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YEAR 11 & 12 SUBJECT SELECTION HANDBOOK

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YEAR 11 & 12



INTRODUCTION

The Grange P-12 College is committed to building strong personal and learning skills to assist all students with current and future studies and career pathways of their first choice.

Each subject selection handbook (Years 7 & 8, 9 & 10, 11 & 12) contains a comprehensive outline of curriculum areas and subject offerings at The Grange P-12 College.

The handbooks are arranged in the following ways:

»» **Years 7 & 8:** outlines the core subjects that students will complete throughout the year across each discipline in line with the Victorian Curriculum.

»» **Years 9 & 10:** students are presented with a range of core (compulsory) and elective subjects. The elective subjects are intended to provide students with a range of experiences that may lead to further specialization during the later years of study. Some year 10 students may also be engaged in the early commencement program that sees them complete a VCE Unit 1 and 2.

»» **Years 11 & 12:** contains information about the Victorian Certificate of Education (VCE), The Victorian Certificate of Applied Learning (VCAL) and Vocational Education and Training (VET) studies for students. Parents and students are encouraged to select combinations of subjects that lead to their intended career and post – compulsory studies at tertiary institutions.

When selecting subjects and programs of study leading into the later years it is critical that students have formed a general idea of what career options are available beyond formal schooling. The College has well-developed programs that expose students to pathway options and staff who will assist with advice about appropriate courses to suit interests, aspirations and learning strengths.

Year 11 and 12 subject choices should also be made with consideration of materials costs for each subject, where relevant. Subjects that have a materials charge are those practical subjects which require specific materials or consumables that students will use throughout the program. A full listing of these charges is provided to parents and students alongside the relevant handbook.

Please note that the full suite of subjects and elective programs from Years 9-12 presented in these handbooks are held subject to availability and demand from students.

CAREER DEVELOPMENT

Before making decisions about VCE, VCAL and VET programs/subjects. Year 9 and 10 students have participated in and investigated the various career paths through both Year 9 Careers Day and Year 10 Careers Day. After this event students are directed to completing their Career Action Plan. This plan is reflected on annually and updated after relevant career immersion days Year 9- Year 12.

Careers Resource Centre located within the Library complex

The Grange P-12 College is focused on providing students with advice and direction regarding their career pathways. The College commitment to engaging young people in these critical decisions are reflected in commitment to a full time specialist staff member who is highly accessible to students throughout the schooling day.

Students are provided with extensive counselling from within the college, including speciality career expo's, visits to universities and access to TAFE tours and 'tasters'.

The Grange P-12 College supports students wishing to explore the world of work through our work experience program. The College has forged links with local businesses committed to providing students with the necessary skills to succeed in the workforce. (Please see the Careers teacher in the Careers Office for further information).

Selecting a Course and Choosing Subjects

Students should keep in mind the following in selecting a course (VCE or VCAL) and appropriate subjects, including VET subjects:

- »» Careers and tertiary courses that interest them
- »» Subjects they are good at, enjoy and likely to do well in
- »» Subjects that interest them

Students also need to have an awareness of:

- »» Year 11 and 12 pre-requisite subjects that they must have successfully completed in order to be accepted into University courses.
 - There are subjects you need to complete in order to gain admittance into a specific course, without these subjects and a study score universities cannot offer you a place.

Students should also be mindful of whether:

- »» They want to attend university: 3 or more years
- »» They want to attend TAFE: 6 months onwards

Students should also consider tuition fees for various courses. Whether they are Australian Citizens will impact the cost of the course.



YEARS 5 to 12 PATHWAYS

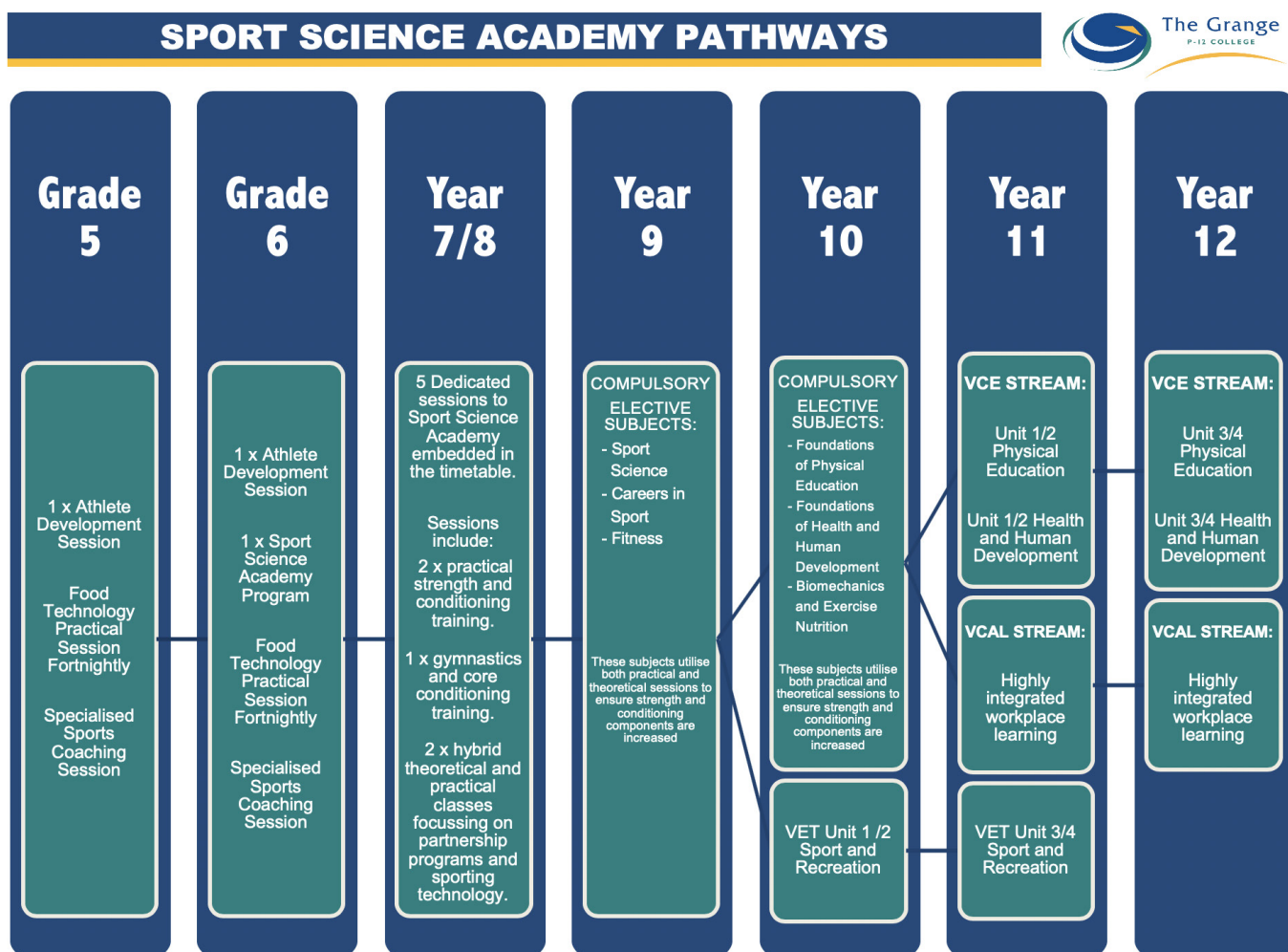
Sports Science Academy

SUB-SCHOOL PROGRAM

Sport Science at The Grange P-12 College is an optional select entry program for students who wish to pursue their academic potential and schooling through a sporting lens. The program shares the College high expectations for students as they participate in and around sporting environments in a variety of different roles. Classes are offered to students from Grade 5 to Year 12 yearly, via an application process, with positions not guaranteed based on previous involvement in the Sport Science Academy. We encourage students to take their time applying for this program.

The Sport Science Academy offers a strong pathway through VCE, VCAL and/or VET to ensure students are able to complete and succeed in Year 12 studies in an appropriate yet challenging learning environment.

See below the Sport Science Academy pathways and compulsory subjects from Grade 5 as outlined further in Subject Selection Handbook.



LEARNING OPTIONS AVAILABLE TO SENIOR STUDENTS

The diagram below indicates the broad certificate choices available at The Grange P-12 College and how these options interconnect. Your Senior School program may be developed by combining a range of the available options in a wide variety of ways.

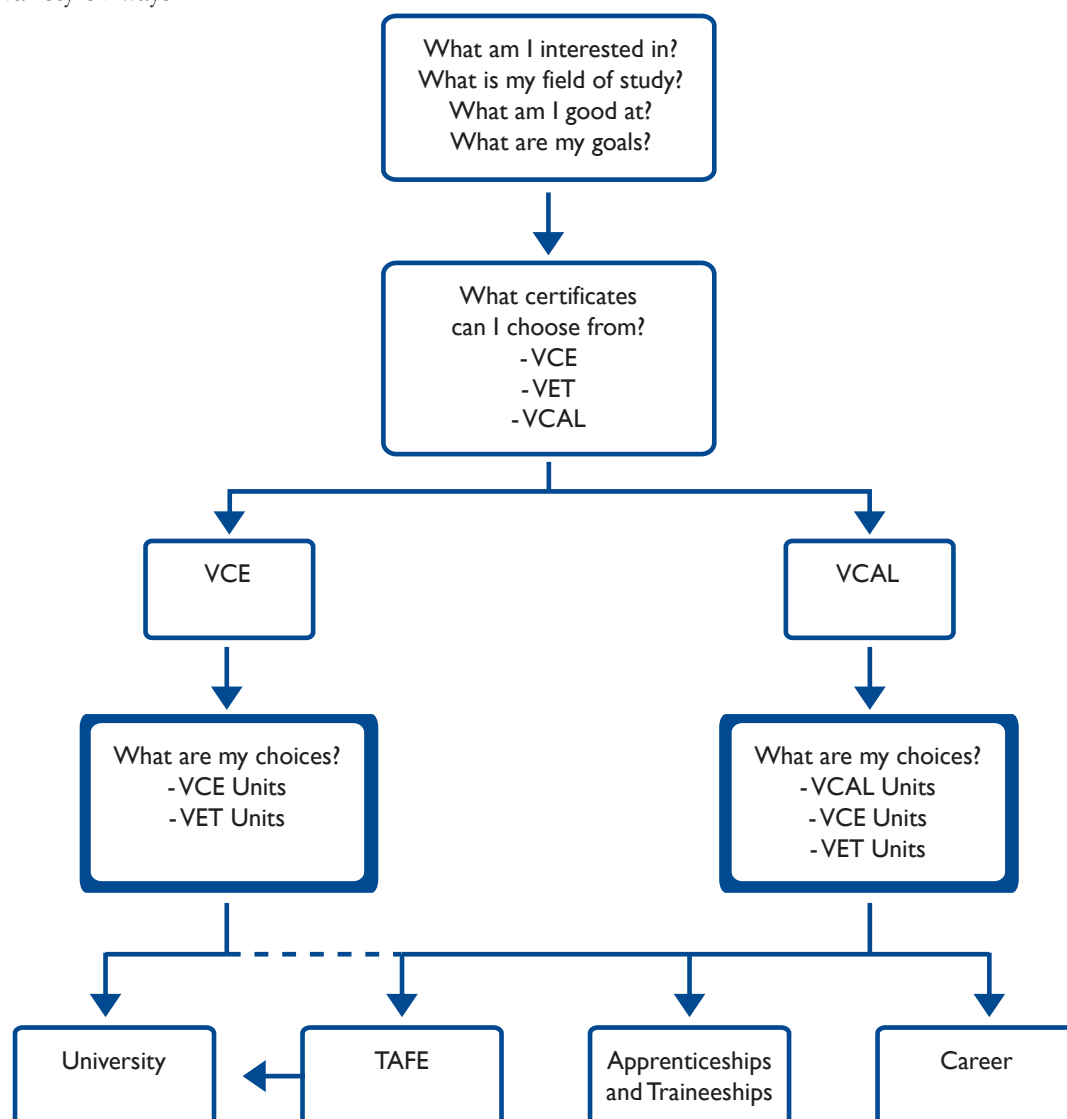


Table: Summary of the range of learning programs offered during Years 11 and 12

Options	VCE Program	VCAL Program	VET Studies
Homework Demands	Demanding (1-4 hours homework per night)	Moderately demanding with 1 hour per night	Ranges from moderate to very demanding depending individual units
Teaching and Learning Styles	Based predominantly on theoretical & analytical learning of key knowledge	Applied & active learning applicable to workplace	Combination of applied and active learning based on achieving a level of competency
Pathways	University entrance TAFE, Apprenticeship or employment	TAFE / trainee / apprenticeship or employment	University, TAFE / Trainee / Apprenticeship or employment
Student Attributes	Highly motivated towards chosen tertiary studies	Students who are self motivated towards specific vocation	Student enjoys combining active and theoretical learning styles
Enrolment and Student Materials Fees	Student material fees are applicable	Student materials fees are applicable	Enrolment fees are applicable for each unit for each year of study

English	Mathematics	Science	Humanities
VCE English (Core for all students) Units 1- 4	VCE Foundation Mathematics Units 1 & 2	VCE Biology Units 1-4	VCE Business Management Units 1-4
VCE Literature Units 1-4	VCE General Mathematics Units 1 & 2	VCE Chemistry Units 1-4	VCE Legal Studies Units 1-4
VCE EAL English (Core for all EAL students) Units 1-4	VCE Maths Methods CAS Units 1-4	VCE Physics Units 1-4	VCE History Units 1-4
VCAL English Year 11	VCE Specialist Mathematics Units 1 - 4	VCE Psychology Units 1-4	
VCAL English Year 12	VCE Further Mathematics Units 3 & 4		
	VCAL Numeracy Year 11		
	VCAL Numeracy Year 12		

Health and Physical Education	The Arts	Specific VET Programs	Specific VCAL Programs
VCE Health and Human Development Units 1-4	VCE Studio Arts Units 1-4	VET Screen & Media Year 1 & 2	VCAL Personal Development
VCE Physical Education Units 1-4	VCE Visual Communication Design Units 1-4	VET Automotive Year 1 & 2	VCAL Work Related Skills
VCE Food Studies Units 1-4	VCE Media Units 1-4	VET Make-Up Year 1 & 2	Structured Workplace Learning
		VET Kitchen Operations Year 1 & 2	
		VET Building and Constructions Year 1 & 2	
Information Technology		VET Sport and Recreation Year 1 & 2	
VCE Applied Computing & Data Analytics Units 1-4			

GLOSSARY OF EDUCATIONAL TERMS

ATAR	Australian Tertiary Admissions Rank. A score is generated from the students' study score.
GAT	A general knowledge examination undertaken by all students who are undertaking units 3 or 4. The GAT is used by VCAA as means of verifying grades or deriving a score.
Learning Outcomes	Learning Outcomes are the basis of satisfactory completion of VCE units. There are approximately 2-4 Learning Outcomes per unit of study. Student must be able to demonstrate their achievement of each learning outcome.
Prerequisite subject	These are units that must be satisfactorily complete (or to stated standard) before a student is eligible for selection into a specific Tertiary course.
SAC	School Assessed Coursework are assessment tasks that are specified in the Study Design set by VCAA. Teachers set SACs that students must complete satisfactorily.
SAT	School Assessed Tasks are completed in subjects that produce a product or model. The unit 3 & 4 work receives a score based on the quality of the work.
Study Score	A score out of 0-50, which sums up the students total achievement in all work set in each unit of work. It is based on internal assessment and external examinations. Only applies to units 3 & 4.
Study Design	A 'study' is broken up into four units. Each VCE study unit is numbered 1, 2, 3 or 4. Student programs may include some Units 1 and 2 in the second or final year and/or some Units 3 and 4 in the first year. Study Designs, assessment advice and other teacher support materials relating to that study.
Trade Training Centre	Specialist facility established to provide training in current industry practices in designated high demand skill areas.
Unit	A self contained study of approximately one semester or commonly referred to as a subject.
VCAA	Victorian Curriculum Assessment Authority – body responsible for the administration of VCE/VCAL/VET in Schools.
VCAL	Victorian Certificate of Applied Learning. A senior school certificate across three levels: Foundation, Intermediate, and Senior based on applied learning.
VCE	Victorian Certificate of Education. A senior school certificate based mainly on theoretical learning.
VET	Vocational Education and Training Studies. Industry endorsed certificates and comprised of units of competency enable students to achieve joint VCE and TAFE qualifications.
VTAC	The Victorian Tertiary Admissions Centre. The Centre processes student applications to the majority of tertiary institutions.

VICTORIAN CERTIFICATE OF EDUCATION VCE

Studies and Units

- Most studies have four units. Each unit lasts one semester, or half-year.
- Units 1 & 2 are usually taken in Year 11.
- Units 3 & 4 are usually taken in Year 12.
- Students may take Units 1 & 2 as single units – that is, just the Unit 1 or just the Unit 2 – Students must take Units 3 & 4 as a sequence (that is Unit 4 follows Unit 3).
- The VCE program is the complete list of VCE units done over two years (Year 11 & 12). It is recommended that students consider as broad a VCE as possible to provide flexible pathways.
- Usually this list will consist of 20 to 24 units (or five to six studies, each of four units).
- The minimum to satisfy successful completion of VCE is 16 units across Year 11 & 12.
- Regardless of how many units students do altogether, you must receive satisfactory completion of:
 - »» At least three units of English and the sequence of English Units 3 & 4, plus a sequence of Units 3 & 4 in three studies apart from English.

Assessment and Reporting

- Judgements about satisfactory completion are based on learning outcomes.
- Each VCE unit of study has between two and four outcomes.
- For all studies, the school decides whether you have satisfactorily completed a unit by achieving the learning outcomes.

Level of Performance

- For Units 1 & 2, there are specific tasks called School Assessed Course (SAC's) that are set by subject teachers, which will measure your level of performance.
- For Units 3 & 4, there are additional types of assessment, for which you get grades as well as an 'S' or an 'N'. These graded assessments are either school assessed or examinations. Each VCE study has two or three graded assessments over Units 3 & 4, a combination of school assessments and examinations.

School Assessment

There are two kinds of school assessment. The first is called School Assessed Coursework (SACs). This assesses how you have performed the Learning Outcomes specified in the Study Design. The second is called a School-Assessed Task (SAT). This kind of task will follow the specifications set by the Victorian Curriculum Assessment Authority. (Generally in subjects requiring a practical component e.g. The Arts & Technology studies.)

VCE English: Units 1 & 2

ATAR Improvement Strategy

Students enrolled in VCE English Units 1 and 2 have the advantage of extra instructional time in order to maximize their score. English is the only compulsory subject in the two year Certificate course – and as such, the score will automatically constitute part of the final ATAR. It is vital, therefore, that all students are working to their full potential and accessing appropriate support in this subject in particular.



VCE English at Units 1 and 2 is undertaken over 6 periods per week, which includes one designated period of Technical English conducted during Period 7. This component of the English course will comprise of a skills-based extension program with the aim of boosting students' study score in this subject. Many universities require a minimum study score of 25 in English for admission to courses, so the program will be designed to equip students with the necessary literacy and critical thinking skills for further study in a range of contexts.

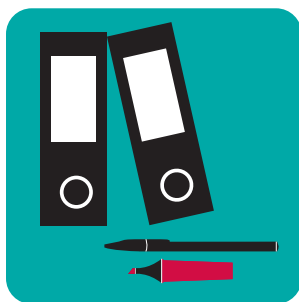
PLANNING MY VCE PROGRAM

Use this chart to plan the VCE program you would like to do

Things to consider:

- Whether you want to complete your VCE in two years or three years
- That you must include an approved combination for the compulsory units from the English group
- The wide range of VCE studies and VCE/ VET programs available
- The advice from your parents, teachers and careers counsellor that may help you identify the program that is best for you

	Year 10	Year 11	Year 12
Unit 1			
Unit 2			
Unit 3			
Unit 4			



UNITS 1 - 4 ENGLISH VCE English

This study aims to develop competence in the understanding and use of English for a variety of purposes sufficient to meet the demands of post-school employment, further education and participation in a democratic society. It emphasises the integration of reading, writing, speaking, listening and thinking. It values student diversity and particularly encourages learning in which students take responsibility for their language development and thus grow in confidence and in language skill and understanding.

Structure

The study is made up of four units:

Unit 1	Area of Study 1 - Reading and Creating Texts Area of Study 2 - Analysing and Presenting Argument
Unit 2	Area of Study 1 - Reading and Comparing Texts Area of Study 2 - Analysing and Presenting Argument
Unit 3	Area of Study 1 - Reading and Creating Texts Area of Study 2 - Analysing Argument
Unit 4	Area of Study 1 - Reading and Comparing Texts Area of Study 2 - Presenting Argument

Unit Outlines

Unit 1	The focus of this unit is the reading of a range of texts, with comprehension, enjoyment and discrimination, development of competence and confidence in writing, and the use of and response to oral language in different contexts.
Unit 2	The focus of this unit is on a variety of forms of response to texts, experimentation with different written forms, and use of oral language to interact positively, critically and confidently with audiences in formal and informal settings.
Unit 3	In this unit students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language.
Unit 4	In this unit students compare the presentation of ideas, issues and themes in texts. They create an oral presentation intended to position audiences about an issue currently debated in the media.

Levels of Achievement

- »» Unit 3 School Assessed Coursework
- »» Unit 4 School Assessed Coursework
- »» End of Year Examination

Career pathways include:

- »» Journalism, media
- »» Professional writing and editing
- »» Publishing
- »» Advertising & Marketing
- »» Government & public service
- »» Creative Writing



UNITS 1 - 4 ENGLISH VCE EAL

English as an Additional Language

English as an Additional Language (EAL) focuses on how English language is used to create meaning in written, spoken and multimodal texts of varying complexity. Students will read and respond to texts to develop their analytical and creative skills. They will learn to analyse and create their own persuasive texts. This course equips students with English language skills to help them to participate in the wider community and become global citizens.

In Units 3 and 4, EAL students need to meet certain criteria for enrolment in VCE EAL. Enrolment in this course is available to qualifying students only.

Structure

The study is made up of four units:

Unit 1	Area of Study 1 - Reading and Creating Texts Area of Study 2 - Analysing and Presenting Argument
Unit 2	Area of Study 1 - Reading and Comparing Texts Area of Study 2 - Analysing and Presenting Argument
Unit 3	Area of Study 1 - Reading and Creating Texts Area of Study 2 - Analysing Argument Area of Study 3 - Listening to Texts
Unit 4	Area of Study 1 - Reading and Comparing Texts Area of Study 2 - Presenting Argument

Unit Outlines

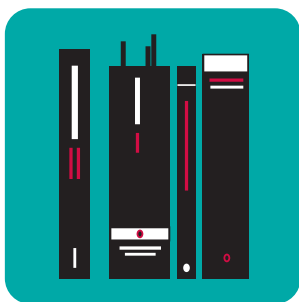
Unit 1	In this unit students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts and create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts.
Unit 2	In this unit students compare the presentation of ideas, issues and themes in texts. They analyse arguments presented and the use of persuasive language in texts and create their own texts intended to position audiences. Students consolidate their skills in creating written, spoken and multimodal texts.
Unit 3	The focus of this unit is to read and respond to texts (both print and non-print) analytically and creatively. Students will analyse arguments and the use of persuasive language in texts. They will also refine listening skills and demonstrate an understanding of how spoken texts construct meaning.
Unit 4	In this unit students compare the presentation of ideas, issues and themes in texts. They create an oral presentation intended to position audiences about an issue currently debated in the media.

Levels of Achievement

»» Unit 3 School Assessed Coursework
»» Unit 4 School Assessed Coursework
»» End of Year Examination

Career pathways include:

»» Journalism, media
»» Interpreter, translator
»» Community Service
»» Publishing
»» Customer Service



UNITS 1 - 4 ENGLISH VCE Literature

VCE Literature focuses on the meaning derived from texts, the relationship between texts, the contexts in which texts are produced and read, and the experiences the reader brings to the texts. The study provides opportunities for reading deeply, widely and critically, responding analytically and creatively, and appreciating the aesthetic merit of texts. Texts selected for study are drawn from the past through to the present and vary in form and social and cultural contexts.

Structure

The study is made up of four units:

Unit 1	Approaches to Literature
Unit 2	Context and Connections
Unit 3	Form and Transformation
Unit 4	Interpreting Texts

Unit Outlines

Unit 1	In this unit students focus on the ways in which the interaction between text and reader creates meaning. Students respond critically, creatively and reflectively to the ideas and concerns of texts and gain insights into how texts function as representations of human experience.
Unit 2	In this unit students explore the ways literary texts connect with each other and with the world. They deepen their examination of the ways their own culture and the cultures represented in texts can influence their interpretations and shape different meanings. Students analyse the similarities and differences across texts and establish connections between them.
Unit 3	In this unit students consider how the form of a text affects meaning, and how writers construct their texts. They investigate ways writers adapt and transform texts and how meaning is affected as texts are adapted and transformed.
Unit 4	In this unit students develop critical and analytical responses to texts. They consider the context of their responses to texts as well as the ideas explored in the texts, the style of the language and points of view. They investigate literary criticism informing both the reading and writing of texts.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Journalism, media
 »» Professional writing and editing
 »» Politics
 »» Publishing
 »» Humanities
 »» Creative Writing

VCE MATHEMATICS OVERVIEW

YEAR 11 AND 12

Mathematics is the study of function and pattern in number, logic, space and structure. It provides both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and precise. It also provides a means by which people can understand and manage their environment. Essential mathematical activities include calculating and computing, abstracting, conjecturing, proving, applying, investigating, modelling and problem solving.

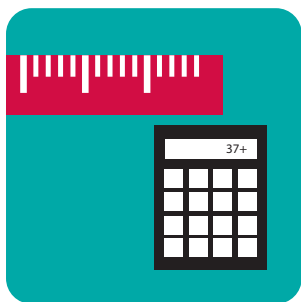
This study is designed to provide access to worthwhile and challenging mathematical learning in a way which takes into account the needs and aspirations of a wide range of students. It is also designed to promote student's awareness of the importance of mathematics in everyday life in a technological society, and confidence in making effective use of mathematical ideas, techniques and processes.

General Guide for Unit Selection

There are a number of different combinations of units or (pathways). These are described below. Discuss what would best suit you with your Maths Teacher, Careers Development Leader, Parents and others before making your selection.

Please note that in the calculation of students' ATARs no more than two subjects of Year 12 Mathematics can contribute to the ATAR primary four.

Package	Career Pathways include:	No. Of units	Year level
Foundation Maths 1&2	Maths for VET, VCAL and apprenticeships	2	11
General Maths Units 1&2	Apprenticeships, Nursing, Art, Music	2	11
General Maths 1&2 Further Maths 3&4	Course for Commerce, Biology, Sciences, Nursing, Teaching and some other tertiary courses	4	11 12
General Maths 1&2 Maths Methods CAS 1&2 Maths Methods CAS 3&4 Further Maths 3&4	Courses for Commerce, Biological Sciences, Nursing, Teaching and some other tertiary courses	6	11 11 12
Maths Methods CAS 1&2 Maths Methods CAS 3&4 Specialist Maths 1&2 Specialist Maths 3&4	Provide widest choice and strongest background. Medicine, Engineering, Health Sciences and Computing Mathematics	8	11 12 12



UNITS 1 & 2 MATHEMATICS VCE Mathematics

FOUNDATION MATHEMATICS

Foundation Mathematics provides for the continuing mathematical development of students entering VCE needing mathematical skills to support their other VCE subjects including VET studies and who do not intend to undertake Unit 3 & 4 studies in VCE Mathematics in the following year.

Foundation Mathematics Units 1 & 2 do NOT provide a pathway to study Mathematics at Unit 3 & 4 levels.

Areas of Study

»» Space, shape and design

»» Patterns and number

»» Data

»» Measurement

GENERAL MATHEMATICS

General Mathematics is designed both to extend students' mathematical knowledge and skills beyond Year 10 level and to provide an appropriate foundation for students who wish to undertake Further Mathematics in Year 12. Topics covered are almost entirely areas of Mathematics with significant applications in a wide range of careers.

Areas of Study

»» Algebra and structure

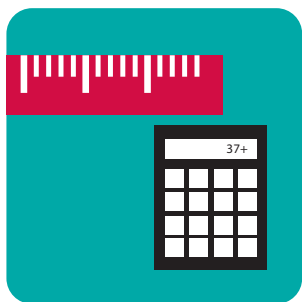
»» Geometry, measurement and trigonometry

»» Arithmetic and numbers

»» Graphs of linear and non-linear relations

»» Discrete mathematics

»» Statistics



UNITS 1 & 2 MATHEMATICS VCE Mathematics

MATHEMATICAL METHODS CAS

Mathematical Methods CAS is a demanding course which significantly extends students' knowledge in key areas of Algebra, Functions, Graphs and also introduces them to the fundamental ideas of Transformational Geometry (including Matrix Methods) and Calculus. Extensive use will be made of the TI-nspire CAS calculator. Any student undertaking Mathematical Methods CAS should have a strong background, particularly in Algebra, and should have achieved at least **above average results for Semester 1 and 2 examinations in Year 10**.

Areas of Study

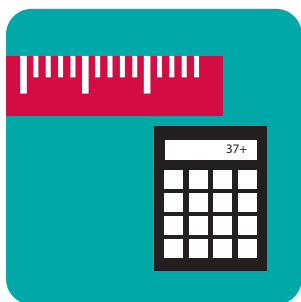
- »» Functions and graphs
- »» Algebra
- »» Calculus
- »» Probability and statistics

SPECIALIST MATHEMATICS

Specialist Mathematics CAS is a demanding course which significantly extends students' knowledge in key areas of Algebra. Specialist Mathematics is an advanced course focussing on the introduction of applications of processes involving rational, real and complex arithmetic, geometric constructions, graphs and calculus. Students wishing to undertake Specialist Mathematics should have an extensive background in Algebra and have **above average results for Semester 1 and 2 examinations in Year 10**.

Areas of Study

- »» Algebra and Structure
- »» Arithmetic and Number
- »» Discrete Mathematics
- »» Graphs of Linear and Non-Linear relations
- »» Geometry, Measurement and Trigonometry Statistics



UNITS 3 & 4 MATHEMATICS VCE Further Mathematics

Further Mathematics covers a range of mathematical topics and techniques which are used in many day-to-day applications in a wide variety of careers.

Areas of Study

The study is made up of two units:

Unit 3 (<i>Core</i>)	Data analysis
	Recursion and Financial Modelling
Unit 4	Matrices
<i>(The College chooses 2 out of 4 modules)</i>	Networks and decision mathematics
	Geometry and Measurement
	Graphs and Relations

Unit Outlines

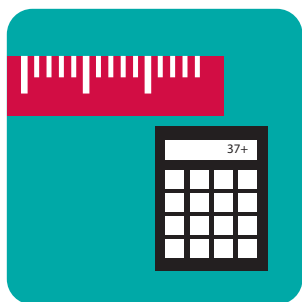
Unit 3 & 4	<p>The Further Mathematics Units 3 & 4 are designed to be widely accessible, comprising a combination of non-calculus based content from the core, and a selection of two from the four possible modules of application contexts.</p> <p>Students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs.</p>
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Levels of Achievement

»» Unit 3 school assessed Coursework
 »» Unit 4 school assessed Coursework
 »» End of Year Examination
 Examination 1 - Multiple choice
 Examination 2 - Written responses

Career pathways include:

»» Accounting
 »» Architect
 »» Health Professional
 »» Teacher
 »» Computer analysis/programming
 »» Engineering
 »» Nursing
 »» Designer



UNITS 3 & 4 MATHEMATICS VCE Mathematical Methods CAS

Mathematical Methods CAS Units 3 & 4 can be a demanding course which significantly extends students' knowledge in key areas of Algebra, Functions, Graphs and also introduces them to the fundamental ideas of Transformational Geometry and Calculus. Extensive use will be made of the TI-nspired CAS calculator.

Students electing to take Mathematical Methods CAS should have a strong knowledge in algebra and have achieved above average results in Mathematical Methods CAS Units 1 & 2 examinations.

Areas of Study

The study is made up of two units:

- | | |
|------------|----------------------------|
| Unit 3 & 4 | Functions and Graphs |
| | Calculus |
| | Algebra |
| | Probability and Statistics |

Unit Outlines

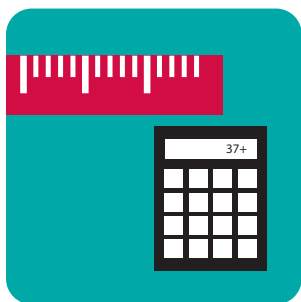
- | | |
|------------|---|
| Unit 3 & 4 | Units 3 & 4 are completely prescribed and extend the study of simple elementary functions to include combinations of these functions, algebra, calculus, probability and statistics and their applications in both practical and theoretical contexts |
|------------|---|

Levels of Achievement

- »» Unit 3 school assessed Coursework
- »» Unit 4 school assessed Coursework
- »» End of Year Examination
- Examination 1 - Short answer and extended response
- Examination 2 - Multiple choice and extended response

Career pathways include:

- | | |
|-------------|-----------------|
| »» Medicine | »» Architect |
| »» Pilot | »» Engineering |
| »» Surveyor | »» Statistician |
| »» VET | »» Scientist |



UNITS 3 - 4 MATHEMATICS VCE Specialist Mathematics

Specialist Mathematics is an advanced and demanding course. The course content focuses on applying techniques to routines and processes involving rational, real and complex arithmetic, geometric constructions, graphs and calculus.

All of this material must be covered in a progression from Unit 1 to Unit 4, with an appropriate selection of content for each of the units. The appropriate use of technology to support and develop the teaching and learning of mathematics is to be incorporated throughout the units.

This will include the use of some of the following technologies for various areas of study or topics: graphics calculators, spreadsheets, graphing packages, dynamic geometry systems, and computer algebra systems. In particular, students are encouraged to use graphics calculators and other both in the learning of new material and the application of this material in a variety of different contexts.

Concurrent enrolment in, or previous completion of, Mathematical Methods Units 1 - 4 is essential.

Areas of Study

The study is made up of two units:

Unit 3	Functions and Graphs
	Algebra
	Calculus and Vectors
Unit 4	Algebra
	Calculus and Vectors
	Mechanics, Probability and Statistics

Unit Outlines

Units 3	Units will typically include content from Functions and Graphs and a selection of material from Algebra, and Calculus and Vectors
Units 4	Units will typically include the remaining content from Algebra, Calculus and Vectors, in addition to Mechanics, and Probability and Statistics

Levels of Achievement

»» Unit 3 school assessed Coursework
 »» Unit 4 school assessed Coursework
 »» End of Year Examination
 Examination 1 - Short answer and extended response
 Examination 2 - Multiple choice and extended response

Career pathways include:

»» Computing
 »» Aeronautics
 »» Health
 »» Engineering
 »» Architecture
 »» Medicine



UNITS 1 - 4 SCIENCE VCE Biology

Biology is a diverse and evolving science discipline that seeks to understand and explore the nature of life, past and present. Despite the diversity of organisms and their many adaptations for survival in various environments, all life forms share a degree of relatedness and a common origin. The study explores the dynamic relationships between organisms and their interactions with the non-living environment. It also explores the processes of life, from the molecular world of the cell to that of the whole organism, that maintain life and ensure its continuity. All units involve designing and performing experiments.

Structure

The study is made up of four units:

Unit 1	How do living things stay alive?
Unit 2	How is continuity of life maintained?
Unit 3	How do cells maintain life?
Unit 4	How does life change and respond to challenges over time?

Unit Outlines

Unit 1	In this unit students are introduced to some of the challenges to an organism in sustaining life. Students examine the cell as the structural and functional unit of life, from the single celled to the multicellular organism. Students investigate how a diverse group of organisms form a living interconnected community that is adapted to, and utilises, the abiotic resources of its habitat.
Unit 2	In this unit students focus on cell reproduction and the transmission of biological information from generation to generation. They examine the process of DNA replication cell division. Students use chromosome theory and terminology from classical genetics to explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses.
Unit 3	In this unit students investigate the workings of the cell from several perspectives. They explore the importance of the insolubility of the plasma membrane, the importance of molecular interactions based on the complementary nature of specific molecules, the synthesis, structure and function of nucleic acids and proteins as key molecules in cellular processes and the nature of biochemical pathways.
Unit 4	In this unit students consider the continual change and challenges to which life on Earth has been subjected. They investigate the relatedness between species and the impact of various change events on a population's gene pool. Students examine the structural and cognitive trends in the human fossil record and the interrelationships between human biological and cultural evolution.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Pharmaceutical researcher and developer
 »» Medical Laboratory Assistant
 »» Pharmaceutical salesperson
 »» Education
 »» Government agency researcher or administrator
 »» Biotechnologist
 »» Biomedical Engineer
 »» Medical Doctor
 »» Forensic Scientist
 »» Veterinarian



UNITS 1 - 4 SCIENCE VCE Chemistry

Chemistry explores and explains the composition and behaviour of matter and the chemical processes that occur on Earth and beyond. Chemistry underpins the production and development of energy, the maintenance of clean air and water, the production of food, medicines and new materials, and the treatment of wastes. Students will investigate, explore and solve qualitative and quantitative problems and discuss chemical concepts and issues. All units involve designing and performing experiments.

Structure

The study is made up of four units:

Unit 1	How can the diversity of materials be explained?
Unit 2	What makes water such a unique chemical?
Unit 3	How can chemical processes be designed to optimise efficiency?
Unit 4	How are organic compounds categorised, analysed and used?

Unit Outlines

Unit 1	In this unit students investigate the chemical properties of a range of materials from metals and salts to polymers and nanomaterials. Using their knowledge of elements and atomic structure, students explore and explain the relationships between properties, structure and bonding forces within and between particles that vary in size from the visible, through nanoparticles, to molecules and atoms.
Unit 2	In this unit students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis. They explore the relationship between these bonding forces and the physical and chemical properties of water.
Unit 3	In this unit students explore energy options and the chemical production of materials with reference to efficiencies, renewability and the minimisation of their impact on the environment. Students analyse manufacturing processes with reference to factors that influence their reaction rates and extent.
Unit 4	In this unit students investigate the structural features, bonding, typical reactions and uses of the major families of organic compounds including those found in food. Students consider the nature of the reactions involved to predict the products of reaction pathways and to design pathways to produce particular compounds from given starting materials.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Biochemist
 »» Chemical Engineer
 »» Pharmaceuticals
 »» Environmental chemistry
 »» Metallurgy
 »» Forensic Science
 »» Petroleum industry



UNITS 1 - 4 SCIENCE VCE Physics

Physics seeks to understand and explain the physical world. It examines models and ideas used to make sense of the world and which are sometimes challenged as new knowledge develops. By looking at the way matter and energy interact through observations, measurements and experiments, physicists gain a better understanding of the underlying laws of nature.

Structure

The study is made up of four units:

Unit 1	What ideas explain the physical world?
Unit 2	What do experiments reveal about the physical world?
Unit 3	How do fields explain motion and electricity?
Unit 4	How can two contradictory models explain both light and matter?

Unit Outlines

Unit 1	In this unit students explore how physics explains phenomena including thermal concepts (such as heat generation and transfer), electricity and the origins and formation of matter, including nuclear radiation, the Big Bang and the quark model of matter.
Unit 2	In this unit students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. This is then applied to the study of aerodynamics as students look at the science of making heavy objects fly.
Unit 3	In this unit students explore gravitational, electric and magnetic fields, and use these to explain the operation of motors and particle accelerators and the orbits of satellite. They also explore how electricity is produced and delivered to homes. They explore the relationships between force, energy and mass using Newton's laws of motion.
Unit 4	In this unit, students explore the use of wave and particle theories to model the properties of light and matter. They examine how the concept of the wave is used to explain the nature of light and explore its limitations in describing light behaviour. Students further investigate light by using a particle model to explain its behaviour.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Engineering
 »» Games design
 »» Medicine and medical imaging
 »» Nuclear scientist
 »» Meteorology
 »» Systems development
 »» Medical research
 »» Governmental policy
 »» Metallurgy
 »» Trades: Electricians, fitting and turning
 »» Geophysics / seismology



UNITS 1 - 4 SCIENCE VCE Psychology

Psychology is a broad discipline which incorporates the scientific study of the mind and of human behaviour. Students will examine 'what makes humans tick' through the behavioural, biological and social perspectives and apply this knowledge to practical activities (experiments), theories and circumstances of everyday life. Students explore how people think, feel and behave and gain valuable insights into human behaviour and a range of psychological health issues which face Australian society.

Structure

The study is made up of four units:

Unit 1	How are behaviour and mental processes shaped?
Unit 2	How do external factors influence behaviour and mental processes?
Unit 3	How does experience affect behaviour and mental processes?
Unit 4	How is wellbeing developed and maintained?

Unit Outlines

Unit 1	Students investigate how the brain functions and examine the relationship between the mind, brain and human behaviour. Students also examine psychological development and consider the complex interplay between nature and nurture which leads us to become the person that we are. Students examine 'atypical' psychological development through a study of psychotic disorders and explore ideas about 'normality.' Students complete a self-directed research investigation.
Unit 2	Students examine how a person's thoughts, feelings and behaviours are influenced by a variety of factors: psychological and social. Students explore how perception of stimuli can be distorted and explore a range of factors which influence behaviour in social groups. Students undertake a practical investigation and draw conclusions from data.
Unit 3	Students investigate the manner in which experiences can affect behaviour and mental processes. Students also explore theories of memory, different levels of consciousness and sleep. Students complete a research investigation task.
Unit 4	Students explore the concept of a mental health continuum, investigate how mental health disorders are diagnosed and consider factors which contribute to mental wellbeing. Students complete a practical investigation.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Psychologist
 »» Counselling
 »» Criminology
 »» Public Relations
 »» Social work
 »» Medical
 »» Youth work
 »» Education
 »» Law



UNITS 1 - 2 SCIENCE

VCE Environmental Science

VCE Environmental Science enables students to explore the challenges that past and current human interactions with the environment presents for the future by considering how Earth's atmosphere, biosphere, hydrosphere and lithosphere function as interrelated systems. In undertaking this study, students examine how environmental actions affect, and are affected by, ethical, social and political frameworks.

In VCE Environmental Science students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary issues related to environmental science, and communicate their views from an informed position.

Structure

The study is made up of two units:

Unit 1	How's are Earth's systems connected?
Unit 2	How can pollution be managed?

Unit Outlines

Unit 1	In this unit students examine Earth as a set of four interacting systems: the atmosphere, biosphere, hydrosphere and lithosphere. Students apply a systems perspective when exploring the physical requirements for life in terms of inputs and outputs, and consider the effects of natural and human-induced changes in ecosystems. They investigate the physical environment and its components, the function of local ecosystems and the interactions that occur in and between ecological components over different timescales. Students consider how the biotic and abiotic components of local ecosystems can be monitored and measured.
Unit 2	In this unit students explore the concept of pollution and associated impacts on Earth's four systems through global, national and local perspectives. They distinguish between wastes, contaminants and pollutants and examine the characteristics, measurement and management of pollution. They analyse the effects of pollutants on the health of humans and the environment over time. Students consider the rules for use, treatment and disposal of pollutants and evaluate the different perspectives of those who are affected by pollutants. They explore the significance of technology, government initiatives, communities and individuals in redressing the effects of pollutants, and consider how values, beliefs and evidence affect environmental decision making.

Career pathways include:

»» Park Ranger	»» Marine Biologist	»» Urban Planner
»» Soil scientist/Laboratory worker	»» Ecologist	»» Zoologist
»» Mining Engineer	»» Environmental Officer	»» Arborist



UNITS 1 - 4 HUMANITIES VCE Business Management

Thinking of a career in the corporate sector about starting your own business? Want to undertake further study in management, marketing, commerce or finance at university or TAFE? Be prepared with VCE Business Management! Business Management examines the ways in which people at various levels within a business organisation manage resources to achieve key objectives. These units examine the theory and practice of managing different business types and sizes, through exposure to real business scenarios.

Structure

The study is made up of four units:

Unit 1	Planning a Business
Unit 2	Establishing a business
Unit 3	Managing a Business
Unit 4	Transforming a Business

Unit Outlines

Unit 1	In this unit students explore the factors affecting business ideas and the internal and external environments within which businesses operate, and the effect of these on planning a business.
Unit 2	This unit focuses on the establishment phase of businesses life. In this unit students examine the legal requirements that must be satisfied to establish a business. They investigate the essential features of effective marketing and consider the best way to meet the needs of the business in terms of staffing and financial record keeping.
Unit 3	In this unit students explore the key processes and issues concerned with managing a business efficiently and effectively to achieve the business objectives. Students examine the different types of businesses and their respective objectives. They consider corporate culture, management styles, management skills and the relationship between each of these. Students investigate strategies to manage both staff and business operations to meet objectives.
Unit 4	In this unit students consider the importance of reviewing key performance indicators to determine current performance and the strategic management necessary to position a business for the future. Students study a theoretical model to undertake change, and consider a variety of strategies to manage change in the most efficient and effective way to improve business performance. They investigate the importance of leadership in change management.

Levels of Achievement

- »» Unit 3 School Assessed Coursework
- »» Unit 4 School Assessed Coursework
- »» End of Year Examination

Career pathways include:

- »» Owner /Manager small business
- »» Innovation and entrepreneurship
- »» Advertising, publicity and marketing
- »» Tourism/hospitality management
- »» Business Management, advisor/consultant



UNITS 1 - 4 HUMANITIES VCE Legal Studies

VCE Legal Studies examines the institutions and principles which are essential to Australia's legal system. Students develop an understanding of the rule of law, law-makers, key legal institutions, rights protection in Australia, and the justice system. Through applying knowledge of legal concepts and principles to a range of actual and hypothetical scenarios, students develop their ability to use legal reasoning to argue a case for or against a party in a civil or criminal matter. They consider and evaluate recent and recommended reforms to the criminal and civil justice systems, and engage in an analysis of the extent to which our legal institutions are effective and our justice system achieves the principles of justice.

Structure

The study is made up of four units:

Unit 1	Guilt and liability
Unit 2	Sanctions, remedies and rights
Unit 3	Rights and justice
Unit 4	The people and the law

Unit Outlines

Unit 1	In this unit students develop an understanding of legal foundations, such as the different types and sources of law and the existence of a court hierarchy in Victoria. Students investigate key concepts of criminal law and civil law.
Unit 2	Students undertake a detailed investigation of two criminal cases and two civil cases from the past four years to form a judgement about the ability of sanctions and remedies to achieve the principles of justice.
Unit 3	In this unit, students consider the Magistrates' Court, County Court and Supreme Court within the Victorian court hierarchy, as well as other Victorian legal institutions and bodies available to assist with cases. Students explore matters such as the rights available to an accused and to victims in the criminal justice system, the roles of the judge, jury, legal practitioners and the parties, and the ability of sanctions and remedies to achieve their purposes.
Unit 4	In this unit, students explore how the Australian Constitution establishes the law-making powers of the Commonwealth and state parliaments, and protects the Australian people through structures that act as a check on parliament in law-making. Students develop an understanding of the significance of the High Court in protecting and interpreting the Australian Constitution.

Levels of Achievement

- »» Unit 3 School Assessed Coursework
- »» Unit 4 School Assessed Coursework
- »» End of Year Examination

Career pathways include:

- »» Para legal
- »» Law enforcement
- »» Social Worker
- »» Correctional services
- »» Lawyer (solicitor/barrister)
- »» Government



UNITS 1 - 4 HUMANITIES VCE History

The great writer, George Orwell, once remarked: “He who controls the past controls the future.” Historical studies involve fascinating explorations of human action in the past and make a critical contribution to our understanding of the present. In this unit, students immerse themselves in the study of past societies so as to understand themselves, others and to broaden their social, political, economic and cultural understanding of the world. In Units 1-4 students explore the problematic nature of working with historical sources and learn that in the past (just as in the present) things are never as simple as they might at first seem. Students explore different interpretations and heated academic debates while undertaking a whirl wind tour which takes them from the edges of the Siberian wilderness in Stalin’s Russia, to the early days of Port Phillip District (now Melbourne) and decolonisation in Asia or Africa.

Structure

The study is made up of four units:

Unit 1	Twentieth Century History 1918-1939
Unit 2	Twentieth Century History 1945-2000
Unit 3	Transformations: Colonial society to nation
Unit 4	Transformations: Old certainties and new visions

Unit Outlines

Unit 1	Students explore the way in which the world was transformed by political, ideological, social and cultural changes during the interwar period. Students examine new ideologies which emerged out of the ashes of the ‘Great War’ such as socialism in the USSR, imperialism and the setting up of colonies world-wide, fascism in Germany and Italy, isolationism in the USA and militarism in Japan. Students examine the first efforts to achieve world peace with the formation (and tragic failure) of the League of Nations and explore the complex causes and tragic events of the Second World War.
Unit 2	Students explore the nature and impact of the Cold War; a decades long confrontation between the ideologies of communism/socialism and capitalism/democracy. Entering a world of intrigue, spies and global conflict students will understand this period from a variety of viewpoints. Independence movements in former colonies in Africa, the Middle East and Asia-Pacific provide a backdrop to the study of continuity and change in the modern world. Students also examine social movements for change such as the LGBT+ movement for civil rights and the peace movement of the 1960s.
Unit 3	Students explore transformative events and processes that changed the nature of Australian society and which created modern Australia. In Unit 3, students explore the world of the 1830’s; a period in which Port Phillip District was inhabited by Indigenous Australians and a small number of colonists. Students will then trace the development of Melbourne from a pastoral economy to a grand city during the Gold Rush era, and later including who was excluded from visions of nationhood in the 1900’s and during World War 1.
Unit 4	Students continue to trace the development of the Australian nation in the early part of the 20th Century. Students consider how World War Two or the Great Depression gave rise to renewed thinking about Australians about how to achieve the society envisaged at the time of Federation. Students subsequently explore social, economic and political changes which overturned (and put into question) much of Australia’s earlier carefully constructed social and economic fabric; a debate which continues into the present. Students examine two changes for example environmental activism and movements for change.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Journalism »» Government »» Academia
 »» Politics »» Social worker »» Non Government
 »» Historian »» Aged Care Agencies



UNITS 1 - 4 HEALTH & PHYSICAL EDUCATION VCE Health and Human Development

The central focus of the Health and Human Development study is to examine the factors that promote health wellbeing in individuals, families and communities. This study aims to develop an understanding of the relationship between Health and Human Development.

Structure

The study is made up of four units:

Unit 1	Understanding health and wellbeing
Unit 2	Managing health and development
Unit 3	Australia's Health
Unit 4	Global Health and Human Development

Unit Outlines

Unit 1	In this unit students identify personal perspectives and priorities relating to health and wellbeing, and enquire into factors that influence health attitudes, beliefs and practices, including among Aboriginal and Torres Strait Islanders. Students look at multiple dimensions of health and wellbeing, the complex interplay of influences on health and wellbeing and the indicators used to measure and evaluate health status. With a focus on youth, students consider their own health as individuals and as a cohort. They build health literacy through interpreting and using data, through investigating the role of food, and through extended inquiry into one youth health focus area.
Unit 2	This unit investigates transitions in health and wellbeing, and development, from lifespan and societal perspectives. Students look at changes and expectations that are part of the progression from youth to adulthood. Students enquire into the Australian healthcare system and extend their capacity to access and analyse health information. They investigate the challenges and opportunities presented by digital media and health technologies, and consider issues surrounding the use of health data and access to quality health care.
Unit 3	Australians generally enjoy good health and are among the healthiest people in the world when compared to other developed countries. This unit focuses on the health status of Australians and the way it is measured. Regardless of how health is measured, health is not shared equally by all Australians. Different levels of health are experienced by different groups, which can be attributed to biological, behavioural and social determinants of health. Different approaches to health issues are examined including government responsibilities.
Unit 4	This unit takes a global perspective on achieving sustainable improvements in health and human development. There is a significant focus on the Sustainable Development Goals, which are made to combat poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. Students study facts that influence differences between developed and developing countries including Government and Non-Government Organisations.

Levels of Achievement

- »» Unit 3 School Assessed Coursework
- »» Unit 4 School Assessed Coursework
- »» End of Year Examination

Career pathways include:

- »» Childhood Development
- »» Community Services/Youth Studies
- »» Family Studies
- »» Nutrition/Dietetics
- »» Health Promotion
- »» Food Science
- »» Nursing
- »» Aged Care
- »» Health Education



UNITS 1 - 4 HEALTH & PHYSICAL EDUCATION VCE Physical Education

Physical Education examines the biological, social and cultural influences on performance and participation in physical activity. Theory and practice are integrated in this study, which is approached through both the study of, and participation in, physical activity. **Please be aware that this course is based heavily on theory and minimal practical activity time.**

Structure

The study is made up of four units:

Unit 1	The Human Body in Motion
Unit 2	Physical Activity, Sport and Society
Unit 3	Movement skills and energy for physical activity
Unit 4	Training to improve performance

Unit Outlines

Unit 1	In this unit, Students explore how the musculoskeletal and cardiorespiratory systems work together to produce movement and how the systems adapt and adjust to the demands of activity. Students also evaluate the social, cultural and environmental influences on movement. They will consider the implications of the use of legal and illegal practices that enhance the musculoskeletal and cardiorespiratory systems, and study strategies to minimise the risk of illness or injury to each system.
Unit 2	Students are introduced to types of physical activity and the role that physical activity and sedentary behaviour plays in their own health as well as in different population groups. They explore a range of factors that influence and facilitate participation in regular physical activity and investigate individual and population-based consequences of physical inactivity and sedentary behaviour. Students also study methods to assess physical activity and sedentary behaviour levels at the individual and population level, and analyse data in relation to physical activity and sedentary behaviour guidelines.
Unit 3	This unit introduces students to the biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective. Students use a variety of tools and techniques to analyse movement skills and apply biomechanical and skill acquisition principles to improve and refine movement in physical activity, sport and exercise. They use practical activities to demonstrate how correct application of these principles can lead to improved performance in physical activity and sport.
Unit 4	Students analyse movement skills from a physiological, psychological and sociocultural perspective, and apply relevant training principles and methods to improve performance within physical activity at an individual, club and elite level. Students analyse skill frequencies, movement patterns, heart rates and work to rest ratios to determine the requirements of an activity. Students consider to physiological, psychological and sociological requirements of training to design and evaluate an effective training program.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Human Movement
 »» Sport and Recreation Management
 »» Personal Training
 »» Sports Marketing
 »» Event Managing
 »» Exercise Science
 »» Sport Psychology
 »» Sports Medicine
 »» Myotherapy
 »» Professional Coaching
 »» Sports Administration
 »» Physical Education



UNITS 1 - 4

HEALTH & PHYSICAL EDUCATION

VCE Food Studies

****Please note that there will be additional charges for this subject.**
Please refer to specific practical subject charges provided as additional information to this booklet.

This study examines the background to the abundance of food in Australia and explores reasons for our food choices. Practical work includes cooking, demonstrations, creating and responding to design briefs, dietary analysis, food sampling and taste-testing, sensory analysis, product analysis and scientific experiments.

Structure

The study is made up of four units:

Unit 1	Food Origins
Unit 2	Food Makers
Unit 3	Food in Daily Life
Unit 4	Food Issues, Challenges and Futures

Unit Outlines

Unit 1	This unit focuses on food from historical and cultural perspectives. Students investigate the origins and roles of food through time and across the world. Students investigate cuisines that are part of Australia's culinary identity today and reflect on the concept of an Australian cuisine. They consider the influence of technology and globalisation on food patterns.
Unit 2	In this unit students investigate food systems in contemporary Australia. Students consider commercial food production industries and food production in small-scale domestic settings. Students use practical skills and knowledge to produce foods and consider a range of evaluation measures to compare their foods to commercial products.
Unit 3	This unit investigates the many roles and everyday influences of food. Students explore the science of food: our physical need for it and how it nourishes and sometimes harms our bodies. Students consider influences on our food choice: how communities, families and individuals change their eating patterns over time and how our food values and behaviours develop within social environments. They also investigate the functional properties of food and the changes that occur during food preparation and cooking.
Unit 4	In this unit students examine global and Australian food systems, issues about the environment, ecology, ethics, farming practices, the development and application of technologies, challenges of food security, food safety, food wastage, and the use of water and land. They practise and improve their food selection skills by interpreting food labels and analysing the marketing terms used on food packaging.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 4 School Assessed Coursework
 »» End of Year Examination

Career pathways include:

»» Hospitality and Tourism Industry »» Dietician
 »» Food manufacturing and Food Science »» Health courses



UNITS 1 - 4 THE ARTS VCE Studio Arts

****Please note that there will be additional charges for this subject.
Please refer to specific practical subject charges provided as additional information to this booklet.**

Studio Arts provides a framework for the establishment of effective art practices through an understanding and application of the process of design. It enables students to specialise in a particular form of studio production. Students generate, explore and communicate ideas through specific studio forms and develop and use specialised skills in a range of media and techniques. The theoretical component of the study informs students' practice through an investigation of how selected studio forms have developed an examination of artists' working methods and a study of professional practices and art industry issues.

Structure

The study is made up of four units:

Unit 1	Studio inspiration and techniques
Unit 2	Studio exploration and concepts
Unit 3	Practices and processes
Unit 4	Studio practice and industry contexts

Unit Outlines

Unit 1	The focus of this unit is the investigation of sources of inspiration, which generate creative activity and the exploration of a wide range of materials and techniques as tools for translating ideas, observations and experiences into visual form. The application of materials and techniques and interpretation of sources of inspiration by artists from different times and locations is also examined.
Unit 2	The focus of this unit is to establish an effective design methodology for the production of art works and develop skills in the analysis of art works.
Unit 3	The focus of this unit is the implementation of the design process leading to the production of a range of solutions. Students also examine traditional and contemporary practices of artists together with the ways in which artists develop distinctive styles and approaches to subject matter.
Unit 4	The focus of this unit is to produce a cohesive folio of finished art works which resolves the aims and intentions set out in the work brief formulated in Unit 3. Students also examine different components of the arts industry and issues relating to the public display, promotion and critique of art works.

Levels of Achievement

»» Unit 3 School Assessed Coursework
 »» Unit 3 School Assessed Task (Folio)
 »» Unit 4 School Assessed Coursework
 »» Unit 4 School Assessed Task
 (Minimum of 2 Finished Artworks)
 »» End of Year Examination

Career pathways include:

»» Painter
 »» Photographer
 »» Illustrator
 »» Education
 »» Print maker
 »» Scenic artist
 »» Art Gallery assistant
 »» Designer
 »» Curator



UNITS 1 - 4 THE ARTS VCE Visual Communication Design

****Please note that there will be additional charges for this subject.**
Please refer to specific practical subject charges provided as additional information to this booklet.

The Visual Communication Design study examines the way visual language can be used to convey ideas, information and messages in the fields of communication, environmental and industrial design. Designers create and communicate through visual means to shape the everyday quality of life for individuals, communities and societies. Visual communication design relies on drawing and use of computers as the primary component of visual language to support the conception and visualisation of ideas. Consequently, the study emphasises the importance of developing a variety of drawing skills to visualise thinking and to present potential solutions.

Structure

The study is made up of four units:

Unit 1	Introduction to visual communication design
Unit 2	Applications of visual communication within design fields
Unit 3	Visual communication design practices
Unit 4	Visual communication design development, evaluation and presentation

Unit Outlines

Unit 1	This unit focuses on using visual language to communicate messages, ideas and concepts. This involves acquiring and applying design thinking skills as well as drawing skills (using ICT) to create messages, ideas and concepts visible and tangible. Students practise their ability to draw what they observe and they use visualisation drawing methods to explore their own ideas and concepts. Students develop an understanding of the importance of presentation drawings to clearly communicate their final visual communications.
Unit 2	This unit focuses on the application of visual communication design knowledge, design thinking skills, drawing and computer methods to create visual communications to meet specific purposes in designated design fields.
Unit 3	In this unit students gain an understanding of the process designers employ to structure their thinking and communicate ideas with clients, target audiences, other designers and specialists. Through practical investigation and analysis of existing visual communications, students gain insight into how the selection of methods, media, materials and the application of design elements and design principles can create effective visual communications for specific audiences and purposes. They investigate and experiment with the use of manual/digital (computer based) methods, media and materials to make informed decisions when selecting suitable approaches for the development of their own design ideas and concepts.
Unit 4	The focus of this unit is on the development of design concepts and two final presentations of visual communications to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated needs. Having completed their brief and generated ideas in Unit 3, students continue the design process by developing and refining concepts for each need stated in the brief. They utilise a range of digital and manual two-and three-dimensional methods, media and materials. They investigate how the application of design elements and design principles create different communication messages with their target audience.

Levels of Achievement

- »» Unit 3 Folio development
- »» Unit 4 Final Presentations
- »» School-Assessed Tasks
- »» End of Year Examinations

Career pathways include:

- »» Illustration & animation
- »» Game design
- »» Digital design
- »» Web design
- »» Interior design
- »» Packaging Design
- »» Graphic Design
- »» Architecture
- »» Fashion Design
- »» Education



UNITS 1 - 4 THE ARTS VCE Media

****Please note that there will be additional charges for this subject.**
Please refer to specific practical subject charges provided as additional information to this booklet.

The media have a significant impact on people's lives. The media entertain, educate, inform and provide channels of communication. The media not only comment on culture, they reflect the society which creates them. The study of media includes media forms such as the press, radio, film, TV, and photography, and media processes such as publishing, advertising, news production, and popular culture.

Structure

The study is made up of four units:

Unit 1	Representation and technologies of representation
Unit 2	Media production and the media industry
Unit 3	Narrative and media production design
Unit 4	Media process, social values and media influence

Unit Outlines

Unit 1	Students develop an understanding of the relationship between the media, technology and the representations present in media forms. Students also develop practical and analytical skills in a study of the production of media products and explore the creative and cultural implications of new media technologies.
Unit 2	Students develop an awareness of the specialist production stages and roles within the collaborative organisation of media production. Students develop practical skills and analyse issues concerning the media production process. Students also develop an understanding of media industry issues and developments.
Unit 3	Students develop an understanding of production and story elements and to recognise the role and significance of narrative organisation in fictional media texts. Students also develop practical skills through undertaking exercises related to aspects of the design and production process.
Unit 4	Students further develop practical skills in the production of media products and to realise a production design. Organisational and creative skills are refined and applied throughout this process. Students also develop an awareness of the role of social values in the construction of media texts and critically analyse issues raised about the role and influence of the media.

Levels of Achievement

»» Unit 3 and 4 School Assessed Coursework
»» Unit 3 and 4 School Assessed Task
»» End of Year Examination

Career pathways include:

»» Illustration & animation
»» Media production
»» Digital & interactive media
»» Film
»» Gaming



UNITS 1 - 4 INFORMATION TECHNOLOGY VCE Applied Computing & Data Analytics

This study is designed to foster student confidence in becoming capable, responsible and ethical users of ICT and adapters of technology. The critical evaluation of the role of ICT in society and the use of selected hardware and software to solve information problems, aims to empower students to initiate or respond effectively to technological change in society and their future workplace.

Structure

The study is made up of four units:

Unit 1	Applied Computing
Unit 2	Applied Computing
Unit 3	Data Analytics
Unit 4	Data Analytics

Unit Outlines

Unit 1	In this unit students focus on how data, information and networked digital systems can be used to meet a range of users' current and future needs. Students collect primary data when investigating an issue, practice or event and create a digital solution that graphically presents the findings of the investigation. Students examine wireless and mobile networks and design a network solution that meets an identified need or opportunity. Students also acquire and apply their knowledge with web authoring skills, when creating a website to present different viewpoints on a contemporary issue.
Unit 2	In this unit students focus on data, design and systems thinking skills to support the creation of solutions that automate the processing of data and programming skills. Students develop a sound understanding of data and how a range of software tools can be used to extract data and reduce the complexity of data. Students also apply all stages of the problem-solving methodology to create a solution using database management software and explain how they are personally affected by their interactions with a database system.
Unit 3	Students examine how relational database management systems (RDBMS) store and manipulate data typically acquired this way. Students develop an understanding of the power and risks of using complex data as a basis for decision making. Students frame a hypothesis and then select, acquire and organise data from multiple data sets to confirm or refute this hypothesis. Students take an organised approach to problem solving by preparing project plans and monitoring the progress of the project. Students draw on the analysis and conclusion of their hypothesis.
Unit 4	Students focus on strategies and techniques for manipulating, managing and securing data and information to meet a range of needs. Students design, develop and evaluate a multimodal, online solution that effectively communicates the conclusion and findings. The evaluation focuses on the effectiveness of the solution in communicating the conclusion and the reasonableness of the findings. Students explore how different organisations manage the storage and disposal of data and information to minimise threats to the integrity and security of data and information and to optimise the handling of information.

Levels of Achievement

»» Unit 3 School Assessed Coursework/Task
 »» Unit 4 School Assessed Coursework/Task
 »» End of Year Examination

Career pathways include:

»» Robotics Engineer,
 »» ICT/Helpdesk Technician
 »» Computer Programmers,
 »» Network Engineer
 »» Web Developer
 »» Mobile Application Developer
 »» Network Administrator
 »» Game Developer
 »» Graphic Designer
 »» Hardware Support and Own Business in Computer Sales

VICTORIAN CERTIFICATE OF APPLIED LEARNING VCAL

The Victorian Certificate of Applied Learning (VCAL) is an alternative qualification to the VCE, designed to provide additional pathways for Years 11 and 12 students interested in vocationally orientated career options or moving straight into employment.

VCAL builds on existing programs that many schools have developed in response to a recognised need for additional learning options in the Senior Years. It sits alongside the VCE and VET to provide students with a wider range of education and training pathways.

What is VCAL?

VCAL is typically for a 'hands on' learner whose pathway is leading towards employment, TAFE or apprenticeship/traineeship. The VCAL teaching team is responsible for your assessment as having met outcomes in a competent manner. Students will need to complete more than two tasks to show that each outcome has been met.

Students studying VCAL are required to undertake a combination of accredited modules and units selected from the following four compulsory strands:

- »» Literacy Skills
- »» Numeracy Skills
- »» Work Related Skills
- »» Personal Development Skills

Industry Specific Skills (VET)

In addition, Year 11 & 12 students undertake VCE Units 1 & 2 study, usually Business Management, Food Studies, I.T. and Health and Human Development, dependent on class availability.

Work Placement is a key component of The Grange P-12 College VCAL program at both Year 11 & 12. Students are encouraged to actively be involved in planning and arranging this work placement.

PLANNING MY VCAL PROGRAM

Use this chart to plan the VCAL program you would like to do

Things to consider:

- The VCAL level (Foundation, Intermediate, Senior). The school will assist you with deciding on the best VCAL level for you
- What you would like to do when you finish school/ training
- Which VET programs you might like to include in your VCAL program
- Which VCE studies you might want to include in your VCAL program
- Whether you have a part-time job and want to receive formal recognition for your on-the-job work
- Your interest in combining work and training (in a school-based apprenticeship) or structured workplace learning

	Literacy and Numeracy Skills Strand	Work Related Skills Strand	Industry Specific Skills Stand	Personal Development Skills Strand
VCAL Units				
VCE Units				
VCE/ VET Programs				
VET/ Further Education Programs				
Credits (for use by school or provider only)				



YEAR 11

VCAL Literacy

The purpose of the course is to enable learners to develop the skills and knowledge to read and write a range of texts on everyday subject matters which include some unfamiliar aspects or material. At this level, once they have identified the audience and purpose of the text, learners use the writing process to produce texts that link several ideas or pieces of information. In reading, learners identify how, and if, the writer has achieved their purpose and express an opinion on the text, taking into account its effectiveness. At the end of the Literacy Unit, learners will be able to read, comprehend and write a range of texts within a variety of contexts.

The oral communication unit provides students with knowledge, understanding and skills in spoken English for different social purposes. The aim of the unit is to teach students that language varies depending on the social context and purpose of the interaction. The course is aimed at developing participants' oral communication skills on areas such as knowledge, practical purposes, problem solving and exploring issues.

What will I Learn?

- »» Different aspects of written material
- »» Purpose of texts
- »» Writing for purpose
- »» Language in social context
- »» Oral communication skills
- »» Skills in spoken English for different purposes

What types of things will I do?

- »» Reading a range of texts
- »» Problem solving
- »» Group discussions
- »» Explore issues
- »» Produce written texts
- »» Oral presentations

Where can this lead me?

Course Pathways

TAFE

Short Courses

Certificates III and IV

Employment

Apprenticeship



YEAR 12

VCAL Literacy

The purpose of this unit is to enable students to develop the skills and knowledge to read and write complex texts. The texts will deal with general situations and include some abstract concepts or technical details. At this level, students produce texts that incorporate a range of ideas, information, beliefs or processes and have control of the language devices appropriate to the type of text. In reading, the student identifies the views shaping the text and the devices used to present that view and express an opinion on the effectiveness and content of the text. In oral communication students use and respond to spoken language for self-expression, to impart knowledge of a particular issue, to explore issues and engage in problem solving, and to communicate for practical purposes.

At the end of the unit students will be able to read, comprehend and write a range of complex texts across a broad range of contexts. Students will be able to use and respond to spoken language with complex and abstract content across a broad range of contexts.

What will I Learn?

- »» To read a variety of texts
- »» To write a variety of texts
- »» Understand technical and abstract details
- »» Understand the purpose of written and spoken texts
- »» Respond to spoken language
- »» Oral communication skills
- »» Exploration of issues

What types of things will I do?

- »» Problem solving
- »» Oral presentations
- »» Group discussions
- »» Short answer questions
- »» »» Explore issues
- »» Production of texts

Where can this lead me?

Course Pathways

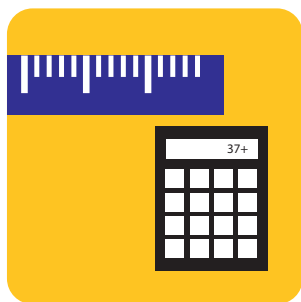
TAFE

Short Courses

Certificates III and IV

Employment

Apprenticeship



YEAR 11

VCAL Numeracy

The purpose of this unit is to enable students to develop everyday numeracy skills to make sense of their daily personal and public lives. The maths involved includes measurement, shape, numbers, and graphs applied to tasks which are part of the learners' normal routine but also extending to applications outside their immediate personal environment such as the workplace and the community, whether first hand or portrayed by the media. At the end of the unit learners would be able to attempt a series of operations or tasks with some confidence, be able to select the appropriate method or approach required, and would be able to communicate their ideas both verbally and in written form. They would be at ease with straightforward calculations either manually and/or using a calculator.

What will I Learn?

- »» Development of numeracy skills
- »» Graphing and measurement
- »» Mathematical calculations and applications
- »» Number facts
- »» Real life numeracy skills
- »» Mathematics for employment

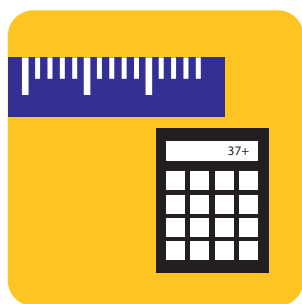
What types of things will I do?

- »» Short answer problems
- »» Use of ICT
- »» Written tasks
- »» Mathematical calculations
- »» Manual calculations
- »» Life and everyday workplace maths
- »» Graphs and surveys
- »» Problem Solving

Where can this lead me?

Course Pathways

- TAFE
- Short Courses
- Certificates III and IV
- Apprenticeship
- Employment



VCAL Numeracy

This course will focus on the application of Numeracy for practical purposes such as in the design, construction and measurement of objects within the physical world. Personal organisation such as the management of time, money and locating destinations and directions will also be covered. Numeracy for interpreting society whereby statistical data will be collected, organised, analysed and interpreted will also be a key feature of the course. The development of mathematical skills for dealing with relationships between variables in real life contexts in order to solve problems using simple linear algebra will also be covered. Assessment will take place through a series of Outcomes and Assessment Tasks.

What will I Learn?

- »» Development of numeracy skills
- »» Measurement of objects
- »» Management of time
- »» Money management
- »» Analysing data
- »» Destination location
- »» Real life numeracy skills

What types of things will I do?

- »» Short answer problems
- »» Use of ICT
- »» Written tasks
- »» Mathematical calculations
- »» Manual calculations
- »» Life and everyday workplace maths
- »» Graphs and surveys
- »» Problem Solving

Where can this lead me?

Course Pathways

TAFE

Short Courses

Certificates III and IV

Apprenticeship

Employment



YEAR 11 & 12

VCAL Work Related Skills

The purpose of the Work Related Skills Strand is to develop employability skills, knowledge and attributes valued within community and work environments as a preparation for employment. The development of employability skills provides learners with a capacity to consider and choose from the range of pathways. The development of Occupational Health and Safety (OHS) knowledge provides learners with the necessary preparation for the workplace.

What will I Learn?

- | | |
|--|---------------------|
| »» Work as a team member | »» Problem solving |
| »» Plan and organise activities | »» Time management |
| »» Find and complete structured workplace learning | »» Self management |
| »» Communication skills | »» Pathway planning |

What types of things will I do?

- | | | |
|--------------------|------------------------------|-------------------------------|
| »» Hazard analysis | »» Industry investigation | »» Problem solving activities |
| »» Team work | »» Careers research | »» Compulsory Work Placement |
| »» Time management | »» Plan, organise and manage | |

Where can this lead me?

Course Pathways

TAFE

Short Courses

Certificates III and IV

Apprenticeship

Employment



YEAR 11 & 12

VCAL Personal Development

The purpose of this aspect of VCAL is to develop skills, knowledge and behaviours that enable improved self-confidence, increased self-esteem and skills for civil and civic participation.

What will I Learn?

Transferrable skills including:

- »» Planning and organising
- »» Communication strategies
- »» Time management
- »» Problem solving
- »» Working in teams
- »» Conflict resolution
- »» Effective use of technology
- »» Task management

What types of things will I do?

- »» Group discussion
- »» Presentations
- »» ICT application
- »» Community Project work
- »» Personal Project work
- »» Written tasks

Where can this lead me?

Course Pathways

TAFE

Certificates III and IV

Short Courses

Apprenticeship

Employment



YEAR 11 VCAL Sports Science Academy

- COMPULSORY SEMESTER SUBJECT SPORTS SCIENCE ACADEMY SUB-SCHOOL -

Through a combination of theory and practical lessons, students will develop a knowledge and understanding of the sporting industry and various workplace opportunities that are available to students through partnership programs including, but not limited to; Victoria University, Deakin University, Rugby Victoria, NRL Victoria, The North Melbourne Football Club, Wyndham Council and Belgrave Group. Students complete strength and conditioning practical classes as well as education around the great outdoors while completing their Duke of Edinburgh Award whilst giving back to the community.

What will I Learn?

- »» Workplace skills within a sports industry
- »» Correct movement techniques in the Strength and Conditioning Room
- »» OHS policies within the sporting industry
- »» New skills and community links to be physically active
- »» How to run sporting events and recreation programs
- »» How to coach children and peers in various sporting contexts

What types of things will I do?

- »» Strength and Conditioning sessions
- »» Engagement in community awards such as Duke of Edinburgh
- »» Partnership sporting programs
- »» Personalised group training programs
- »» Accreditation in sporting codes for coaching and umpiring

Where can this lead me?

Career Outcomes

- »» Sports Coach
- »» Event Manager
- »» Personal Trainer
- »» Gym Instructor
- »» Sport Development
- »» Sport and Recreation

VET Courses on Offer 2020

(Subject to availability, student pathway and numbers)

What is VET?

Vocational Education and Training refers to senior school studies, which enable a secondary student to combine their VCE or VCAL studies with vocational training. VET is **usually** a two year program combining general VCE/VCAL studies with accredited vocational education and training. It enables students to complete a nationally recognised vocational qualification (e.g. Certificate II in Community Services) and VCE/VCAL at the same time. It provides the opportunity to trial a career and helps students explore possible areas of interest which will lead to further study and better work choices.

A VET in Schools program is usually made up of VCE VET units that are delivered at the student's school, another school within the Wyndham VET Cluster or at TAFE.

Contribution to the VCE and ATAR

VET is fully incorporated into the VCE. Key features include:

- »» VET programs usually have a Unit 1-4 structure
- »» Of the 16 units that make up the VCE, a number can be VET units
- »» VET programs contribute directly to the ATAR with a study score derived from scored assessment OR as 10% increment as a 5th or 6th subject. However, in some instances there is nil contribution towards ATAR when Units are at 1 and 2 level only.

For more information, you can access the Victorian Curriculum and Assessment Authority (VCAA) website.

VET Courses at the Grange P-12 College

- »» CERT III in SCREEN AND MEDIA 2 year
- »» CERT III in KITCHEN OPERATIONS 2year
- »» CERT III in SPORT AND RECREATION 2 year



YEAR 11 & 12

VET Certificate III in Screen and Media

****Please note that there will be additional charges for this subject. Please refer to specific practical subject charges provided as additional information to this booklet.**

This subject is a unique opportunity for students to specialise in multimedia and game design. The subject is delivered in partnership with industry specialist the Academy of Interactive Entertainment over 2 years. Students successfully completing this VET program will gain entry into Higher Education Diploma or Certificate courses at A.I.E.

Students will sit a final exam at the end of the second year, which contributes to the ATAR. It is recommended that students complete 80 hours of work placement in this industry.

Students will have the opportunity to visit the A.I.E premises in the city, use their state of the facilities to complete course work for the certificate.

Unit Outlines

- | | |
|--------|---|
| Unit 1 | The focus of this unit is the study of how individuals use, and can be affected by, information and communication technology in their daily lives. Students acquire and apply a range of knowledge and skills to create solutions for various communication purposes. They use web authoring / multimedia authoring and image editing and database management software to create solution and information products to solve information problems |
| Unit 2 | The focus of this unit is how individuals and a variety of organisations use ICT. Students examine how networked information systems are used within organisations. They develop and apply knowledge and skills using programming or scripting language, web authoring / multimedia authoring and image editing software. Additionally students work collaboratively in teams to solve information problems. |
| Unit 3 | The unit focuses on how individuals or organisation use ICT to solve information problems and to participate actively in a society where the use of ICT is commonplace. During this unit, students use database management software to solve information problems and web authoring software to create prototypes or websites. |
| Unit 4 | This unit focuses on how ICT is used by a variety of organisations to manage the storage, communication and disposal of data and information in order to minimise threats to integrity of data and security of information, and to optimise efficient information handling. Students develop and acquire knowledge and skills in creating solutions and information products using spreadsheets and web authoring or multimedia authoring software. |

Levels of Achievement

- »» Unit 3 School Assessed Coursework
- »» Unit 4 School Assessed Coursework
- »» End of Year Examination

Career pathways include:

- »» ICT Support/ helpdesk ICT Technician
- »» Computer Programmers and Game Developer
- »» Network Engineer and Network Administration
- »» Web Developer and Web Designer
- »» Hardware support and Own Business in Computer Sales



YEAR 11 & 12

VET Certificate II in Kitchen Operations

****Please note that there will be additional charges for this subject.
Please refer to specific practical subject charges provided as additional information to this booklet.**

This subject is a unique opportunity for students to specialise in Hospitality. The subject is delivered in partnership with industry specialists and the Grange College.

Students completing this VET program will receive Certificate II in Hospitality- Kitchen operation. This qualification is delivered over 2 years. VCE students are required to sit the Hospitality exam, units 1, 2, mid year unit 3 and final exam. This contributes towards the ATAR in the final year of study. It is recommended that VCAL students sit the exam to further support their TAFE or apprenticeship applications. The VET Hospitality program will contribute at the Foundation, Intermediate and Senior levels of VCAL.

Students wishing to pursue a career in Hospitality are reminded that 80 hours of Structured Workplace Learning is recommended to support student learning.

Unit Outlines

- Unit 1 & 2** This unit focuses on foundational skills in cookery, whereby students will prepare simple dishes such as gnocchi, Caesar salad, tarts, soufflés and dumplings. Students will work with colleagues and customers in a social diverse environment, follow occupational health and safety procedures, develop industry knowledge, organise and prepare food, receive and store kitchen stock and learn methods of cookery. Students will visit Vic Markets to explore the vast array of foods and ingredients available, and investigate the origins of food, from paddock to plate.
- Unit 3 & 4** These units focus upon building skills acquired in units 1 & 2 and acquiring additional skills. Students will prepare, cook and serve food for service. They will focus upon preparation of appetizers, salads, sauces, stock, soups, poultry and desserts. In this unit students will have the opportunity to visit the Langham Hotel as they critique the world of fine cuisine.

Levels of Achievement

- »» Unit 1 & 2 School Assessed Coursework and VETis competency completion.
- »» Unit 3 & 4 School Assessed Coursework and VETis competency completion.
- »» End of Year Examination

Career pathways include:

- »» Chef
- »» Catering
- »» Events
- »» Patisserie
- »» Hotel management
- »» Tourism



YEAR 11 & 12

VET Certificate III Sport and Recreation

****Please note that there will be additional charges for this subject.**
Please refer to specific practical subject charges provided as additional information to this booklet.

This subject is a unique opportunity for students to explore all aspects of a future career in the Sport and Recreation industry. The Certificate III in Sport and Recreation (VCAA Program 3) is the most popular VET in schools course, delivered over two-years. This course offers students a vocational qualification as well as VCE units 1 to 4.

Students will develop the skills and knowledge required to support the operation of facilities and assist in conducting sport and recreation programs as well as develop a comprehensive understanding of the Sport and Recreation industry. This program is an examinable subject and students complete a VCAA exam at the end of the units 3&4 sequence. On successful completion of the course, students will obtain Certificate III in Sport and Recreation, four VCE units and an ATAR contribution.

As part of the program students are strongly recommended to complete 80 hours of Work Placement in the Sport and Recreation industry.

Unit Outlines

- Unit 1 & 2** Students will gain an understanding of the policies, procedures, skills and knowledge needed to work and excel in the Sport and Recreation industry. This will include topics such as how to provide customer service and organise a sport and recreation workplace, how to be a creative thinker and how to utilise social media in the industry. They will also take an in-depth look at what it takes to be a successful coach. As well as completing a unit on workplace health and safety students will receive external training in responding to emergency situations and applying basic first aid.
- Unit 3 & 4** With an overall focus of working in the sport and recreation industry students will complete a fitness unit where they will acquire the skills and knowledge needed to develop and apply a resistance training program. They will learn how to promote sport and recreation programs, how to plan and conducting sport and recreation sessions and how to develop warm up and cool down programs. Students will also discover how to work effectively with groups of people, manage conflict and undertake a risk analysis.

Levels of Achievement

- »» Unit 1 & 2 School Assessed Coursework and VETis competency completion.
- »» Unit 3 & 4 School Assessed Coursework and VETis competency completion.
- »» Units 3 & 4 Written Examination

Career pathways include:

- »» Exercise science
- »» Sports psychology
- »» Swim teacher
- »» After school sports programs
- »» Sport and recreation attendant
- »» Sports event manager
- »» Coaching
- »» Pool lifeguard
- »» Sports retail
- »» Sports trainer
- »» Leisure services officer
- »» Sports administration
- »» Personal training

Wyndham VET Cluster:

To access Wyndham VET cluster courses, an application form and interview is required. Places are dependent on class availability. Preference is given to Year 11 students. Students in Year 10 may apply for a position. If unsuccessful, they will receive first preference in 2021.

Courses delivered in the cluster that are relevant to VCE scored assessment, contribute to a VCAL program, and have a Unit 3 & 4 exam are:

»» HLT33015	CERT III (Partial Completion) in ALLIED HEALTH ASSISTANCE 2 year
»» BSB30115	CERT II (Partial CERT III) in BUSINESS 2year
»» CHC32015	CERT II in COMMUNITY SERVICES 2 year
»» CUA20113	CERT II in DANCE 2 year
»» 22209VIC	CERT II in ENGINEERING STUDIES 2 year
»» MSF20516	CERT II in FURNITURE MAKING 2 year
»» ICT30115	CERT III in INFORMATION, DIGITAL MEDIA & TECHNOLOGY 2 year
»» MSL30116	CERT III in LABORATORY SKILLS 2 year
»» CUA30915	CERT III in MUSIC INDUSTRY (PERFORMANCE) 2 year
»» CUA30915	CERT III in MUSIC INDUSTRY (SOUND PRODUCTION) 2 year

CERT III (Partial Completion) in ALLIED HEALTH ASSISTANCE 2 year

Certificate III in Allied Health Assistance provides students with the knowledge and skills that will enhance their employment prospects in the Health industry. These qualifications cover workers who provide assistance to allied health professionals and other health professionals with the care of clients

CERT II (Partial Cert III) in BUSINESS 2 year

Certificate II with selected units from Certificate III offers a narrower choice of electives but provides students with a Units 3 and 4 sequence and scored assessment. Units 3 and 4 of the program incorporate units such as organising work priorities, organising workplace information, promoting innovation and design and producing business documents. The VCE VET Business program offers essential cross-industry skills for all enterprises.

The Certificate II and III in Business provide a pathway for students wishing to continue with their business studies into higher education.

CERT II in COMMUNITY SERVICES 2 year

VCE VET Community Services program offers students the opportunity to learn about the community services sector and explore specific contexts of work. They will develop skills in communication, information provision and processing, administration support, networking and group support.

CERT II in DANCE 2 year

Certificate II in Dance aims to provide students with the technical and performance skills to begin the process of establishing a career in the entertainment industry. Students will learn the necessary knowledge and skills to enable them to participate in a variety of dance routines. Units 1 and 2 of the program include developing basic levels of physical condition for dance performance and basic dance techniques, sourcing information on the history and theory of dance and applying it to an area of work. Units 3 and 4 offers scored assessment and incorporates units such as sourcing and applying entertainment industry knowledge, preparing for a dance performance, refining basic dance techniques and applying basic dance techniques for performances.

CERT II in ENGINEERING STUDIES 2 year

This program provides students with the knowledge and skills to achieve competence that will enhance their employment prospects in the engineering or engineering related industries

CERT II in FURNITURE MAKING 2 year

This course is designed to provide students with the knowledge and skills to achieve units of competence that will enhance their employment prospects in the furnishing industry.

CERT III in INFORMATION, DIGITALMEDIA & TECHNOLOGY 2 year

This course will equip the student with comprehensive skills and knowledge to enter the information and communications technology (ICT) field. The course provides the introductory skills and knowledge with an emphasis on ICT support and computer networking. The course incorporates theoretical, practical and hands-on training in areas such as PC hardware and software maintenance; server administration; client operating systems; and workplace skills. The students will be enrolled in enough units over the two years to obtain the full certificate but VCAA requires only partial completion to obtain satisfactory VCE VET study score. The choice is with the students if they want to complete the full certificate by working on the additional units or follow the VCAA pathway which will only be entitled the student to a Statement of Attainment from the RTO.

CERT III in LABORATORY SKILLS 2 year

The VCE VET Laboratory Skills program is drawn from the MSL09 Laboratory Skills Training Package and provides students with a pathway to working in a wide range of enterprises and industry sectors such as process manufacturing, food and beverage processing, biotechnology, biomedical research, pathology testing, mining, chemical, forensic, environmental analysis and education.

Certificate III in Laboratory Skills provides students with the necessary knowledge and skills associated with the day-to-day operation of a laboratory and associated technical tasks such as sampling and testing. Units 1 and 2 include units such as recording and presenting data, planning and conducting laboratory/field work, maintaining the laboratory fit for purpose, with electives such as performing basic tests and assisting with fieldwork included. Units 3 and 4 offers scored assessment and incorporates units such as performing aseptic techniques, contributing to the achievement of quality objectives, preparing working solutions and performing microscopic examinations.

CERT III in MUSIC INDUSTRY (PERFORMANCE) 2 year

Certificate III in Music enables students to apply a broad range of knowledge and skills in varied work contexts in the music industry. Depending on the electives chosen, Units 1 and 2 include preparing for performances, writing song lyrics, developing ensemble skills and assisting with sound recordings. Units 3 and 4 offer scored assessment and include units such as developing improvisation skills, applying knowledge of genre to music making and performing music as part of a group or as a soloist.

CERT III in MUSIC INDUSTRY (SOUND PRODUCTION) 2 year

Certificate III in Music Industry (Sound Production) provides students with the practical skills and knowledge to record, mix and edit sound sources. Units 1 and 2 include developing music industry knowledge, establishing contractual and work relationships, and following health, safety and security practices. Units 3 and 4 offers scored assessment and includes units such as editing sound using digital systems, operating sound mixing consoles, operating sound reinforcement systems and mixing sound sources.

Courses delivered in the cluster that contribute to a VCAL program:

- »» CERT III in EARLY CHILDHOOD EDUCATION & CARE 2 year
- »» CERT II in VISUAL ARTS 2 year
- »» CERT II in ELECTROTECHNOLOGY STUDIES 2 year
- »» CERT II in HORTICULTURE 2year
- »» CERT III in INFORMATION, DIGITAL MEDIA & TECHNOLOGY 2 year
- »» CERT III in LABORATORY SKILLS 2 year
- »» CERT II in ANIMAL STUDIES 2 year
- »» CERT II in APPLIED FASHION DESIGN & TECHNOLOGY 2 year
- »» CERT II in AUTOMOTIVE VOCATIONAL PREPARATION 2 year
- »» CERT III in BEAUTY SERVICES 2 year
- »» CERT III in AVIATION (REMOTE PILOT - VISUAL LINE OF SIGHT) 1 year
- »» CERT II in BUILDING & CONSTRUCTION (BRICKLAYING PRE-APPRENTICESHIP) 2 year
- »» CERT II in BUILDING & CONSTRUCTION (CARPENTRY PRE-APPRENTICESHIP) 2 year
- »» CERT III in MAKE-UP 2 year
- »» CERT III in MUSIC INDUSTRY (PERFORMANCE) 2 year
- »» CERT III in MUSIC INDUSTRY (SOUND PRODUCTION) 2 year
- »» CERT II in PLUMBING (PRE-APPRENTICESHIP) 2 year
- »» CERT II in SMALL BUSINESS 2 year

CERT III in EARLY CHILDHOOD EDUCATION & CARE 2 year

The Certificate III in Early Childhood Education & Care (formerly called Children's Services) prepares students to be competent in a range of skills, knowledge and attributes identified by the Children's Services sector. The course has specialist children services units to enable work in child care centres when completed.

CERT II in VISUAL ARTS 2 year

This qualification allows learners to develop the basic creative and technical skills that underpin visual arts and craft practice. Students undertake a range of subjects and use a range of art mediums within the course to further their knowledge within the Arts area of study.

CERT II in ELECTROTECHNOLOGY STUDIES 2 year

The Certificate II in Electrotechnology aims to provide students with the knowledge and skills to achieve units of competence that will enhance their employment prospects in the electrical industry. It also provides students with increased opportunities of gaining an electrical apprenticeship. The program also provides experiences across a number of electrical trades including electrical, electronics, refrigeration and mechanical engineering.

CERT II in HORTICULTURE 2 year

The Certificate II is regarded as an entry level course. Graduates will have skills and knowledge to become a valued and productive employee within the Amenity Horticulture Industry. Graduates assist with planting and maintaining lawns, shrubs and garden beds in public or private gardens and parks. Upon successful completion of the Certificate II in Horticulture students may choose to complete an apprenticeship or traineeship in Horticulture, Parks and Gardens or Landscape Construction.

CERT III in INFORMATION, DIGITAL MEDIA & TECHNOLOGY 2 year

This course will equip the student with comprehensive skills and knowledge to enter the information and communications technology (ICT) field. The course provides the introductory skills and knowledge with an emphasis on ICT support and computer networking. The course incorporates theoretical, practical and hands-on training in areas such as PC hardware and software maintenance; server administration; client operating systems; and workplace skills. The students will be enrolled in enough units over the two years to obtain the full certificate but VCAA requires only partial completion to obtain satisfactory VCE VET study score. The choice is with the students if they want to complete the full certificate by working on the additional units or follow the VCAA pathway which will only be entitled the student to a Statement of Attainment from the RTO.

CERT III in LABORATORY SKILLS 2 year

The VCE VET Laboratory Skills program is drawn from the MSL09 Laboratory Skills Training Package and provides students with a pathway to working in a wide range of enterprises and industry sectors such as process manufacturing, food and beverage processing, biotechnology, biomedical research, pathology testing, mining, chemical, forensic, environmental analysis and education.

Certificate III in Laboratory Skills provides students with the necessary knowledge and skills associated with the day-to-day operation of a laboratory and associated technical tasks such as sampling and testing. Units 1 and 2 include units such as recording and presenting data, planning and conducting laboratory/field work, maintaining the laboratory fit for purpose, with electives such as performing basic tests and assisting with fieldwork included. Units 3 and 4 offers scored assessment and incorporates units such as performing aseptic techniques, contributing to the achievement of quality objectives, preparing working solutions and performing microscopic examinations.

CERT II in ANIMAL STUDIES 2 year

This program provides training and skill development for the achievement of competencies in areas such as occupational health and safety, animal care, veterinary clinic duties, handling of animals and communication skills.

CERT II in APPLIED FASHION DESIGN & TECHNOLOGY 2 year

Certificate II in Applied Fashion Design and Technology provides an introductory overview of skills that can be applied in the fashion industry. It includes various skills in designing, production of garments, millinery, and the development of unique fashion and textile designs. Students must complete 13 units of competency to gain MST201616 Certificate II in Applied Fashion Design and Technology.

CERT II in AUTOMOTIVE VOCATIONAL PREPARATION 2 year

Offered at The Grange P-12 College

This program provides training and skill development required to perform minor maintenance and repair of an automotive vehicle body. The range of technical skills and knowledge is limited. This qualification reflects the role of individuals who perform a limited range of tasks relating to identifying and inspecting mechanical and electrical components and systems of light vehicles, heavy vehicles, outdoor power equipment, bicycles, marine craft and motorcycles.

CERT III in BEAUTY SERVICES 2 year

Certificate III in Beauty Services SHB30115 has been designed as a standard entry level qualification for the Beauty industry. It applies to those wishing to develop the skills and knowledge to begin a career in as a makeup artist. Likely functions within the Beauty industry for those who achieve this level of qualification include working within clearly defined contexts and under supervision. It involves communicating in the workplace, performing routine salon/store functions, demonstrating skin care products and designing and applying make-up in general and specialist situations.

CERT III in AVIATION (REMOTE PILOT - VISUAL LINE OF SIGHT) 1 year

Drone technology is booming. The market for drone technology has been estimated by Price Waterhouse Coopers to grow to US\$127 billion by 2020.

CERT II in BUILDING & CONSTRUCTION (BRICKLAYING PRE-APPRENTICESHIP) 2 year

This course will equip students with comprehensive skills and knowledge to enter the bricklaying or building trades. The course is designed to enhance students' bricklaying and/or associated building trades prospects and gives them an introduction to the industry specific trade skills such as hand and power tools and also the requirements of occupational health and safety procedures within the industry.

CERT II in BUILDING & CONSTRUCTION (CARPENTRY PRE-APPRENTICESHIP) 2 year

This course will equip students with comprehensive skills and knowledge to enter the carpentry or building trades. The course is designed to enhance students' carpentry and/or associated building trades prospects and gives them an introduction to the industry specific trade skills such as hand and power tools and also the requirements of occupational health and safety procedures within the industry.

CERT III in MAKE-UP 2 year

This course will equip students with the hands-on skills and knowledge required to provide make-up services in a salon or as a freelance artist. The program covers topics such as demonstrating and selling make-up and retail skincare products, and also develops their communication and customer service skills to prepare them to perform routine salon and store functions.

CERT III in MUSIC INDUSTRY (PERFORMANCE) 2 year

Certificate III in Music enables students to apply a broad range of knowledge and skills in varied work contexts in the music industry. Depending on the electives chosen, Units 1 and 2 include preparing for performances, writing song lyrics, developing ensemble skills and assisting with sound recordings. Units 3 and 4 offer scored assessment and include units such as developing improvisation skills, applying knowledge of genre to music making and performing music as part of a group or as a soloist.

CERT III in MUSIC INDUSTRY (SOUND PRODUCTION) 2 year

Certificate III in Music Industry (Sound Production) provides students with the practical skills and knowledge to record, mix and edit sound sources. Units 1 and 2 include developing music industry knowledge, establishing contractual and work relationships, and following health, safety and security practices. Units 3 and 4 offers scored assessment and includes units such as editing sound using digital systems, operating sound mixing consoles, operating sound reinforcement systems and mixing sound sources.

CERT II in PLUMBING (PRE-APPRENTICESHIP) 2 year

The Certificate II in Plumbing (Pre-Apprenticeship) will equip students with the basic skills and knowledge to enter the plumbing or associated building industries and is designed to enhance their apprenticeship prospects. The program covers relevant material, equipment, and occupational health and safety procedures to ensure they work safely and effectively on building sites.

CERT II in SMALL BUSINESS 2 year

This course provides students with the knowledge and skills to enhance their employment prospects in a small business or related industries. The program offers full completion of the certificate II and includes units such as small business policies and procedures, professional skills for small business environments, small business operations and innovation, small business planning, quality and change processes and routine financial activities of a small business.