

Module Code	SS-4303		
Module Title	Computer Graphics		
Degree/Diploma	Bachelor of Science (Computer Science)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	4 hours/week
Pre-requisite	SS-1202 Computer Systems and Information Technology		
Anti-requisite	None		
Aims			
This module provides an overview of the different techniques used in computer graphics and how to implement them.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order:	20%	<ul style="list-style-type: none"> - explain how 3D and 2D scenes are represented - explain the various stages in a 3D rendering engine 	
Middle order:	60%	<ul style="list-style-type: none"> - implement some rendering algorithms 	
Higher order:	20%	<ul style="list-style-type: none"> - apply some physical model to produce realistic rendering - use 3D graphics library 	
Module Content			
<ul style="list-style-type: none"> - Process pipeline in transforming an abstract model into a visual rendition - 3D transformation, 3D-to-2D projection, 2D transformation - Wire frame rendition and hidden-line removal, shading and raytracing - Models: color models (RGB, CMY, HSV, including alpha), optics (reflection, refraction, diffusion radiosity) and geometry (lines, curves, surfaces, solids, fractals) - Advanced modeling and rendering techniques 			
Assessment	Formative assessment	Interactive Quizzes and Feedback	
	Summative assessment	Examination: 50%	
		Coursework: 50% <ul style="list-style-type: none"> - 2 class tests (20%) - 2 written assignments (30%) 	