

Agriculture

The following contains a description of the course we offer to students at St Marys Senior High. It is intended as a guide to help you select your subjects and you should read it carefully.

Please note:

- The details given represent the way that the course is delivered at St Marys Senior High and may involve different choices from the way other schools might operate the same course.
- Classes can only be formed where sufficient students select the particular course. The fact that a course is listed here is not a commitment to run the course in a particular year.
- The arrangements for particular courses are subject to change for a variety of reasons.
- HSC students may elect to take extension courses which we offer in English, French, History, Japanese, Mathematics and Music.

Agriculture - Course Details

Units	Type	ATAR	Faculty Teaching This Course
2	Board Developed Course BOS Number: 11010 – Examinable at the HSC, marks can be used to count towards an ATAR	A – Counts towards an ATAR with no restrictions	Science

What will I be doing in this course?

The Agriculture Stage 6 Syllabus has been designed to allow students to develop knowledge and understanding of the interaction between the components of agriculture and the scientific principles that explain the processes that take place when inputs are transformed into outputs. It caters for a diverse range of students and ability levels. It has the facility to challenge students academically as well as providing them with a wide range of practical skills and an awareness of technologies associated with agriculture.

Opportunities are also provided for students to develop awareness of the welfare, ethical and legal issues relating to animal research.

The Agriculture Stage 6 Syllabus provides opportunities for multiple pathways to employment and further education. Some students may well be stimulated to move into post-secondary agricultural courses or to seek employment in rural and related industries.

The Agriculture Stage 6 Syllabus is designed to increase student understanding and capabilities in a continuum from the farm level through to the international markets in which agricultural commodities are traded. The relevance of the course is enhanced by the inclusion of the study of a farm and agricultural product of interest to the student.

The study of Agriculture in Years 7-10 is NOT necessary for this course. Agriculture may be taken with any combination of science subjects and is NOT counted in the 6 or 7 units maximum limit.

What should I be able to do at the end of the course?

Students will develop:

- knowledge and understanding of the physical, chemical, biological, social, historical and economic factors that interact in agricultural production systems
- knowledge, understanding and skills required to manage agricultural production systems in a socially and environmentally responsible manner
- knowledge of, and skills in, decision-making and the evaluation of technology and management techniques used in sustainable agricultural production and marketing
- skills in effective research, experimentation and communication
- knowledge and understanding of the impact of innovation, ethics and current issues on Australian agricultural systems.

Course Structure

The Agriculture Stage 6 Syllabus has a Preliminary and HSC course.

It is intended that students engage in and reflect upon practical experience relevant to all aspects of the physical, chemical, biological, economic and social sciences embodied within Agriculture Stage 6. Some of this experience will be in the laboratory, some in small plot work and some on commercial farms or other components of the industry. In all cases, students should use these practical experiences to develop design, practical, management, observation, recording, interpretation and communication skills. Practical experiences may also be used to achieve coverage of the content statements not specifically related to skills. ***The practical experiences should occupy a minimum of 30 per cent of allocated course time.***

Preliminary course

120 hours indicative time

The Preliminary course incorporates the study of the interactions between the components of agricultural production, marketing and management, while considering the issues of sustainability of the farming system. This is an 'on-farm', environment-orientated course.

Overview (15%)

- Agricultural systems
- Agricultural history
- Social aspects surrounding agriculture

The farm case study (25%)

- The farm as a unit of production
- Farm management
- Marketing
- Farm technology
- The agricultural workplace

Plant production (30%)

- Plants and their commercial production
- Animals, climate and resource interaction
- Microbes, invertebrates and pests
- Technology
- Experimental design and research

Animal production (30%)

- Animals and their commercial production
- Plants, climate and resource interaction
- Microbes, invertebrates and pests
- Technology
- Experimental design and research

HSC course

120 hours indicative time

The Higher School Certificate course builds upon the Preliminary course. It examines the complexity and scientific principles of the components of agricultural production and places a greater emphasis on farm management to maximise productivity and environmental sustainability. The farm as a fundamental production unit provides a basis for analysing and addressing social, environmental and economic issues as they relate to sustainability, from both national and international perspectives. This is achieved through the farm product study. Australian agriculture faces many challenges and significant and continuous change is needed to address these challenges. New computer, satellite, robotic and biological technologies are being integrated into management systems. As farmers need to respond to changing economic, social and climatic conditions, the electives focus on innovations, issues and challenges facing Australian agriculture.

Core (80%) (approximately 96 indicative hours)

Plant/Animal production (50%)

- Soil, nutrients and water
- Factors contributing to the degradation of soil and water
- Sustainable resource management
- Plant production systems
- Constraints on plant production
- Managing plant production
- Animal nutrition
- Animal growth and development
- Animal reproduction and genetics
- Animal pests and diseases
- Animal ethics and welfare
- Experimental analysis and research in plant/animal systems

Farm product study (30%)

- The farm as a business
- Decision-making processes and management strategies
- Agricultural technology
- Marketing of a specific farm product

Elective (20%)

(approximately 24 indicative hours)

Choose ONE of the following electives to study.

- Agri-food, Fibre and Fuel Technologies
- Climate Challenge
- Farming for the 21st Century