

Curriculum aim

The overarching aim of the Physics Curriculum is to provide physics-related learning experiences for students to develop scientific literacy, so that they can participate actively in our rapidly changing knowledge-based society, prepare for further studies or careers in fields related to physics, and become lifelong learners in science and technology.

The broad aims of the curriculum are to enable students to:

- develop interest in the physical world and maintain a sense of wonder and curiosity about it;
- construct and apply knowledge of physics, and appreciate the relationship between physical science and other disciplines;
- appreciate and understand the nature of science in physics-related contexts;
- develop skills for making scientific inquiries;
- develop the ability to think scientifically, critically and creatively, and to solve problems individually or collaboratively in physics-related contexts;
- understand the language of science and communicate ideas and views on physics-related issues;
- make informed decisions and judgments on physics-related issues; and
- be aware of the social, ethical, economic, environmental and technological implications of physics, and develop an attitude of responsible citizenship.

Requirement for studying Physics

Students taking Physics should

- be a person who like to ask ‘why’. They should also enjoy mental challenges, like attempting to solve new problems without any help from the others.
- be able to organize and present data in a way that is meaningful to other people;
- be able to explain new ideas to people who knows little about your subject; Hence, an up to standard language skills, especially English is important.
- feel comfortable with Mathematics and Integrated Science; and have above average results in the 2 subjects.

Curriculum Structure

Compulsory Part (Total 200 hours)	
I. Heat and Gases	a. Temperature, heat and internal energy b. Transfer processes c. Change of state

	d. Gases
II. Force and Motion	<ul style="list-style-type: none"> a. Position and movement b. Force and motion c. Projectile motion d. Work, energy and power e. Momentum f. Uniform circular motion g. Gravitation
III. Wave Motion	<ul style="list-style-type: none"> a. Nature and properties of waves b. Light c. Sound
IV. Electricity and magnetism	<ul style="list-style-type: none"> a. Electrostatics b. circuits and domestic electricity c. electromagnetism
V. Radioactivity and Nuclear Energy	<ul style="list-style-type: none"> a. Radiation and radioactivity b. Atomic model c. Nuclear energy

Elective Part (Total 54 hours)	
VI. Atomic World	<ul style="list-style-type: none"> a. Rutherford's atomic model b. Photoelectric effect c. Bohr's atomic model of hydrogen d. Particles or waves e. Probing into nano scale
VII. Energy and Use of Energy	<ul style="list-style-type: none"> a. electricity at home b. energy efficiency in building and transportation c. Renewable and non-renewable energy sources

Investigative Study (16 hours)	
VIII. Investigative Study in Physics	a. Student should conduct an investigation with a view to solving an authentic problem

Assessment

Component	Outline	Weighting	Duration
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Public Examinations	Paper I Compulsory Part	60%	2 ½ hour
	Paper II Elective part	20%	1 hour
School Base Assessment	Before 2014, only practical related marks shall be submitted. Students shall perform a series of assessed experiments during the 3 years of Senior Secondary Physics Course. Assessments shall be made during the practical session, as well as the final reports submitted by students.	20%	---