PHYSICS

Status .................................. AUTHORITY SUBJECT
QCE Credit Points .............. 4

RECOMMENDED REQUIREMENTS FOR SUCCESS:
Students wishing to undertake Physics should be achieving at least a high (B) in Year 10 Mathematics and Science. It is also recommended that students have achieved at least a C in Year 10 English. Students who do not meet these pre-requisites should consult with the Head of Department prior to choosing Physics. It would be expected that a student enrolling in Physics would also be enrolling in Mathematics B.

AIMS
Any dictionary will tell you that Physics studies the interaction between matter and energy and even though this is basically true, it reveals very little about what the study of Physics actually involves. Physics, with the aid of Mathematics, enables us to explain the occurrences in nature which we observe daily. For example, the physical laws that govern how and why we move, will help us to discover the physics involved in kicking balls, riding roller coasters and driving our cars.

Students will be taught to apply the laws and rules of physics to known and unknown situations. Real life practical situations are used to enhance the student's understanding.

COURSE OUTLINE
- Physical Quantities and Measurements
- Forces and Motion
- Energy and Momentum
- Thermal Physics
- Optics/Light
- Wave Motion
- Electricity/Electronics
- Magnetism and Electro-magnetism
- Atomic and Nuclear Physics

ASSESSMENT
- Two exams at end of each term.
- Three assessment pieces are given each Semester. These can be comprised of a combination of supervised assessments, extended experimental investigations and/or extended response tasks.
- Practical work and report writing is ongoing throughout the two year course.

FUTURE PATHWAYS
Physics is essential/highly desirable for students aspiring to become a:
Physicist; Civilian or Military Pilot; Computer Scientist; Doctor; Optometrist; Radiologist; Architect; Surveyor; Acoustic Technician; Engineer; Stenographer; Air Traffic Controller.

Physics will assist the student who needs the subject to enter university. Students will also be taught to think at a very complex level.

COST:
The costs associated with this course are included in the Student Resource Scheme.

ADDITIONAL:
- A Graphics Calculator (Texas) is required.
- Possible excursions – approximate cost is $100.
- Some experiments may require students to supply their own materials.