Physics

Subject Code: PHY

HEAD OF DEPARTMENT: Allison Sneddon

SUBJECT OUTLINE:

Physics is the field of Science that helps us understand the physical universe, from the smallest particles to the start of the universe. This is achieved through the structuring of learning experiences that aim at developing:

- Knowledge and understanding of physics principles
- Manipulative and communicative skills, abilities and attitudes important in scientific investigations
- Appreciation and concern for the products and influence of both science and technology.

The key concepts in Physics are divided into three themes: Forces, Energy and Motion. These themes and the key concepts are embedded in a range of contexts throughout the two-year course. This context-based course allows students to investigate all the concepts relevant to a particular context.

Some examples of contexts that may be studied by students are: Physics of the ocean, Physics of sport and human movement, Electricity and electronics, Particle physics and cosmology, Nuclear technology in medicine, Flight and aerodynamics, Sight and sound, and Investigative techniques.

CONTRIBUTES TO OP: Yes

ASSESSMENT OUTLINE:

A range of assessment tasks will be completed during the course. Each task will fit into one of the following categories:

- **Extended Experimental Investigation** – this is a research task that has an experimental component. Students may design their own experiments in this type of assessment task.

- **Extended Response Task** – this is a non-experimental research task. It may take the form of a written assignment, an oral presentation, report or a response to stimulus material.

- **Written Task** – this will be conducted under supervised exam conditions, and may resemble a traditional Physics exam or a response to stimulus material.

Much of the context-based work in Physics will require a problem-solving approach to the subject. Students will need to be self-motivated and will develop strong research skills in both experimental and non-experimental methods.

CAREER PATHWAYS: *insert information about career pathways*
STUDENT REQUIREMENTS/PREREQUISITES:

Students should have a high degree of ability in Scientific and Mathematical thinking. They should have obtained a high level of achievement in Junior Science as well as a high level of achievement in Junior Mathematics. Although not compulsory, it is advisable that students undertaking a study of Physics also do Maths B and/or Maths C as these subjects complement each other. Students who have not achieved a high level of achievement in both Junior Science and Mathematics are advised to consult with the Head of Department before choosing Senior Physics.