

Module Title:	Physics 1
Language of Instruction:	English
Credits:	5
NFQ Level:	6
Module Delivered In	6 programme(s)
Teaching & Learning Strategies:	This subject will be taught in three theory classes of one hour duration per week and one two hour practical class each week.
Module Aim:	The aim of this module is to provide the student with an introduction to physics and to develop practical laboratory skills.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Apply a theoretical knowledge of physics to solve problems.
LO2	Practice scientific procedures, including measuring, recording and analysing experimental data. Identify and quantify basic sources of error in laboratory experiments.
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment
Indicative Content
Measurement

Physical standards, SI units, measurements, measurement uncertainty.

Forces

Newton's Laws of motion. Force of gravity. Centripetal force. Conservation of energy. Conservation of momentum.

Pressure

Density, atmospheric pressure, pressure in fluids and solids. Young's modulus.

Heat

Temperature scales and thermometers. Specific heat capacity. Latent heat. Conduction, convection and radiation. Expansion of solids, liquids, gases. Gas laws and the kinetic theory of gases. Refrigeration.

Practicals

Measurement and analysis of primary data. Applying theory to data sets. Working both independently and as part of a group. Observing safety protocols.

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	50.00%
End of Module Formal Examination	40.00%

Special Regulation

Students must achieve a minimum grade (35%) in the practical/CA and the final exam.

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	Two one hour exams during the semester.	1,2	10.00	n/a

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Two hour practical each week.	1,2	50.00	n/a

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Two hour exam.	1,2	40.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	3.00
Laboratory	12 Weeks per Stage	2.00
Estimated Learner Hours	15 Weeks per Stage	4.33
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_SABTP_B	<u>Bachelor of Science (Honours) in Biosciences with Biopharmaceuticals</u>	1	Mandatory
CW_SABRE_B	<u>Bachelor of Science (Honours) in Brewing and Distilling</u>	1	Mandatory
CW_SAPHA_B	<u>Bachelor of Science (Honours) in Pharmaceutics and Drug Formulation</u>	1	Mandatory
CW_SAASC_D	<u>Bachelor of Science in Analytical Science</u>	1	Mandatory
CW_SABFQ_D	<u>Bachelor of Science in Biosciences</u>	1	Mandatory
CW_SASCI_C	<u>Higher Certificate in Science in Applied Biology or Applied Chemistry</u>	1	Mandatory