

Module Title:	Electrical Science – Semester 2
Academic year:	2009 – 2010
Credit Value:	5 – Mandatory
Pre- requisites:	Electrical science 1
Assessment:	60% Final Exam, 25 % Practical, 15% Continuous Assessment (CA)
Aims	This module aims to provide an introduction to AC signals and the basic elements of alternating current circuits. The student familiarised with a range of components, measurement techniques and important issues surrounding electrical safety when constructing and testing AC circuits. Elements of analytical techniques are explored when dealing with the behaviour of capacitors and inductors in AC circuits.
Module Content	<ul style="list-style-type: none"> • AC circuits; • Signals; • Frequency response; • Magnetic materials and magnetic circuits.
Intended Learning Outcomes:	<p>On successful completion of this module students should have the ability to:</p> <ol style="list-style-type: none"> 1. Describe the behaviour of circuits under AC excitation; 2. Analyse AC circuits using phasor notation and circuit theorems; 3. Describe electromagnetic induction and its main applications; 4. Identify simple electrical filter types (RLC); 5. Describe power and power factor 6. Construct electrical circuits, perform AC and DC measurements and record (in Lab notebook)