

Module code	SP-1201		
Module Title	Basic Experimental Skills in Physics		
Degree/Diploma	Bachelor of Science (Applied Physics)		
Type of Module	Major Core		
Modular Credits	4	Total student Workload	8 hours/week
		Contact hours	4 hours/week
Prerequisite	A Level Physics or equivalent		
Anti-requisite	None		
Aims			
<p>This module is compulsory for students intending to major in Applied Physics. It is also suitable for students who are interested in hands-on explorations and self-learning of basic skills useful in experimental and laboratory work. This module aims to expose students to the basic laboratory skills and methods of data analysis in experimental physics.</p>			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	0%	- understand the basic laboratory skills and data analysis in experimental physics	
Middle order :	30%	- understand the usage and purpose of various electronic components, and other laboratory tools and equipments, for experiments - apply knowledge on various electronic components and other laboratory tools and equipments	
Higher order:	70%	- obtain data and results from various experimental exercises and use graph plotting tools for data treatments - analyse and interpret the results from experimental exercises that includes uncertainties analysis - work independently and collaboratively in experimental works	
Module Content:			
<ul style="list-style-type: none"> - Basic electronics: identification of electronic components - Use of digital multimeters - Connection of basic electrical components - Soldering - Familiarization with common tools, e.g. wire strippers, screw-drivers - Exploring the principles of the vernier callipers - Use of computers for graph-plotting and data treatment - Analysis of uncertainties in measurements - Study of optical components - Use of the traditional cathode-ray-tube and the modern computer oscilloscopes 			
Assessment	Formative assessment	Homework, discussions and feedback	
	Summative assessment	Examination: 0% Coursework: 100% -3 lab reports (30%) -1 lab book assessment (30%) -1 lab skills (10%) -2 tests (30%)	