



UNIVERSITI TEKNOLOGI MARA

FAB533: 3D CHARACTER ANIMATION

Course Name (English)	3D CHARACTER ANIMATION APPROVED
Course Code	FAB533
MQF Credit	4
Course Description	This course is an extension of Introduction to 3D Animation course which provides the indepth on character rigging for animation. Students will experience building a skeletal structure, blendshape, Inverse and Forward kinematics for keyframe animation of the 3D model through the understanding and application of the principles of animation
Transferable Skills	Apply the appropriate skills and techniques of 3D character modeling Undertake independent and self-directed study and learning in 3D computer animation Work safely and accurately within time management constraints
Teaching Methodologies	Lectures, Blended Learning, Practical Classes, Tutorial
CLO	CLO1 Construct character skeletal rigged bodies based on the understanding of human locomotion. CLO2 Complete 3D character facial expression and able to identify problems and available solutions in 3D applications. CLO3 Perform animation techniques using inverse and forward kinematics in walk cycle and solve problems within the application with suggestion of solutions.
Pre-Requisite Courses	INTRODUCTION TO 3D ANIMATION (FAB422)
Topics	
1. Human Locomotion & Character Skeletal 1.1) N/A	
2. Creating Skeleton – Bone Hierarchy 2.1) N/A	
3. Leg Rigging 3.1) N/A	
4. Foot Control and Knee Control 4.1) N/A	
5. Pole Vector 5.1) N/A	
6. Spine Rigging 6.1) N/A	
7. Arm & Finger Rigging 7.1) N/A	
8. Head Rigging 8.1) N/A	
9. Skinning 9.1) N/A	
10. Paint Weighting 10.1) N/A	
11. Facial Rig – Blend Shape 11.1) N/A	

12. Troubleshooting 12.1) N/A
13. Character Walk Cycle 13.1) N/A
14. Troubleshooting and Final Submission 14.1) N/A

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Body Rigging	30%	CLO1
	Assignment	Head Rigging and Blendshape	30%	CLO2
	Final Project	Walkcycle and Report	40%	CLO3

Reading List	Recommended Text	<ul style="list-style-type: none"> • Legaspi, C. 2015, <i>Anatomy for 3D Artist: The Essential Guide for CG Professional</i>. 3Dtotal Publishing • Osipa, J. 2010, <i>Stop Staring: Facial Modeling and Animation Done Right</i>, Wiley Publishing.Inc, Indianapolis, Indiana • Beane, A. 2012, <i>3D Animation Essentials</i>, Wiley & Sons, Inc.,Indianapolis, Indiana • Rodriguez, D. 2012, <i>Animation Methods: The Only Book You'll Ever Need</i>, CreateSpace Author • O'Rourke, M. 1998, <i>Principles of Three-dimensional Computer Animation: Modeling, Rendering, and Animating with 3D Computer Graphics</i>, Rev. ed. New York: Norton
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	