

Year 12 Physics Units 3/4 Assessment Outline 2022.

The following document includes the SCSA breakdown of marks by assessment item type. This is followed by a schedule of assessment for 2022. Students should note timings are subject to the CAP schedule. The chronological CAP sequence is summarised in the last table below.

The required assessment will be covered in 6 CAP periods. Experimental work will be carried out in class time prior to the validation.

You should note that the first test will be conducted in week two of 2022 and this will be based on theoretical and practical work completed at the end of 2021. It is our expectation that students will return to school prepared for this assessment and we have not set aside specific time for revision. AS A REMINDER. The year 12 course is generally accepted as being more difficult than year 11. WACE courses are designed with the expectation that students will complete three hours of independent study per week and if you do not hit the ground running with your study program it is very easy to get left behind, SO COME PREPARED TO WORK!

	Weighting
<p>Science Inquiry</p> <p>There must be at least one experiment, one investigation and one evaluation and analysis completed in this pair of units. Appropriate strategies should be used to authenticate student achievement on an out-of-class assessment task.</p> <p>Experiment</p> <p>Practical tasks designed to develop or assess a range of laboratory related skills and conceptual understanding of physics principles, and skills associated with representing data; organising and analysing data to identify trends and relationships; recognising error, uncertainty and limitations in data; and selecting, synthesising and using evidence to construct and justify conclusions.</p> <p>Tasks can take the form of practical skills tasks, laboratory reports and short in-class tests to validate the knowledge gained.</p> <p>Investigation</p> <p>Activities in which ideas, predictions or hypotheses are tested and conclusions are drawn in response to a question or problem. Investigations can involve experimental testing, field work, locating and using information sources, conducting surveys, and using modelling and simulations.</p> <p>Assessment tasks can take the form of an experimental design brief, a formal investigation report requiring qualitative and/or quantitative analysis of the data and evaluation of physical information, or exercises requiring qualitative and/or quantitative analysis of second-hand data.</p> <p>Evaluation and analysis</p> <p>Involves interpreting a range of scientific and media texts; evaluating processes, claims and conclusions by considering the accuracy and precision of available evidence; and using reasoning to construct scientific arguments.</p> <p>Assessment tasks can take the form of answers to specific questions based on individual research; exercises requiring analysis; and interpretation and evaluation of physics information in scientific and media texts.</p>	20%
<p>Test</p> <p>Tests typically consist of questions requiring short answers, extended answers and problem solving. This assessment type is conducted in supervised classroom settings.</p>	30%
<p>Examination</p> <p>Examinations require students to demonstrate use of terminology, understanding and application of concepts and knowledge of factual information. It is expected that questions would allow students to respond at their highest level of understanding.</p> <p>Typically conducted at the end of each semester and/or unit and reflecting the examination design brief for this syllabus. This assessment type is conducted in supervised classroom settings.</p>	50%

Assessment type	Assessment type weighting	Assessment task weighting	When	Assessment task
Science inquiry	20%	10%	Term 1 Week 2	Investigation: Vectors and Projectiles. Validation (CAP 1)
		5%	Term 2 Week 10	Experiment: Interferometry Validation (CAP 4)
		5%	Term 2 Week 10	Evaluation and Analysis – De Broglie and electron diffraction Validation (CAP 4)
Test	30%	8%	Term 1 Week 8	Test 1 – Motion (not projectiles). (CAP 2)
		8%	Term 2 Week 2	Test 2 – Electromagnetism. (CAP 3)
		7%	Term 3 Week 2	Test 3 – Light. (CAP 5)
		7%	Term 3 Week 7	Test 4 – Standard model & Special Relativity (CAP 6)
Examination	50%	22%	Term 2 Week 4/5	Semester 1 examination
		28%	Term 3 Week 9/10	Semester 2 examination
Total	100%	100%		

Timings may be subject to change

TERM	WEEK	CAP	TASK	WEIGHT
1	2	1	Investigation Validation	10
1	8	2	Motion topic test	8
2	2	3	Electromagnetism topic test	8
2	4/5	Semester 1 Exams		22
2	10	4	Interferometry experiment validation De Broglie and electron diffraction evaluation and analysis validation	5+5
3	2	5	Light and Quanta test	7
3	7	6	Special relativity and standard model test	7
3	9/10	Semester 2 Exams		28