



## UNIVERSITI TEKNOLOGI MARA

### FAB531: 3D LAYOUT DESIGN

<b>Course Name (English)</b>	3D LAYOUT DESIGN <b>APPROVED</b>
<b>Course Code</b>	FAB531
<b>MQF Credit</b>	3
<b>Course Description</b>	This course introduces students to the concept of 3D computer animation. Through practice and analysis, students will develop an understanding of the essential principles of 3D animation which includes perspective, transformations, geometric and spline-based modelling, lighting, camera work, rendering, and modelling natural phenomena and motion through hands-on experience by utilizing computer tools and application. Concurrently, this course works alongside with the principles of animation.
<b>Transferable Skills</b>	<ol style="list-style-type: none"><li>1. Apply numerical skills to interpret, use and analyse information and subject matter</li><li>2. Undertake independent and self-directed study and learning in life drawing</li><li>3. Work safely and accurately within time management constraints</li></ol>
<b>Teaching Methodologies</b>	Lectures, Studio, Practical Classes, Tutorial, Workshop
<b>CLO</b>	<p>CLO1 Identify the basic knowledge of 3D computer animation functions and environments</p> <p>CLO2 Construct 3D environment ideas imaginatively through 3D computer animation</p> <p>CLO3 Alter 3D computer animation work by demonstrate the basic understanding of various tools, techniques and processes</p>
<b>Pre-Requisite Courses</b>	No course recommendations
<b>Topics</b>	
<b>1. Course Briefing &amp; Introduction; Introduction to 3D Computer Animation, Environment and Context</b> 1.1) n/a	
<b>2. Types of modelling: Modifiers and the Modifier Stack</b> 2.1) n/a	
<b>3. Modelling/deformation animation techniques: Lathing, Displacement, Lofting, Booleans</b> 3.1) n/a	
<b>4. Modelling with Lofts, Compound Objects, and Patch modelling</b> 4.1) n/a	
<b>5. Low-polygon modelling: Edit Poly and Edit Mesh</b> 5.1) n/a	
<b>6. Modelling terrain, trees, leaves</b> 6.1) n/a	
<b>7. Textures and texture mapping</b> 7.1) n/a	
<b>8. Unwrap UVW &amp; Pelt Mapping</b> 8.1) n/a	
<b>9. Environments, environment mapping, atmosphere</b> 9.1) n/a	
<b>10. Lighting &amp; light effects</b> 10.1) n/a	
<b>11. Camera tools</b> 11.1) n/a	

<b>12. Animating objects and camera walk through</b> 12.1) n/a
<b>13. Rendering</b> 13.1) n/a
<b>14. Final Presentation</b> 14.1) n/a

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment 1 - Modelling	30%	CLO1
	Assignment	Assignment 2 - Texturing	30%	CLO2
	Assignment	Final Assessment	40%	CLO3

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> <li>• O'Rourke, M 1998, <i>Principles of Three-dimensional Computer Animation: Modeling, Rendering, and Animating with 3D Computer Graphics</i>, Revised Edition Ed., Norton New York</li> <li>• Kurtti, J 1998, <i>A Bug's Life: The Art and Making of an Epic of Miniature Proportions</i>, Hyperion New York</li> <li>• Kerlow, I 2009, <i>The Art of 3D Computer Animation and Effects</i>, Third Edition Ed., Wiley New York</li> <li>• Gardner, G 2002, <i>Gardner's Guide to Colleges for Multimedia &amp; Animation</i>, First Edition Ed., Garth Gardner Company New York</li> </ul>

<b>Article/Paper List</b>	This Course does not have any article/paper resources
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<b>Other References</b>	This Course does not have any other resources
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