

Year 11 and 12 Subjects (Home)

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Year 11 & 12 Subjects

The electives offered in years 11 and 12 are for a two year duration. Browse through the electives by choosing from the menu on the right.

{mospagebreak title=Marine Studies - OP}

Marine Studies (OP)

Marine Studies is an OP subject. Students will gain a knowledge and understanding of our marine environment, an awareness of the value of our seas, coastal zone and of the necessity of wise management of our marine environment, and an ability to communicate positive values and attitudes regarding our marine environment with an appreciation of the diversity of our marine environment

Completion of the Broadwater Studies Science and/or Marine Studies elective in years 9 or 10 will contribute to the understanding of Marine Studies, although is not prerequisite.

Students study the following topics embedded in various contexts:

- Boating
- CPR
- Non-living aspects of the sea
- Oceans
- Sea water quality
- Pollution
- Fish anatomy
- Marine Biotics
- Commercial aspects of the sea
- Aquaculture
- Commercial Management
- Navigation
- Conservation & Management
- Marine Operator's Certificate
- Practical Boating.

Students also have the opportunity to gain their Recreational Marine Drivers Licence.

Although Marine Studies is not a prerequisite for any university or TAFE studies course, it may be beneficial for future studies in subjects such as Marine Biology and Environmental Studies.

Completion of this course would also be advantageous in preparing students for vocational certificate courses within the marine industry.

{mospagebreak title=Biology - OP}

Biology (OP)

Biology is an OP Subject. Biology provides students with the opportunity to study and appreciate the relationships between living things, including humans and their environment. Students should have an SA (sound achievement) in Science, and a HA (high achievement) in English. Completion of the Physiology and Broadwater Studies Science electives in years 9 or 10 will contribute to the understanding of Biology, although are not prerequisite.

Students study the following topics embedded in various contexts:

- Cell biology
- Ecology
- Physiology of animals
- Reproduction, growth & development
- Stimulus & Response

- Immunology
- Microbiology
- Environmental impact
- Evolution
- Genetics
- Lifestyle Diseases.

The study of this subject at senior level will lead to a wide range of University & TAFE courses and careers. Students will gain a greater appreciation of their natural environment and the role they play in preserving or destroying this environment.

Costs for field excursions for assessment purposes will be approximately \$10.00 per year.

Study of this subject at senior level may lead to a wide range of university courses and careers. These include :

- Nursing
- Dental technician
- Ambulance officer
- Biochemist
- Science Teacher

{mospagebreak title=Chemistry - OP}

Chemistry (OP)

Chemistry is an OP Subject. Chemistry is the study of matter and how it reacts. Students should have a HA (high achievement) or better in both science and maths. An SA (sound achievement) in English is also essential.

During the course, students will acquire knowledge of a range of chemicals and chemical theories and will use this information in various contexts. The topics studied include:

- The nature of matter
- Atomic theory
- Moles and equilibrium
- Chemical bonding
- Acids and bases
- Oxidation/reduction
- Organic chemistry.

Students will be expected to participate in the RACI national chemistry quiz, at a cost to each student of approximately \$3.50 – \$4.

2010 will see the introduction of the GriffChem program with Griffith University wherein students will have the opportunity to gain credit for a Chemistry subject at Griffith University whilst studying year 11 and 12 Chemistry and/or direct entry offer for particular science related courses.

Chemistry has become a vital and essential subject of students doing any tertiary studies in science.

Examples include:

- Engineering
- Bachelor of science
- Agricultural science
- Environmental science
- Medical fields, particularly Nursing and Pharmacy

{mospagebreak title=Physics - OP}

Physics (OP)

Physics is an OP subject. Physics is the way we explain the physical nature of the universe. In Physics we study energy and forces and the way they interact on everyday objects. Students should have a H.A. or better in both Science and Maths. A sound knowledge in English is also essential. Completion of the Physics – Forces and Energy Science elective will contribute to the understanding of Physics in years 11 and 12, although is not prerequisite.

An excellent work ethic will be required for students to obtain maximum outcomes for this subject.

Students study the following topics embedded in various contexts:

- Fundamental Maths & Measurement
- Kinematics
- Force / Momentum
- Motion in two dimensions
- Work & Energy
- Optics Waves
- Electricity
- Electronics
- Magnetism
- Modern Physics

Field excursions to Griffith University Engineering laboratories and Dreamworld form part of the course with associated costs to the student.

Students have the opportunity to participate in the GriffPhys program with Griffith University wherein students will have the opportunity to gain credit for a Physics subject at Griffith University whilst studying year 11 and 12 Physics and/or direct entry offer for particular science related courses.

Students will also have the unique opportunity to gain direct entry to a Griffith University Engineering course if they obtain a minimum of HA (high achievement) for Maths B, English and one other OP subject related to the sciences eg. Physics.

Study of this subject at senior level may lead to a wide range of university courses and careers. These include:

- Engineering
- Electrical trade
- Medical fields / Veterinary practices
- Environmental studies eg. Fisheries, Health Officer
- Electronics
- Geology, Metallurgy
- Science degrees

{mospagebreak title=Cert II in Rural Ops}

Certificate II in Rural Operations RTE20703

Certificate II in Rural Operations is a group of activity-based modules in which students learn-by-doing to develop a range of practical skills related to primary and associated industries. This subject does not contribute to an OP.

This course aims to provide training appropriate for a person involved in general agriculture and horticultural tasks and working under some supervision. The units studied lead to a nationally recognized qualification. A compulsory part of this course is the participation in industry placement. This means that students will be expected to complete on the job training at an agricultural or horticultural workplace. Students will be expected to visit farms during school time to gain relevant industry experience.

UNITS OF COMPETENCY

- RTC2701A Follow OHS procedures
- RTC2702A Observe environmental work practices
- RTC2705A Work effectively in the industry
- RTC2801A Participate in workplace communications
- RTE2902A Collect & record production data
- RTE2129A Move & handle pigs
- RTE1101A Support extensive livestock work
- RUV1103A Support animal care cleaning activities
- RTE2118A Handle livestock using basic techniques
- RTE2128A Provide feed for livestock
- RTE2131A Care for health & welfare of livestock
- RTE2144A Carry out regular livestock observation
- RTE2201A Carry out basic electric fencing operations
- RTE2503A Observe and report on weather
- RTE1601A Support irrigation work
- RUV2401A Prepare for & conduct a tour or presentation
- RTF2013A Pot-on plants
- RTE2136A Load & unload livestock
- RTE2134A Assist with feeding in an intensive production system

RTE2131A Care for health & welfare of livestock

To complete the Certificate II in Rural Operations, students must complete all 17 units of competency. Students must be able to demonstrate their competency in work relevant to the rural sector.

This course leads to the completion of a Certificate II in Rural Operations. This will enable students to further their interests in Agriculture and Horticulture with the opportunity to

- gain entry to further Certificate in Horticulture courses at TAFE.
- Gain employment in Horticulture / Agriculture

{mospagebreak title=Marine and Aquatic Practices - SAS}

Marine and Aquatic Practices (SAS)

This strand enables students to develop skills in Marine & Aquatic Practices through the delivery of study units in management, safety and optional School-developed electives. Students will study Strand B of the Marine & Aquatic Pursuits Course.

Units and modules are designed to deliver interactions within the commercial, environmental, recreational and cultural areas of study. This does not contribute towards an OP.

Completion of the Broadwater studies Science elective in years 9 or 10 will contribute to the understanding of Marine and Aquatic Pursuits, although is not prerequisite.

Students will study the following topics:

- Boating
- Estuarine Animals & Plants
- Shipwrecks & Maritime History
- Oceans
- Canoeing & First Aid
- Aquaculture
- Tourism
- Pollution Management & Conservation
- Fishing, Tides, Weather & Currents

Students who select this course need to display a high degree of self-discipline within the structure of this course. Study elements will require practical experience, recall of knowledge and working with theoretical processes. They need to possess self-discipline and maturity to undertake the activities involved.

(The student must comply with all safety regulations and policies of this course.)

Students also have the opportunity to gain their Recreational Marine Drivers Licence.

Marine and Aquatic Pursuits opens pathways to Queensland Yachting Federation accreditation. This may lead to gaining a commercial Coxswain's certificate, a requirement for working at sea.

This course can lead to:

- Deckhand
- Restricted Coxswain's Certificate
- Coxswain's Certificate
- Master Class V