Module code	TG-3216			
Module Title	Engineering Design VI			
Degree/Diploma	Bachelor of Engineering			
Type of Module	Major Core			
Modular Credits	2	**Total student workload**	4	hours/week
		Contact hours	2	hours/week
Prerequisite	TG-3215 Engineering Design V			
Anti-requisite	None			

Aims

The aim of this module is to expose students to modern systematic design techniques used in the practice of mechanical engineering. The students will gather their knowledge on product development processes, comprehend customer needs and generate into product engineering analysis, and transform the design analysis studies to rapid prototyping.

Learning Outcomes:

On successful completion of this module, a student will be expected to be able to:

Lower order :	10%	- recognise systematic design techniques and base case designs
Middle order :	10%	- generate design concepts for integrated design project - review case studies of process design concepts
Higher order:	80%	- use selection criteria to appraise and evaluate generated design concepts - work collaboratively on project to prototype an innovative design project of the student's own selection - manage projects tasks to deliver prototype in a timely manner - verbally communicate project outcomes to peers and supervisors

Module Contents

- Overview to product development
- Development processes and organisations
- Identifying customer needs and product specifications
- Concept generation, selection and testing
- Product architecture and rapid prototyping
- Design for environment, manufacturing and assembly
- Engineering ethics, codes and standards
- Industrial design, patents and intellectual property

Assessment	Formative assessment	Monthly progress reports will be used to evaluate their learning.
	Summative assessment	Examination: 0%
		Coursework: 100% - 4 individual assignments (10% each) - 1 group design proposal (10%) - 1 group final prototype design assessment (10%) - 1 group final design project report (20%) - 1 final design project presentation (20%)