

<b>Module code</b>	SP-1201		
<b>Module Title</b>	Basic Experimental Skills in Physics		
<b>Degree/Diploma</b>	Bachelor of Science (Applied Physics)		
<b>Type of Module</b>	Major Core		
<b>Modular Credits</b>	4	<b>Total student Workload</b>	8 hours/week
		<b>Contact hours</b>	4 hours/week
<b>Prerequisite</b>	A Level Physics or equivalent		
<b>Anti-requisite</b>	SP-1205 Experimental and Mathematical Skills in Physics		
<b>Aims</b> To expose students to the basic laboratory skills and methods of data analysis in experimental physics.			
<b>Learning Outcomes</b> <i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	10%	- Identify the basic laboratory skills and data analysis in experimental physics	
Middle order :	10%	- Explain 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:	80%	- Evaluate data and results from various experimental exercises and <u>apply</u> 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	
<b>Module Content:</b> <ul style="list-style-type: none"> <li>- Basic electronics: identification of electronic components</li> <li>- Use of digital multimeters</li> <li>- Connection of basic electrical components</li> <li>- Soldering</li> <li>- Familiarization with common tools, e.g. wire strippers, screw-drivers</li> <li>- Exploring the principles of the vernier callipers</li> <li>- Use of computers for graph-plotting and data treatment</li> <li>- Analysis of uncertainties in measurements</li> <li>- Study of optical components</li> <li>- Use of the traditional cathode-ray-tube and the modern computer oscilloscopes</li> </ul>			
<b>Assessment</b>	Formative assessment	Weekly Tutorial Sessions and Discussion	
	Summative assessment	Examination: 0% Coursework: 100% <ul style="list-style-type: none"> <li>- 3 Individual Lab Reports (30%)</li> <li>- 1 Log Book Assessment (30%)</li> <li>- 1 Individual Practical Lab Skills Assessment (10%)</li> <li>- 2 Class Tests (30%)</li> </ul>	