



ELECTIVES: YEAR 10 2018

SCIENCE ELECTIVES

You are required to select two Science modules for Year 10 using Web Preferences. **You must select an 'A' option and a 'B' option.**

Please note:

While Science A and B are **highly recommended** for students intending to study VCE Science subjects, they are **not prerequisites**, so you will not be excluded from any career pathways by your choice of Science modules at Year 10.

Science A

In Science A you will study Chemistry and Physics, exploring the science behind the production of useful products and the motion of objects. In Chemistry, you use your understanding of the periodic table to explain how elements can form chemical compounds and learn how to write chemical formulas and chemical equations. In Physics, you will investigate how Newton's Laws help us understand how cars move and why car collisions result in extensive damage. The mathematical calculations required for the determination of velocity, acceleration and distance will be introduced and consolidated in a range of activities.

This module is recommended if you are considering studying a VCE Science (Biology, Chemistry, Physics or Psychology).

General Science A

In General Science A, you will study Chemistry and Physics, exploring the science behind the production of useful products and the motion of objects. In Chemistry, you will learn about how the periodic table can be used to explain and predict the properties of elements and how these elements form compounds. In Physics, you will investigate the effect of mobile phones on driver reaction times and develop a driver safety awareness program.

Science B

In Science B, you will study Biology and Earth and Space Sciences, learning about the Universe, Earth's natural cycles and the human impact on these cycles. In Biology, you will learn about genetics, looking at the way that genetic information is passed from one generation to the next. In Earth and Space Sciences, you will explore how our Universe is made, investigating the life cycle of stars and the evolution of galaxies.

This module is recommended if you are considering studying a VCE Science (Biology, Chemistry, Physics or Psychology).

General Science B

In General Science B, you will study Biology and Earth and Space Sciences. In Biology, you will learn about how DNA and genes are integral to the transfer of genetic information. In Earth and Space Sciences, you will study stars, galaxies, the Big Bang Theory and human impacts on global systems. In this part of the course, you will design a lesson where you will teach Year 3 students about the ideas that you have learnt in class.

OTHER ELECTIVES

Agriculture

Year 10 Agriculture will provide you with firsthand experience in the establishment and management of animals and plants which are produced for profit. During the semester, you will learn about: working safely on farms, the importance of soil, the production and management of plants and animals, and a range of different agricultural industries. You will investigate and establish a small class business, focusing on the economic, social and environmental sustainability of that business. This course has a high practical component that will require you to work at the farm and carry out all necessary tasks required; you will need to be involved in all aspects of livestock and plant care. Assessments may include business design, field work, investigations of issues and presentations to other classes.

Bahasa Indonesia – single semester or full year

Indonesian in Year 10 is a course intended to prepare students to undertake VCE Indonesian Units 1 and 2 in Year 11. You have the choice of studying Indonesian over either a full year or single semester. By studying Year 10 Indonesian you will have the opportunity to adjust to the requirements of VCE. While studying Indonesian over a full year will give you greater exposure to Indonesian, and a more gradual transition, a single semester of Indonesian will still provide you with the necessary skills to undertake VCE Indonesian. The course is designed to build upon previous learning with students moving towards greater fluency in the language, so you should take your results in Indonesian in previous year into account when considering this subject. Indonesia is Australia's largest close neighbour with a population of more than 200 million people and is expected to become the world's tenth biggest economy by 2025 so there are lots of opportunities for 'Indonesia savvy' people in areas such as law, engineering, diplomatic relations, business and trade, defence, tourism and education.

Computer Aided Design (CAD)

Year 10 Computer Aided Design is recommended if you are interested in selecting VCE courses such as Product Design and Technology and/or Visual Communication and Design in the future. This elective offers you a unique opportunity to gain the necessary skills to use Adobe Illustrator, SketchUp, Autodesk products such as AutoCAD, Inventor and Fusion 360 software to design, model and create realistic renderings of structures and everyday products. The focus of this course is on designing and creating parts, assemblies and fully dimensioned and annotated working drawings. The focus of the CAD course is on the design process, ergonomics, real-life use of CAD for manufacturing, architectural, and environmental considerations within design. You will explore the many functions within the Autodesk design academy suite which allows for easy manipulation of models. You can also view models as animations, place them in virtual environments or finally construct them using 3D printing and laser cutting technology.

Computer Programming

Year 10 Computer Programming will introduce you to computer programming using Microsoft Visual Studio 2010 Express. Some areas that will be incorporated into the course are the introduction to the science of computer programming; problem solving techniques, including algorithm design (N-S Diagrams); and good programming practice, conventions and formats. On completion of this unit you will be able to write well-structured programs of moderate complexity. You will be able to compile programs and have a sound understanding of computer programming principles, including control structures, variables and constants, IF statements and the Visual Basic language. You will create fully functioning computer programs that can operate in a Windows environment.

Commerce – The World of Business

Year 10 Commerce will provide you with the skills necessary to understand how successful small businesses operate, and the factors in the economy that contribute to their success or failure. You will gain an understanding of the world of commerce by investigating a range of practical case studies. This course also looks at developing your awareness of personal finance. You will gain an understanding of the basic concepts relating to Accounting, Business Management and Legal studies. If you do not intend to pursue these subjects in Year 11, you will still gain an understanding of how the business world operates.

Digital Technology

In Year 10 Digital Technology you will learn how to analyse information problems and create solutions using technology. In doing so, you will use a variety of software, techniques and procedures for processing and communicating information so that you can develop and produce solutions to meet specific needs. The course is designed for you to develop skills in preparation for VCE Computing. The subject includes content on creating, using and manipulating databases, using Adobe Dreamweaver to create a website on data security, data handling and spreadsheets.

Drama – Theatre Craft

In Year 10 Drama – Theatre Craft (Semester One), you will develop your skills in theatre stagecraft. You will explore in detail a variety of theatre crafts including lighting, sound, hair, make up, set design, stage management, properties and costumes. You will nominate one theatre craft in which you will become an ‘expert’. You will put your skills into practice through the planning and implementation of a specific theatre craft within the staging of the Middle School Play.

***NOTE: If you choose Drama – Theatre Craft you are required to provide and wear protective work toe shoes.**

Drama – Theatre Studies

In Year 10 Drama – Theatre Studies (Semester Two) you will develop your core acting skills. The elective will serve as an excellent introduction to the Theatre Studies subject so you can assess the viability of taking this subject in VCE. You will learn about the history of theatre and the different forms it has taken over the years. You will then implement these skills through a series of mini performances. You will gain both a theoretical and practical understanding of a variety of stagecraft. This will then be applied through a series of scripts as you implement the Production process, in the development and performance of both group and solo pieces.

***NOTE: If you choose Drama – Theatre Studies you are required to provide and wear Drama Blacks and will be required to participate in the College Play.**

Food Technology

Throughout the semester you will be involved in exploring, designing, preparing, cooking and evaluating various foods. You will learn about and implement new food processing techniques and develop confidence in selecting and using appropriate tools and equipment. Food Technology in Year 10 is divided into two main thematic units. The first unit, food safety, allows you to look closely at safe food handling procedures, food poisoning, cross contamination and the danger zone. The second topic is themed ‘Evolving cuisines’, in which you will look at a range of countries and their cuisine. It’s also an opportunity for you to look at the history of Australian migration and the influence this has had on the multicultural aspect of what is considered Australia’s evolving cuisine. You will present your work in the form of a magazine whilst following the design process.

Media 1 – The Group Project

Media aims to develop and deepen your understanding of different media forms and the designing, planning and process of producing media products. The projects will be created using iPads, HD cameras and Apple computers in the media room and collated into multi-media journals published on MyAitken. In Media 1, you will study two films of a similar genre to understand how narrative (story) structure works and is told through the use of different production and story elements and techniques. You will then take this new understanding of the elements and genre conventions and in small groups apply it to your own short film productions. You will also learn about the different jobs in the film industry and take on those roles to develop new production skills. Finally, you will look at how different groups are represented in the media, how the audience uses and consumes media and the media's role and influence within society past, present and into the future.

Media 2 – The Solo Project

Media aims to develop and deepen your understanding of different media forms and the designing, planning and process of producing media products. The projects will be created using iPads, HD cameras and Apple computers in the media room and collated into multi-media journals published on MyAitken. In Media 2, you will study several different films from the same director, analysing the distinct individual style that director brings to their projects and how it has developed over the course of their career. You will individually research and develop a plan, scripts, storyboards and schedules for a media production, using the conventions and styles of a particular genre and audience. You will then put your design plan into action and create your media product, developing your own production skills working on your own and other students' projects.

Music Performance

Year 10 Music Performance will refine your performance skills; focusing not only on musicianship, but on stagecraft and the art of "performing". You will continue to extend your song writing skills and will perform works composed by yourself and others. Participation in at least one College ensemble is a required part of the weekly learning program of this unit. Participation in ensembles assists development of rhythmic accuracy, pitch discrimination, acquiring a full dynamic range, and developing musical style and vitality through a variety of rehearsal techniques employed by each ensemble director. You will present a performance at the conclusion of the semester in which you perform the works that you have learnt throughout the unit, both as a soloist and as a member of a group. **NOTE: Students wishing to student Music Performance should be currently learning a musical instrument.**

Music Technology

Year 10 Music Technology builds upon your knowledge of digital music making taught in Year 9. You will incorporate technology into your music making and performance by researching the use of technology in music making and discussing its application in contemporary music production. You will collect and organise content for broadcast and publication as you learn to mix sound in a broadcasting environment. Using appropriate tools to undertake routine repairs and maintenance on audio equipment, you will also create your own instrument leads. This subject is an ideal introduction for students interested in studying VET Music Industry (Sound Production) in later years, which could lead to careers such as audio engineering, sound design, music production and composition.

Outdoor Environments

In Year 10 Outdoor Environments you will explore a variety of natural environments and consider how they were formed as well as the adventures that each earthly formation can offer. Human relationships with natural environments will be analysed and discussed regularly in class, and you will learn about self-reflection following outdoor experiences. It is for this reason that participation in related incursions, excursions and other practical activities is compulsory. This subject also includes a full-day practical exam during the normal exam period at the end of semester.

Photography

In Year 10 Photography you will study the art of composing photographs that capture a range of themes, moods and effects. You will also learn how to use the various creative functions of the digital SLR camera. Digital manipulation of photographs will also be explored using Adobe Photoshop. The theory component of the course will involve a study of some of the world's master photographers. We will explore their ideas and analyze the artistic qualities and technical aspects of their work. An important part of the practical course is the photo-shoot excursion, usually to Werribee Park. This gives you the opportunity to practise your camera skills in a beautiful environment. You will prepare for the day with themed ideas and plans. The use of costumes and props is encouraged to further enhance the creativity of your photographs. You will then create a folio of your completed images for assessment. The skills gained in Year 10 Photography can lead to further studies at Year 11 in Art, Media and VCD.

Product Design

Year 10 Product Design provides you with a great opportunity to develop your creativity, problem solving techniques and practical skills. You will investigate, design, produce and evaluate your work according to a design brief. This involves understanding design specifications, investigating and developing design options, materials selection and making informed choices regarding style, joining methods and finish. You will learn about the sequence and processes involved in the development of the final product. These include both freehand sketches and Computer Aided Design (CAD). You will learn how to produce high quality presentation and working drawings, which will include detailed dimensions and annotations. You will learn about the different design factors and how they affect the design and performance of products. Emphasis is given to creative design, construction techniques and the safe use of a range of simple and more sophisticated hand and portable power tools.

Visual Art

Year 10 Visual Art is for students who are keen to explore ideas and messages through Art and to develop skills in preparation for VCE Art/Studio Arts. You will continue to develop skills in the areas that were covered in the core course in Year Seven and the elective courses in Years Eight and Nine. Specific areas of study include painting, print-making, drawing, sculpture, ceramics and mixed media. You will build up a folio of work as well as accompanying development work in your visual art diary. There is an emphasis on you learning and exploring new techniques to express individual themes and ideas through the making of art. In theory lessons you will study a range of art periods and artists to complement the themes that are explored and the materials and techniques used in the practical assignments. You will research the work of a variety of Australian and International artists and study the influences they have had on artworks and art processes. The study of past and contemporary artists and their work practices will be assisted through relevant excursions and research trips or visiting artists.

Visual Communication and Design

The Year 10 Visual Communication and Design course aims to prepare you for VCD in VCE. You will be taught to draw using freehand and technical drawing systems (e.g. paraline and perspective drawing). You will be set a number of design briefs for which you must produce a creative and suitable solution. Throughout the design process you will learn to apply different design approaches and media in your own work. Projects include instrumental drawing, product design, computer enhanced imagery, packaging and symbology. You will complete a folio of work including development work in your visual diary. Various aspects of theory such as the use of design elements, principles and the design process will be taught in this subject. You will research various product, information and environmental designs. Technology will be integrated into the subject with the use of computer software programs such as Adobe Photoshop and Illustrator. Viewing videos and attending relevant excursions or presentations by visiting artists may occur to complement the study of visual communication.