

Taylor's University
School of Engineering
Scheme of Work

SOW/SoE/08/18

Module	Electrical and Electronic Engineering Group Project 2	Module Code	PRJ61003								
Module Status	Core	Prerequisite	Electrical and Electronic Engineering Group Project 1 (PRJ60903)								
Semester/year	EE : Semester 6/ Year 3	Date Prepared	20 August 2018								
Lecturer	Dr. Phang Swee King PhD	Credit Hours	Three (3)								
Period	Fourteen (14) weeks	Date(s) of Revision	August 2018								
Module Synopsis	The students will work in teams to solve an engineering challenge, analyse an engineering failure or build an engineering product. Student evaluation for this subject is in two parts: group and individual.										
Contact hours	Lecture: 1 hour/week Discussion: 4 hours/week										
Evaluation	100% Continuous Assessment										
Learning Outcomes	<p>On completion of this module, students will be able to:</p> <p>LO1: Demonstrate effectiveness in communicating technical activities in oral and/or written form (PO9)</p> <p>LO2: Apply project management tools and techniques in effective project execution and closure (PO12)</p> <p>LO3: Implement and Operate effective solutions for complex engineering challenges (PO3)</p> <p>LO4: Apply professional and ethical responsibilities of engineering practice (PO8)</p> <p>LO5: Demonstrate effectiveness as a team member and/or team leader (PO10)</p> <p>LO6: Assess the designed solutions for complex engineering challenges against societal, health, safety, legal, economical and cultural issues (PO6)</p> <p>LO7: Evaluate the functionality of prototype against design (PO4)</p> <p>LO8: Identify activities to cope with technological needs of the future (PO11)</p> <p>LO9: Analyse and document the solution for a complex electrical engineering challenge and draw substantiated conclusions. (PO2)</p>										
Assessment Methods	Distribution	(%)	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9
	Logbook	15	X							X	
	Final Report	40		X	X	X		X			X
	Presentation	20	X						X		
	Peer Assessment	5					X				
	Artefact Assessment	20						X	X		
	Total	100									
Learning References	References Books: "Think Like an Engineer" by Mushtak Al-Atabi										
Additional References	List of references to be assigned by the supervisor based on the project title.										

Program Outcomes (Electrical and Electronic Engineering)

PO1	Apply the knowledge of mathematics, science, engineering practices, innovation techniques, entrepreneurship and human factors to provide value-adding solutions to complex Electrical and Electronic Engineering challenges.
PO2	Identify, formulate, analyse and document complex engineering challenges to arrive at viable solutions and substantiated conclusions.
PO3	Conceive, Design, Implement and Operate solutions for complex engineering challenges that meet specified requirements with appropriate consideration for public health and safety, cultural, societal, environmental and economical considerations.
PO4	Conduct research and investigation into complex challenges using methods which include experiment design, analysis of data and synthesis of information to provide valid conclusions.
PO5	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an awareness of the accompanying assumptions and limitations.
PO6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, economical and cultural issues and the consequent responsibilities relevant to professional engineering practice.
PO7	Explain the global impact of professional engineering solutions in societal, economical and environmental contexts and demonstrate knowledge of and need for sustainable development.
PO8	Apply professional and ethical responsibilities of engineering practice.
PO9	Effectively communicate complex engineering activities, both orally and in a written form, in both technical & non-technical contexts.
PO10	Function effectively as an individual and in multidisciplinary settings with the capacity to be a leader.
PO11	Recognise the importance of lifelong learning and engaging in continuous professional development activities in accordance with technological change.
PO12	Effectively manage projects in multidisciplinary environments and apply project management tools and techniques to one's own work, as a member and leader in a team to satisfy stakeholders requirements.

Chapter	Topic	Week	Topic Outcomes (TO)	LO	PO	Delivery Methods
1	Introductory Lecture	Week 1	Students would be briefed on the module and the project.	-	-	Lecture
2	Integrate the Prototype	Week 2 to Week 7	<p>Students will be exposed to key areas to assist their project integration.</p> <p>Weekly updates with team and supervisor will be conducted as well.</p>	All LOs	PO2 PO3 PO4 PO6 PO8 PO9 PO10 PO11 PO12	Lecture & Discussion
3		Week 8 & Week 9	*TES briefing (15 min)			
4		Week 10 & Week 11	* Fill up TES student evaluation (15 min). Students are required to bring their own devices to complete the evaluation.			
5	Operate and Test the Prototype	Weeks 7 to 14	<p>Students will learn how to test their solutions (design of experiments for functional tests).</p> <p>Students should be able to reflect on their project and evaluate the solution against the proposal.</p>	All LOs	PO2 PO3 PO4 PO6 PO8 PO9 PO10 PO11 PO12	Lecture & Discussion

Assessment Details			
Type	Details	Learning Domain	Mark
Logbook	Individual	Cognitive	15 %
Final Report	Group	Cognitive	40 %
Presentation	Individual	Affective	20 %
Peer Assessment	Individual	Affective	5 %
Artefact Assessment	Group	Psychomotor/Affective	20 %
Total			100%

For all assessments, TURNITIN similarity limit: 30%

Student is not allowed to transcribe directly (cut and paste) any material from another source into their submission.

Assessment schedule:

		Week N ^o .													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Assessment Methods	Logbook		X		X		X		X		X		X		
	Final Report											X			
	Presentation													X	
	Peer Assessment													X	
	Artefact Assessment														X

LO-PO(TGC) mapping:

		Programme Outcomes (POs) and Taylor's Graduate Capabilities (TGC)											
		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Learning Outcomes, LOs	LO 1									X			
	LO 2												X
	LO 3			X									
	LO 4							X					
	LO 5										X		
	LO 6					X							
	LO 7				X								
	LO 8											X	
	LO 9		X										

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Remarks:

1. The Scheme of Work is to be distributed to the students in the first week of the semester.
2. Module coordinators may set a more stringent similarity percentage (minimum 20%) for their respective modules pertaining to students' submissions with the approval of the Programme Director.
3. Any changes to the Scheme of Work shall be communicated (in writing) to the Program Director and the approved revised version must be communicated to the students.