SEKOLAH KEJURUTERAAN ELEKTRIK	
Nama Matapelajaran: Makmal Tahun 3 (PBL) Kod Matapelajaran : SKEE 3742	Semakan : 3 Tarikh Keluaran : 2008 Pindaan Terakhir : 2019 No. Prosedur : **PK-UTM-FKE-(0)-10**

UNIVERSITI TEKNOLOGI MALAYSIA

SKEE 3742

SEKOLAH KEJURUTERAAN ELEKTRIK
FAKULTI KEJURUTERAAN
UNIVERSITI TEKNOLOGI MALAYSIA

POWER ELECTRONICS LABORATORY

PROBLEM PACK

4-Quadrant DC Motor Drive

Disediakan oleh:	Disahkan oleh:
PM. Dr. Nik Rumzi Nik Idris PM. Dr. Naziha Ahmad Azli PM. Dr. Awang Jusoh PM. Dr. Junaidi Abdul Aziz PM. Dr. Shahrin Md. Ayob PM. Ir. Dr. Tan Chee Wei Dr. Mohd. Rodhi Sahid Dr. Norjulia Mohammad Nordin En. Nik Din Muhammad En. Zaki Daud	Pengarah Program Dr. Jasrul Jamani Jamian Tandatangan Cop :
Tarikh : 18 Julai 2019	Tarikh : 18 Julai 2019

Project Introduction:

In a modern electrical drive system, the motor is normally fed by a power electronic converter to obtain higher efficiency and flexibility. The task of the converter is to supply the motor with a variable voltage and/or current so that the speed, torque or position of the motor can be controlled with minimum losses. There are several types of power electronic converters that can be used depending on the type of applications in hand. In most of the variable speed drive applications, we are required to control the speed of the motor in either reverse or forward direction. For these types of applications, the so-called 4-quadrant converters are required.

For the next three weeks, you will be studying the four-quadrant converter used in DC motor drive applications. You will need to simulate, construct and test the converter using the available modules in the lab.

Project tasks:

a) To simulate the 4-quadrant converter using Matlab/SIMULINK
b) To construct the 4-quadrant converter using the available modules.