

<b>Module Code</b>	TG-3215		
<b>Module Title</b>	Engineering Design V		
<b>Degree/Diploma</b>	Bachelor of Engineering Degree		
<b>Type of Module</b>	Major Core		
<b>Modular Credits</b>	2	<b>Total student Workload</b>	5 hours/week
		<b>Contact hours</b>	3 hours/week
<b>Prerequisite</b>	TG-2214 Engineering Design IV		
<b>Anti-requisite</b>	None		
<b>Aims</b>			
This module is a continuation of the Engineering Design Spine modules offered at FIT. This is an open ended design module in which the students are expected to investigate certain selected design activities mainly paper/software-based design.			
<b>Learning Outcomes</b>			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order:	10%	- relate different components of lessons taught in other modules and integrate skills required for conducting research	
Middle order :	10%	- identify and define problems to topics given	
Higher order:	80%	- justify and recommend solutions to the problems - compute data, simulate, perform data analyses and deduce the obtained results - produce technical reports for an effective presentation to design work - be self-directed to work independently or in a team effectively	
<b>Module Contents</b>			
<ul style="list-style-type: none"> <li>- Materials Properties: Density and Hardness</li> <li>- Corrosion and Electrodeposition</li> <li>- Tensile Testing and Mechanical Properties</li> <li>- Polymers and Polymer-Matrix Composites</li> <li>- Casting and Solidification Processing</li> <li>- Thermo-Mechanical Processing of Aluminum</li> <li>- The Sn-Bi Equilibrium Phase Diagram</li> <li>- The Heat Treatment of Steel</li> <li>- The Solar Cell</li> <li>- OLED Fabrication</li> <li>- Reverse Design - The Hard Disk Drive</li> </ul>			
<b>Assessment</b>	Formative assessment	Progress assessment are arranged once every two weeks to review and to give feedback for their learning	
	Summative assessment	Examination: 0% Coursework: 100% - 3 reports (30% each) - 1 oral presentation (10%)	