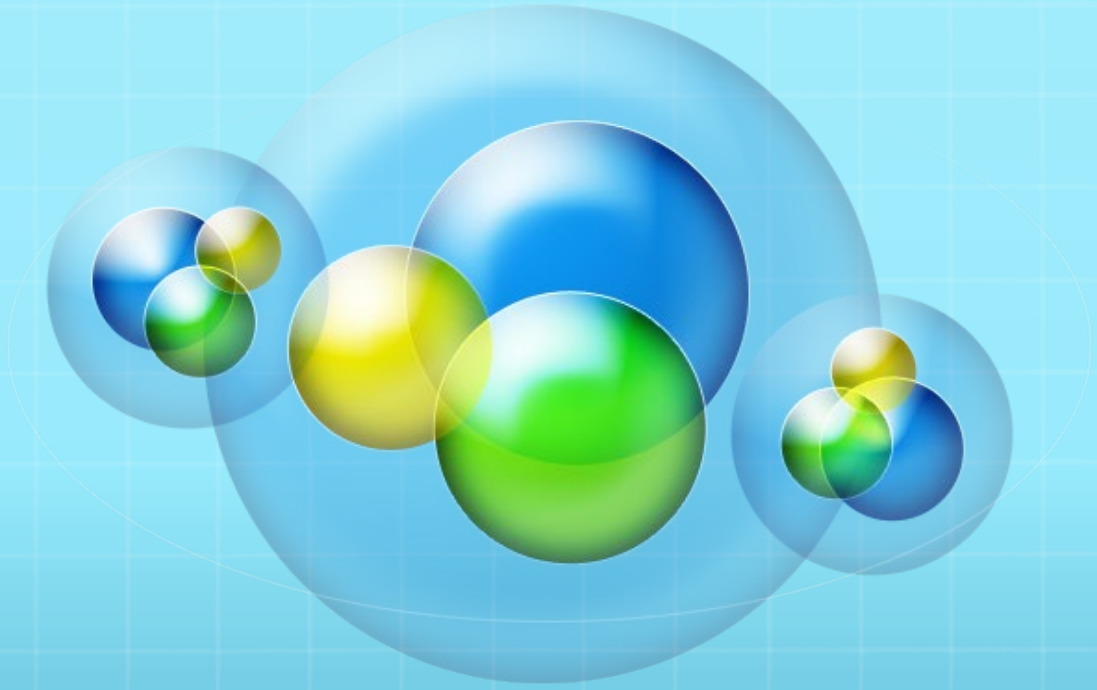


HSC SCIENCE

WHAT ARE MY OPTIONS?

DO I HAVE TO CHOOSE SCIENCE?

NO!

WHY CHOOSE SCIENCE?

- Enjoy Science.
- I am good at Science – currently scoring at least a "C" for Science. Grades have been determined from Task 1 and 2 – ask your Science teacher.
- I have a strong interest in Science and you are interested in a career related to Science.
- It is a pre-requisite for my university degree.
- I have good ability in Mathematics.
- I will be choosing other subjects that overlap well with Science.

WHAT CHOICES DO I HAVE?

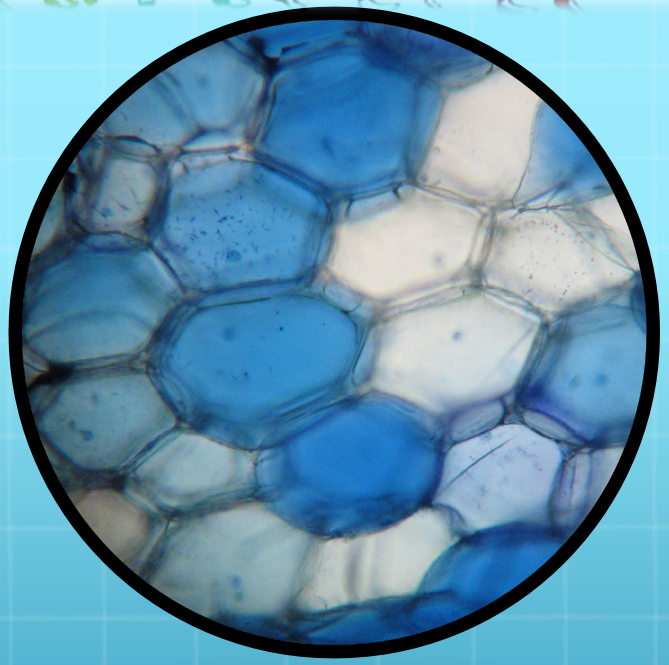
- Biology
- Chemistry
- Earth and Environmental Science
- Physics
- Science Extension - only offered in Year 12 (beginning of Term 4)

BIOLOGY

Is the study of living things.

The Year 11 Course includes a study of cells and the microscope, ecology, earth history and evolution

The Year 12 Course includes the study of inheritance, genetics and disease .



Biology

Year 11 Course

- Cells as the Basis of Life
- Organisation of Living Things
- Biological Diversity
- Ecosystem Dynamics

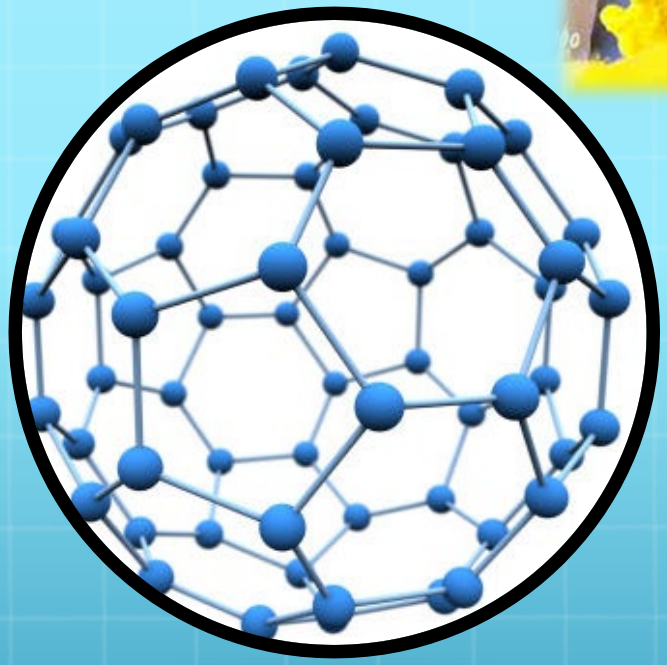
Compulsory field study

Year 12 Course

- Heredity
- Genetic Change
- Infectious Disease
- Non-infectious Disease and Disorders

Biology

- Comments – Biology is an academically demanding course at the HSC level. There is a huge amount of content to cover as well as a lot of subject specific vocabulary to grasp. It will require regular homework and revision.
- Recommendations - You should ONLY be considering selecting Biology if you are currently scoring at least a “C” in Science and you have advanced English literacy skills.



Is the study of composition, structure, properties and change of matter.

The Year 11 Course includes a study of matter, elements, compounds, metals, chemical reactions and stoichiometry, energy, enthalpy and entropy.

The Year 12 Course includes the study of equilibrium, carbon chemistry, acids and bases and analysis of organic and inorganic substances.

Chemistry

Year 11 Course

- Properties and Structure of Matter
- Introduction to Quantitative Chemistry
- Reactive Chemistry
- Drivers of reactions

Year 12 Course

- Equilibrium and Acid Reactions
- Acid/base reactions
- Organic Chemistry
- Applying Chemical Ideas

Chemistry

- Comments – Chemistry is an academically demanding course at the HSC level. There is a huge amount of content to cover as well as a lot of subject specific vocabulary to grasp. It will require regular homework and revision.
- Recommendations - You should ONLY be considering selecting Chemistry if you are currently scoring at least a “B” in Science; you have good English literacy skills and have successfully completed 5.3 Mathematics in Year 10.

EARTH AND ENVIRONMENTAL SCIENCE

Is the study of the Earth and geological processes with an environmental perspective.

The Year 11 Course includes a study of the Earth , Rocks and Minerals ,Plate Tectonics, Energy in Earths processes and Human Impact.

The Year 12 Course includes the study of the Earths Spheres, Natural Disasters, Climate change and Resource Management

Earth & Environmental Science

Year 11 Course

- Earth's Resources
- Plate Tectonics
- Energy transformations
- Human Impacts

Compulsory field study

Year 12 Course

- Earth's Processes
- Hazards
- Climate Science
- Resource Management

Compulsory field study

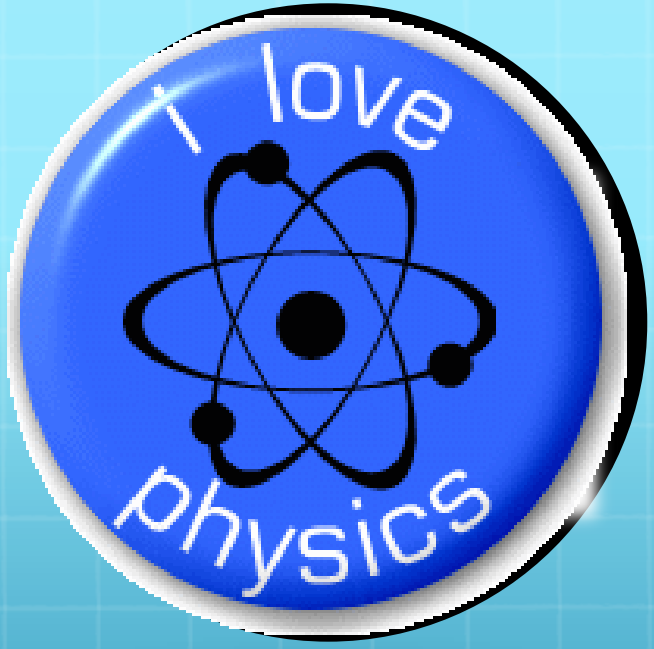
Earth & Environmental Science

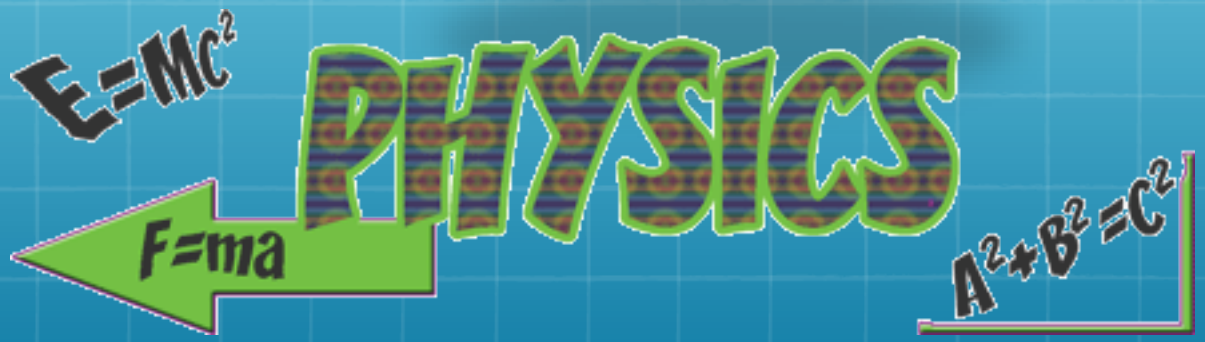
- Comments – EES is an academically demanding course at the HSC level. There is a huge amount of content to cover as well as a lot of subject specific vocabulary to grasp. It will require regular homework and revision.
- Recommendations - You should ONLY be considering selecting EES if you are currently scoring at least a "C" in Science and you have good English literacy skills.

Is the study of matter and its motion through space and time.

The Year 11 Course includes the study of motion, forces and energy, waves and thermodynamics, electricity and magnetism.

The Year 12 Course includes the study of mechanics, electromagnetism, electromagnetic spectrum and light, matter and the universe





Physics

Year 11 Course

- Kinematics
- Dynamics
- Waves and Thermodynamics
- Electricity and Magnetism

Year 12 Course

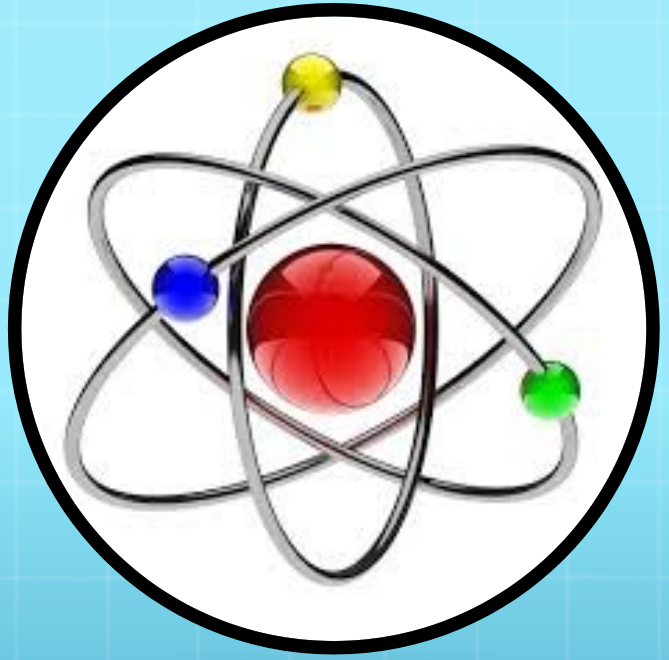
- Advanced Mechanics
- Electromagnetism
- The Nature of Light
- From the Universe to the Atom

Physics

- Comments – Physics is an academically demanding course at the HSC level. There is a huge amount of content to cover as well as a lot of subject specific vocabulary to grasp. It will require regular homework and revision.
- Recommendations - You should ONLY be considering selecting Physics if you are currently scoring at least a “B” in Science; you have good English literacy skills and have successfully completed 5.3 Mathematics in Year 10.

SCIENCE EXTENSION

- ONLY offered at the end of Year 11 to begin Year 12.
- A 1 unit course to studied in conjunction with at least ONE other Science course.
- Must have satisfactorily completed at least ONE Year 11 Science course.
- Will be "offered" to the top students from each of the Science subjects.
- Investigates the philosophy of Science and the processes of Science.



What are the changes to the Science courses?

Whist these courses are similar to previous HSC courses they differ in:

- **Comprised of four mandatory modules in BOTH Year 11 &12**
- **Delivery – centred on Inquiry Questions (inquiry based learning)**
- **Focus on Working Scientifically Skills**
- **Include 35 hours of practical investigations, 15 hours of which are allocated to the new Depth Studies**
- **Structure of HSC paper – ALL parts of the paper are now mandatory (no Option topics).**

What are depth studies?

- Both Year 11 and Year 12 involve a 15 hour depth study in EACH of the Science courses.
- These come from a range of modules and form part of the assessment in each year.
- Depth studies will require both INDEPENDENT and GROUP work skills.
- They may involve collecting and analysing second-hand data (research) or designing and conducting first-hand investigations.

Other Recommendations

- Take into account the literacy and numeracy demands of the NEW courses.
- It is recommended that students will be studying the following courses along with their Science course

- Biology – Earth and Environmental Science
- Chemistry – Mathematics (a very strong 2 unit candidate)
- Earth and Environmental Science – Biology, Geography
- Physics- Mathematics (a strong Advanvced candidate)

HOW MANY UNITS OF SCIENCE CAN I CHOOSE?

- A MAXIMUM OF THREE SUBJECTS - 6 UNITS
- SCIENCE EXTENSION (1 UNIT) – is available for students at the end of Year 11 to pick up for the beginning of the Year 12 course.
- This means you are able to have a maximum of 7 units of Science in Year 12.

Other Recommendations

- It is STRONGLY recommended that only students currently achieving a “B” in Science should consider selecting more than 1 Science.
- Further, it is STRONGLY recommended that only those students achieving an “A” should consider doing 3 Science courses. This should be done in consultation with your class teacher of the HT of Science.

ANY QUESTIONS?