and forces with vectors. Managing sprite movements through simulated physical motion such as gravity, elasticity and velocity changes due to collisions.</p>
<p><b>Incorporating audio-visual assets</b>            Audio: Background music, sound effects, speech, talking heads. Visual: Location panorama, animated buttons, animated backgrounds. Loading and playing multimedia assets at both design time and run time.</p>
<p><b>Multimedia scripting, coding and data communications</b>            Introduction to communication-driven interactive multimedia systems. Working with persistent data and external data sources (e.g. text files, XML files, databases). Using scripts and code sequences, selection and iterations to allow for further control and interactivity within artefacts.</p>
<p><b>HCI and multimedia systems for mobile devices</b>            Design challenges and constraints for mobile devices. Standard Human Computer Interaction (HCI) approaches to these challenges. Deployment of artefacts and products for use as mobile apps.</p>

Indicative Assessment Breakdown	%
Course Work Assessment %	100.00%

Course Work Assessment %				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Lab work	Weekly exercises; small projects to implement multimedia applications and debug scripts or code. Theoretical tests, such as quizzes on terminology. Demonstration of skills in building sample projects.	1,2,3,4	30.00	n/a
Practical/Skills Evaluation	Practical skills test to edit and run a multimedia product. Spotting and correcting flaws in a time based multimedia artefact at design-time and run-time. Writing scripts and code to enhance interactivity. Creating a user interface to be run as a multimedia application that allows a variety of user activity choices	1,2,3,4	30.00	n/a
Project	Design and develop a usable multimedia object such as a game, simulation, eLearning object or informational application that can be run as a stand-alone artefact independent of the internet. Include working code and simple scripts to enhance the application's usability. Demonstrate that the application can be used on a range of different devices. Implement a thorough testing and evaluation phase for the project.	3,4,5,6	40.00	n/a

No Final Exam Assessment %
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Indicative Reassessment Requirement
<p><b>Coursework Only</b>  <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i></p>
<p><b>Reassessment Description</b>            Practical Repeat Coursework and Demonstration</p>

ITB reserves the right to alter the nature and timings of assessment

**Indicative Module Workload & Resources**

Indicative Workload: Full Time	
Frequency	Indicative Average Weekly Learner Workload
Every Week	2.00
Every Week	2.00
Every Week	3.00

**Resources**

*Recommended Book Resources*

Nigel Chapman and Jenny Chapman 2009, *Digital multimedia*, Wiley Chichester [ISBN: 0470512164]

Tom Vaughan 2014, *Multimedia: Making It Work*, 9th Ed., 13, McGraw-Hill Osborne [ISBN: 0071832882]

Rex van der Spuy, *Foundation Game Design with Flash*, 1st ed Ed., friends of ED [ISBN: 1430218215]

*Supplementary Book Resources*

Jeff Fulton, Steve Fulton, 2010, *The Essential Guide to Flash Games: Building Interactive Entertainment with ActionScript*, FRIENDS OF ED [ISBN: 1430226145]

Jobe Makar, 2009, *ActionScript for Multiplayer Games and Virtual Worlds*, 1st ed Ed. [ISBN: 0321643364]

*Recommended Article/Paper Resources*

*Web Journal, Simulation and Gaming*  
[www.sagepub.com/journal.aspx?pid34](http://www.sagepub.com/journal.aspx?pid34)

*Other Resources*

Web based: *DIGRA Digital Games Research Association Last visited Jan 2012*  
<http://www.digra.org/>

Web based: *IDGA International Game Developers Association; Last visited Jan 2012*  
<http://www.igda.org/>

**Module Delivered in**

Programme Code	Programme	Semester	Delivery
BN_DDMED_8	<a href="#">Bachelor of Arts (Honours) in Creative Digital Media [240 ECTS credits]</a>	4	Mandatory
BN_DDMED_7	<a href="#">Bachelor of Arts in Creative Digital Media [180 ECTS credits]</a>	4	Mandatory