



GEELONG GRAMMAR SCHOOL®
EXCEPTIONAL EDUCATION



CURRICULUM GUIDE 2024

YEAR 11-12 VCE

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01	Welcome to VCE	5
	A vibrant and diverse programme	5
	Course Requirements	5
	Entry Into Units 3 and 4	6
	Availability of subjects	7
	Special Provision	7
02	Arts	8
	Art Making and Exhibiting (formally known as VCE Studio Arts)	8
	Media	12
	Music	14
	Theatre Studies	17
	VET Certificate III in Music Industry (Performance)	20
	VET Certificate III in Music Industry (Sound Production)	22
	Visual Communication Design	24
03	English	28
	English	28
	English as an additional language	31
	Literature	34
04	Equine Studies (VET)	37
05	Health and Physical Education	38

Health and Human Development	38
Physical Education	40
VET Certificate III in Sport and Recreation	43

06 Humanities 45

Accounting	45
Australian and Global Politics	48
Business Management	50
Economics	54
Geography	57
History - Overview	60
Ancient History	61
History (Modern)	62
History (Revolutions)	63
Legal Studies	64

07 Languages 67

Chinese	67
French	70
German	72
Japanese Second Language	75

08 Mathematics 78

Foundation Mathematics	78
General Mathematics	79
Mathematical Methods (CAS)	82
Specialist Mathematics	86

09	Science	90
	<hr/>	
	Biology	90
	Chemistry	94
	Environmental Science	98
	Physics	100
	Psychology	103
10	Technology	107
	<hr/>	
	Agricultural and Horticultural Studies	107
	Product Design and Technology	109

01 Welcome to VCE

A vibrant and diverse programme

Geelong Grammar students can select from a broad range of subjects across a spectrum of disciplines. Our VCE programme offers a vibrant and engaging curriculum that ensures the gifts of every student are energised and optimised.

VCE studies are made up of Units 1, 2, 3 or 4. Each unit is a semester, or half year in length. Students may choose to study Unit 1 or Unit 2 of a subject as stand-alone units, however Units 3 and 4 must be studied as a sequence.

Most students will undertake 22 units over the two-year VCE period; 12 units at Year 11, and 10 units at Year 12.

Students who display the academic ability and maturity in Year 9 have the option of completing either VCE Unit 1 or 2 or both in Year 10. Similarly, Year 11 students wishing to study a Unit 3 and 4 sequence need to be achieving an overall B average in Year 10 and a B+ in the prerequisite subject.

Hear more about the VCE

<https://vimeo.com/227855763>

Course Requirements

To obtain the VCE, students must satisfactorily complete sixteen units, including:

At least three units from the English group: English, English (EAL) or Literature, and at least three other Unit 3 and 4 sequences.

At least one of the English units must be a Unit 3 and 4.

What is the ATAR?

The Australian Tertiary Admission Rank (ATAR) is a means of statistically treating study scores and is important to tertiary institutions for student selection. Its calculation is undertaken by the Victorian Tertiary Admissions Centre (VTAC).

The ATAR uses study scores from Unit 3 and 4 VCE studies and, where appropriate, VCE VET programs. The scores in each study are compared or 'scaled' to yield a percentile ranking for each student that reflects their comparative performance against all other candidates across the state.

Students completing the IB Diploma are also given a ranking, which can be converted to an ATAR for tertiary admission purposes.

Entry Into Units 3 and 4

In some subjects, students must have completed Units 1 and 2, and in other subjects it is possible to complete Units 3 and 4 without Units 1 and 2 although extensive pre-reading may be required.

Students who have not completed Unit 1 and Unit 2 in a subject and who wish to select a Unit 3 and 4 subject for the following year will need to seek permission from the relevant Head of Department. The student's academic record and work ethic will be considered before permission is granted.

Units 3 and 4 at Year 11

Some students may be interested in the possibility of taking one Unit 3 and 4 sequence during Year 11. While it is accepted that this possibility is appropriate in some circumstances it may be a disadvantage in others.

Units 3 and 4 work is based on the development of skills, knowledge and intellectual maturity that Units 1 and 2 studied at Year 11 encourage. While it is no doubt possible to undertake some Units 3 and 4 without this preparation, and to do so with success, the overall picture must be kept in mind before any decision is made. For some Year 11 students, the commitment necessary to succeed at one sequence of Unit 3 and 4 could undermine the proper foundation for Year 12 in other subjects. Moreover, it could mean that participation in the wider life of the School may be hampered. As a result the seeming advantage of an extra final year subject and the bonus points that might be involved is overshadowed by the eventual loss of more points across an entire academic programme and limitation of the wider education of the student.

Consequently, some students do not take a Year 12 subject during Year 11.

Year 11 students wishing to select a Unit 3 and 4 sequence need to be achieving an overall B average in Year 10 and a B+ in the required prerequisite subject. Students would also need to gain a recommendation from their subject teacher and the relevant Head of Department which would largely be based on the student's Attitude and Effort grades from Year 10.

Entry to a Unit 3 and 4 sequence at Year 11 will only be possible if it can be arranged within the timetable.

Subject selection decisions should be discussed with the parents, Mentor, the Head of House, the Head of Careers and the VCE Coordinator.

Availability of subjects

At the completion of the subject selection process a subject may not proceed if there is an insufficient number of students choosing that subject. The students involved would be informed of the changes as soon as possible.

Special Provision

Students with a significant learning difficulty may be eligible for Special Provision. Advice can be sought from the Director of Inclusive Learning or VCE Coordinator early in Year 11 so that appropriate testing and documentation can be put into place, although the final decision rests with VCAA.

02 Arts

Art Making and Exhibiting (formally known as VCE Studio Arts)

<https://vimeo.com/825323287>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Explore, expand and investigate

In this unit students explore materials, techniques and processes in a range of art forms. They expand their knowledge and understanding of the characteristics, properties and application of materials used in art making. They explore selected materials to understand how they relate to specific art forms and how they can be used in the making of artworks. Students also explore the historical development of specific art forms and investigate how the characteristics, properties and use of materials and techniques have changed over time. Throughout their investigation students become aware of and understand the safe handling of materials they use.

Students explore the different ways artists use materials, techniques and processes. The students' exploration and experimentation with materials and techniques stimulates ideas, inspires different ways of working and enables a broad understanding of the specific art forms. Their exploration and experimentation is documented in both visual and written form in a Visual Arts journal.

ASSESSMENT

1. Folio (65%)
2. Research (15%)
3. Examination (20%)

Unit 2: Semester 2 - Understand, develop and resolve

In this unit students continue to research how artworks are made by investigating how artists use aesthetic qualities to represent ideas in artworks. They broaden their investigation to understand how artworks are displayed to audiences, and how ideas are represented to communicate meaning.

Students respond to a set theme and progressively develop their own ideas. Students learn how to develop their ideas using materials, techniques and processes, and art elements and art principles. They consolidate these ideas to plan and make finished artworks, reflecting on their knowledge and understanding of the aesthetic qualities of artworks. The planning and development of at least one finished artwork are documented in their Visual Arts journal.

Students investigate how artists use art elements and art principles to develop aesthetic qualities and style in an artwork. Working in their Visual Arts journal they begin to discover and understand how each of the art elements and art principles can be combined to convey different emotions and expression in their own and others' artworks. They also explore how art elements and art principles create visual language in artworks.

Students begin to understand how exhibitions are planned and designed and how spaces are organised for exhibitions. They also investigate the roles associated with the planning of exhibitions and how artworks are selected and displayed in specific spaces. This offers students the opportunity to engage with exhibitions, whether they are in galleries, museums, other exhibition spaces or site-specific spaces.

ASSESSMENT

1. Folio (65%)
2. Research (15%)
3. Examination (20%)

Unit 3: Semester 1 - Collect, extend and connect

In this unit students are actively engaged in art making using materials, techniques and processes. They explore contexts, subject matter and ideas to develop artworks in imaginative and creative ways. They also investigate how artists use visual language to represent ideas and meaning in artworks. The materials, techniques and processes of the art form the students work with are fundamental to the artworks they make.

Students use their Visual Arts journal to record their art making. They record their research of artists, artworks and collected ideas and also document the iterative and interrelated aspects

of art making to connect the inspirations and influences they have researched. The Visual Arts journal demonstrates the students' exploration of contexts, ideas and subject matter and their understanding of visual language. They also document their exploration of and experimentation with materials, techniques and processes. From the ideas documented in their Visual Arts journal, students plan and develop artworks. These artworks may be made at any stage during this unit, reflecting the students' own ideas and their developing style.

In order to receive constructive feedback on the progress of their art making, and to develop and extend their ideas, students present a critique of their artworks to their peer group. Students show a selection of their developmental work and artworks from their Visual Arts journal in their presentation. After the critique students evaluate their work and revise, refine and resolve their artworks.

Students will visit an exhibition in either a gallery, museum, other exhibition space or site-specific space. They must visit or view a minimum of two exhibitions during the current year of study. Exhibitions studied must be from different art spaces, to give students an understanding of the breadth of artwork in current exhibitions and to provide a source of inspiration and influence for the artworks they make. Students must select one exhibition space for study in Unit 3 and a different exhibition space for study in Unit 4. Students research the exhibition of artworks in these exhibition spaces and the role a curator has in planning and writing information about an exhibition.

Unit 4: Semester 2 - Consolidate, present and conserve

In this unit students make connections to the artworks they have made in Unit 3, consolidating and extending their ideas and art making to further refine and resolve artworks in – specific art forms. The progressive resolution of these artworks is documented in the student's Visual Arts journal, demonstrating their developing technical skills in a specific art form as well as their refinement and resolution of subject matter, ideas, visual language, aesthetic qualities and style. Students also reflect on their selected finished artworks and evaluate the materials, techniques and processes used to make them.

The Visual Arts journal in Unit 4 includes:

- the continued development of the student's own art making in a specific art form
- evaluation of art making in a specific art form
- the visual documentation of the processes used for finalising artworks
- annotations to support visual documentation

- research into the connections between specific artists and artworks and the student's own artworks
- research about the presentation of artworks in exhibitions
- research undertaken for conservation and care of artworks
- research about the selection of artworks for display and the planning of exhibitions
- written and visual research to make connections with specific artists and artwork.

The progress of individual student artworks is an important element of Unit 4, and throughout the unit students demonstrate their ability to communicate to others about their artworks. They articulate the development of subject matter, ideas, visual language, their choice of materials, their understanding of the inherent characteristics and properties of the material, their use of techniques and processes, and aesthetic qualities. Acting on their critique from Unit 3, students further develop their ideas and broaden their thinking to make new artworks.

Students organise the presentation of their finished artworks. They make decisions on how their artworks will be displayed, the lighting they may use, and any other considerations they may need to present their artworks. Students also present a critique of their artworks and receive and reflect on feedback.

Students continue to engage with galleries, museums, other exhibition spaces and site-specific spaces and examine a variety of exhibitions. They review the methods used and considerations involved in the presentation, conservation and care of artworks, including the conservation and care of their own artworks. Students must visit or view a minimum of two exhibitions during the current year of study. Exhibitions studied must be from different art spaces, to give students an understanding of the breadth of artwork in current exhibitions and to provide a source of inspiration and influence for the artworks they make. Students must select one exhibition space for study in Unit 3 and a different exhibition space for study in Unit 4. The exhibitions can be selected from the recommended list of exhibitions in the VCE Art Making and Exhibiting Exhibitions List, which is published annually on the VCAA website. Students document the investigation and review of artworks and exhibitions in their Visual Arts journal.

ASSESSMENT

1. School-assessed Coursework – Unit 3 (5%)
2. School-assessed Coursework – Unit 4 (5%)
3. School-assessed Task – Units 3 and 4 (60%)

4. End-of-year examination – (30%)

Media

<https://vimeo.com/825693399>

Prerequisites

Taking 10 VCD and/or Photo/Film is highly advisable.

Course Description

Unit 1: Semester 1 - Media forms, representations and Australian stories

By engaging in practical making and theoretical analysis and discussion, students in this unit develop an understanding of audiences and the core concepts underpinning the construction of representations and meaning in different media forms. They will explore media codes and conventions and the construction of meaning in media products. Students will analyse how representations, narrative and media codes and conventions contribute to the construction of the media realities audiences engage with and read. Students will gain an understanding of audiences as producers and consumers of media products. Through analysing the structure of narratives, they will consider the impact of media creators and institutions on production. They will develop research skills to investigate and analyse selected narratives focusing on the influence of media professionals on production genre and style. Students will also develop an understanding of the features of Australian fictional and non-fictional narratives in different media forms. Lastly, students will work in a range of media forms and develop and produce representations to demonstrate an understanding of the characteristics of each media form, and how they contribute to the communication of meaning.

ASSESSMENT

1. Coursework Theory (20%)
2. Coursework Practical (40%)
3. Examination (40%)

Unit 2: Semester 2 - Narrative across media forms

In this unit students will further develop an understanding of the concept of narrative in media products and forms in different contexts. Narratives in both traditional and newer forms include film, television, sound, news, print, photography, games, and interactive digital

forms. Students will analyse the influence of developments in media technologies on individuals and society, examining in a range of media forms the effects of media convergence and hybridisation on the design, production and distribution of narratives in the media and audience engagement, consumption and reception. They will undertake production activities to design and create narratives that demonstrate an awareness of the structures and media codes and conventions appropriate to corresponding media forms.

ASSESSMENT

1. Coursework Theory (20%)
2. Coursework Practical (40%)
3. Examination (40%)

Unit 3: Semester 1 - Narrative and media production design

In this unit students will undertake theoretical investigations to help them develop an understanding of film, television or radio drama production. They will also explore and analyse narrative elements and structure in fictional film, television or radio drama texts. Students examine how production and story elements work together to convey meaning and engage audiences. Students also develop practical skills through undertaking exercises related to aspects of the design and production process. They will complete a media production design plan for a specific media form and audience. They present the relevant specifications as a written planning document, with visual representations that employ media planning conventions appropriate to the media form in which the student chooses to work.

Unit 4: Semester 2 - Process, influence and society's values

In this unit students further develop practical skills in the production of media products to realise the production design plan completed during Unit 3. Organisational and creative skills are refined and applied throughout each stage of the production process. Students analyse the relationship between media texts, social values and discourses in the media. The nature and extent of media influence, the relationship between the media, media audiences and media regulation are also critically analysed in this unit.

ASSESSMENT

1. Coursework - Unit 3 (6%)
2. Coursework - Unit 4 (12%)
3. School-assessed task - Unit 4 (37%)
4. Examination (45%)

Music

<https://vimeo.com/825713980>

Prerequisites

Whilst there are no prerequisites studies for entry to Units 1, 2 and 3, students are required to be enrolled in private instrumental lessons. Students must also undertake Unit 3 and Unit 4 as a sequence.

Course Description

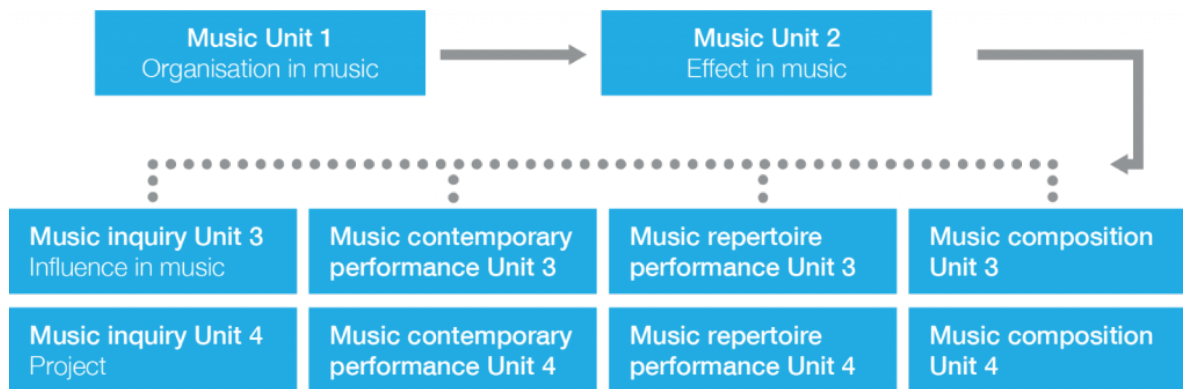
The new VCE Music study design is based on active engagement in all aspects of music. Students develop and refine musicianship skills and knowledge and develop a critical awareness of their relationship with music as listeners, performers, creators and music makers. Students explore, reflect on and respond to the music they listen to, create and perform. They analyse and evaluate live and recorded performances, and learn to incorporate, adapt and interpret musical practices from diverse cultures, times and locations into their own learning about music as both a social and cultural practice. Students study and practise ways of effectively communicating and expressing musical ideas to an audience as performers and composers, and respond to musical works as an audience. The developed knowledge and skills provide a practical foundation for students to compose, arrange, interpret, reimagine, improvise, recreate and critique music in an informed manner.

In this study students are offered a range of pathways that acknowledge and support a variety of student backgrounds and music learning contexts, including formal and informal.

Structure

The study is made up of ten units. Each unit deals with specific content contained in areas of study and is designed to enable students to achieve a set of outcomes for that unit. Each outcome is described in terms of key knowledge and key skills.

The study structure is:



Overview: Year 11 VCE Music Units 1 & 2

Unit 1: Semester 1 - Organisation of Music

- Area of Study 1 – Performing
- Area of Study 2 - Creating
- Area of Study 3 – Analysing and responding
- Assessment – performances, composition/improvisation exercises and aural, oral, written and practical tasks.

Unit 2: Semester 2 - Effect in Music

- Area of Study 1 – Performing
- Area of Study 2 - Creating
- Area of Study 3 – Analysing and responding
- Assessment – performances, composition/improvisation exercises and aural, oral, written and practical tasks.

OVERVIEW: Year 12 VCE Music Units 3 & 4

There are four different elective pathways to choose from in Units 3 & 4 (Year 12). These are:

1. Music Inquiry
2. Music Composition
3. Music Contemporary performance
4. Music Repertoire performance

Music Inquiry Units 3 & 4

Unit 3: Semester 1 – Influence in Music

- Area of Study 1 – Music Making
- Area of Study 2 – Analysing for music making
- Area of Study 3 - Responding

Unit 4: Semester 2 – Project

- Area of Study 1 – Music Making
- Area of Study 2 – Analysing for music making
- Area of Study 3 – Responding

ASSESSMENT

1. Unit 3 School-assessed coursework: 30%
2. Unit 4 School-assessed coursework: 5%
3. Externally-assessed task: 50%
4. End-of-year examination: 15%

Music Composition Units 3 & 4

Unit 3: Semester 1 - Music composition

- Area of Study 1 – Creating
- Area of Study 2 – Analysing for composition
- Area of Study 3 - Responding

Unit 4: Semester - Music composition

- Area of Study 1 – Creating
- Area of Study 2 – Analysing for composition
- Area of Study 3 - Responding

ASSESSMENT

1. Unit 3 School-assessed Coursework: 20%
2. Unit 4 School-assessed Coursework: 10%
3. Unit 4 Externally-assessed Task: 50%
4. End-of-year aural and written examination: 20%

Music contemporary performance Units 3 & 4

Unit 3 - Music contemporary performance

- Area of Study 1 – Performing
- Area of Study 2 – Analysing for performing

- Area of Study 3 - Responding

Unit 4 - Music contemporary performance

- Area of Study 1 – Performing
- Area of Study 2 – Analysing for performing
- Area of Study 3 - Responding

ASSESSMENT

- Unit 3 School-assessed Coursework: 20%
- Unit 4 School-assessed Coursework: 10%
- Unit 4 Performance examination: 50%
- end-of-year aural and written examination: 20%

Music repertoire performance Units 3 & 4

Unit 3: Semester 1 - Music repertoire performance

- Area of Study 1 – Performing
- Area of Study 2 – Analysing for performing
- Area of Study 3 - Responding

Unit 4: Semester 2 - Music repertoire performance

- Area of Study 1 – Performing
- Area of Study 2 – Analysing for performing
- Area of Study 3 - Responding

ASSESSMENT

- Unit 3 School-assessed coursework: 20%
- Unit 4 School-assessed coursework: 10%
- Unit 4 Performance examination: 50%
- End-of-year aural and written examination: 20%

Theatre Studies

<https://vimeo.com/825761362>

Prerequisites

Nil.

Course Description

VCE Theatre Studies is a powerful symmetry of Drama and Theatre, producing an expressive balance between the craft of performance and the skills of production.

Theatre is a creative discipline, and it is for the student who is curious, imaginative and ambitious, who likes to be challenged, who is prepared to experiment with new ideas, who is able to communicate with others, and who is ready to respond to the dynamic of performance in a way that remains resilient, open and persistent. Theatre Studies allows students to appreciate and participate in expressions of human experience that lie outside their own emotional, cultural and intellectual experiences.

Theatrical exploration occurs in the context of the ensemble. Generous commitment to the collaborative work and growth of the ensemble is essential; it must be actively and consistently demonstrated. Participation in theatrical performance is obligatory; support of theatrical productions is expected. Applied stagecraft is a vital component of the course. The evolution of design and technology skills is fundamental; design and stagecraft skills are assessable components in each unit of work.

Unit 1: Semester 1 - Pre-Modern Theatre

Here, students begin their adult understanding of how theatre works, of why it can challenge, provoke, enlighten, alienate and amuse its audiences. A close examination of theatre history concentrates on the pre-modern. Students are introduced to the elements of applied stagecraft: design, costume, lighting, sound, direction, dramaturgy and multi-media. Students discuss performance and production values and learn how to analyse professional productions. They are encouraged to attend all kinds of theatrical performance.

Students will be engaged in drama activities – in games and exercises of increasing sophistication; they will work on improvisation and polished improvisation, movement and voice. The development of their confidence as an individual, and as a productive member of the ensemble, is of paramount importance.

On completion of this unit, students should be able to: apply knowledge of at least three distinctive historical periods of the pre-modern era through interpretation and realisation in the theatre; develop an understanding of the ways in which stagecraft contributes to the development of theatrical styles; analyse a play in performance from the pre-modern era.

ASSESSMENT

1. Coursework (45%)
2. Collaborative Processes (30%)
3. Examination (25%)

Unit 2: Semester 2 - Modern Theatre

This unit focuses on the dramaturgy of the modern era - from the 1880's to the present. It explores new forms of acting styles - naturalistic and non-naturalistic - and identifies the nature of theatre demanded by the modern audience. Students are involved in a theatrical production that employs modern theatrical styles. They work collaboratively on performance and learn to apply stagecraft in the realisation of creative design ideas.

On completion of this unit, students should be able to: apply acting and other stagecraft to realise plays or excerpts of plays from the modern era; develop a practical understanding of the application of stagecraft in performance and production; analyse a play in performance from the modern era, focussing on the use of stagecraft in interpretation.

ASSESSMENT

1. Coursework (30%)
2. Collaborative Processes and Production (45%)
3. Examination (25%)

Unit 3: Semester 1 - Playscript Interpretation

This unit focuses on the interpretation and production of a play, involving all aspects of production processes: conceptualisation; interpretation; realisation; stagecraft and critical analysis.

On completion of this unit, students should be able to: use two areas of stagecraft in the planning, development, season and evaluation of the production of a play; analyse the influences of stagecraft on, and the collaborative processes involved in, the production of a playscript; and analyse and evaluate the relationship between a written play script and its interpretation on stage.

Unit 4: Semester 2 - Performance Interpretation

This unit focuses on a prescribed play that involves students in the areas of text research, interpretation and performance. Students, as individuals, select a scene containing a

prescribed monologue and - employing their knowledge of stagecraft and acting skills - develop an appropriate interpretation.

On completion of this unit, students should be able to: develop a theatrical brief that demonstrates understanding of the creation of character and the application of stagecraft in the performance of a selected monologue; rehearse and perform a selected monologue; analyse and evaluate actors in performance in a selected play.

ASSESSMENT

1. Coursework – Unit 3 (30%)
2. Coursework – Unit 4 (15%)
3. Performance Examination (25%)
4. Written Examination (30%)

VET Certificate III in Music Industry (Performance)

<https://vimeo.com/825768314>

Prerequisites

Year 10 Music or Music Technology highly recommended.

Course Description

VCE/VET Music Industry is an exciting new inclusion into the academic programme at Geelong Grammar School and will offer students a whole range of practical skills related to the Music Industry. Students will be able to undertake competency-based training and assessment, while receiving a study score that contributes to their ATAR.

CUA30920 Certificate III in Music (Performance) is offered to students under the auspices of the College of Sound and Music Production (RTO #41549). This qualification is for those students who have an interest in music and are keen to develop skills as a musician with the aim to perform and compose music.

Music Performance Specialisation provides students with the opportunity to apply a broad range of knowledge and skills in varied work contexts in the music industry. Depending on the electives chosen, students will work towards composing simple songs or musical pieces and preparing for performances, whilst developing improvisation skills, applying knowledge of genre to music making and performing music as part of a group or as a soloist. Students will

gain competencies that will enhance their employment opportunities within the music industry and a recognised qualification that will assist them in making a more informed choice when considering vocational/career pathways.

Units of Competence for Performance

Core Units (Year 11 only)

- CUACMP₃₁₁ Implement copyright arrangements
- CUAIND₃₁₃ Work effectively in the music industry
- CUAIND₃₁₄ Plan a career in the creative arts industry

Elective Units (Year 11 only)

- CUAMPF₂₁₃ Perform Simple Repertoire In Ensembles
- CUAMCP₃₁₁ Create simple musical compositions
- CUAMPF₃₁₄ Make Music Demos

Elective Units (Year 12 only)

- CUAMPF₃₁₂ Prepare for musical performances
- CUAMPF₃₁₅ Develop and perform musical improvisation
- CUAMPF₃₁₁ Develop technical skills for musical performances
- CUAMPF₄₁₂ Develop and apply stagecraft skills

And choose one from the following:

- CUAMPF₄₁₄ Perform music as part of a group (for bands)
- CUAMPF₄₁₆ Perform music as a soloist (for soloists)

Competency Based Assessment

Competency-based training is a method of training that focuses on a learner's ability to receive, respond to and process information in order to achieve competency. It is geared towards the attainment and demonstration of skills to meet industry-defined standards, rather than to a learner's achievement relative to that of others.

In year 11, students will be assessed as either competent or not competent for each Unit of Competency

In year 12, students will be assessed as either competent or not competent for each Unit of Competency and in addition, students work is graded via three internal Scored Assessed Coursework tasks (SACs) and one external examination.

CONTRIBUTION TO VCE/VCAL

VCE: Students who complete Certificate III in Music Industry will be eligible for up to five Units of credit towards their VCE: up to three at the Unit 1 & 2 level and a Unit 3 & 4 sequence.

VCAL: This program contributes to the Industry Specific Skills Strand and may also contribute to the Work- Related Skills Strand of VCAL

ATAR: Students wishing to receive an ATAR contribution for the Unit 3 & 4 sequence must undertake scored assessment for the purposes of gaining a study score. This study score can contribute directly to the primary four or as a fifth or sixth study.

PATHWAY OPTIONS

- CUA40915 Certificate IV in Music Industry
- CUA50815 Diploma of Music Industry
- CUA60515 Advanced Diploma of Music Industry

POSSIBLE FUTURE CAREER OPPORTUNITIES:

- Sound Engineer • Producer • Broadcaster
- Musician • Performer • Stage Manger
- Digital Audio Technician • Sound & Lighting Technician • Songwriter

VET Certificate III in Music Industry (Sound Production)

<https://vimeo.com/825768388>

Prerequisites

Year 10 Music or Music Technology is highly recommended.

Course Description

CUA30920 Certificate III in Music (Sound Production) is offered to students under the auspices of the College of Sound and Music Production (RTO #41549). This qualification is for students who have an interest in music and sound production and are keen to develop skills in a range of areas such as recording, mixing and sound editing.

Sound Production Specialisation provides students with the practical skills and knowledge to

record, mix and edit sound sources, and operate sound reinforcement equipment for live music events. The program includes core units such as implementing copyright arrangements, performing basic sound editing and developing music industry knowledge. Elective units provide students with the opportunity to learn the essentials of audio engineering and electronic music production. Students will gain competencies that will enhance their employment opportunities within the music industry, and a recognised qualification that will assist them in making a more informed choice when considering vocational and career pathways.

Units of Competency for Sound Production

Core Units (Year 11 only)

- CUACMP₃₁₁ Implement copyright arrangements
- CUAIND₃₁₃ Work effectively in the music industry
- CUAIND₃₁₄ Plan a career in the creative arts industry

Elective Units (Year 11 only)

- CUASOU₃₁₂ Develop and apply knowledge of audio theory
- CUASOU₂₁₂ Perform basic sound editing
- CUALGT₃₁₁ Operate basic lighting

Elective Units (Year 12 only)

- CUASOU₃₀₆ Operate sound reinforcement systems
- CUASOU₃₀₈ Install and disassemble audio equipment
- CUASOU₃₂₁ Mix music in studio environments
- CUASOU₃₁₇ Record and mix basic music demos
- CUASOU₄₁₂ Manage audio input sources

Competency Based Assessment

Competency-based training is a method of training that focuses on a learner's ability to receive, respond to and process information in order to achieve competency. It is geared towards the attainment and demonstration of skills to meet industry-defined standards, rather than to a learner's achievement relative to that of others.

In year 11, students will be assessed as either competent or not competent for each Unit of Competency

In year 12, students will be assessed as either competent or not competent for each Unit of

Competency and in addition, students work is graded via three internal Scored Assessed Coursework tasks (SACs) and one external examination.

CONTRIBUTION TO VCE/VCAL

VCE: Students who complete Certificate III in Music Industry will be eligible for up to five Units of credit towards their VCE: up to three at the Unit 1 & 2 level and a Unit 3 & 4 sequence.

VCAL: This program contributes to the Industry Specific Skills Strand and may also contribute to the Work- Related Skills Strand of VCAL

ATAR: Students wishing to receive an ATAR contribution for the Unit 3 & 4 sequence must undertake scored assessment for the purposes of gaining a study score. This study score can contribute directly to the primary four or as a fifth or sixth study.

PATHWAY OPTIONS

- CUA40915 Certificate IV in Music Industry
- CUA50815 Diploma of Music Industry
- CUA60515 Advanced Diploma of Music Industry

POSSIBLE FUTURE CAREER OPPORTUNITIES:

- Sound Engineer • Producer • Broadcaster
- Musician • Performer • Stage Manger
- Digital Audio Technician • Sound & Lighting Technician • Songwriter

Visual Communication Design

<https://vimeo.com/825766786>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Introduction to visual communication design

This unit focuses on using visual language to communicate messages, ideas and concepts. Students acquire and apply design thinking skills as well as drawing skills to create messages,

ideas and concepts, both visible and tangible. Students practice their ability to draw what they observe and they use visualisation drawing methods to explore their own ideas and concepts. They develop an understanding of the importance of presentation drawings to clearly communicate their final visual communications.

Through experimentation and exploration of the relationship between design elements and design principles, students develop an understanding of how they affect the visual message, and the way information and ideas are read and perceived. Students review the contextual background of visual communication through an investigation of design styles. This research introduces students to the broader context of the place and purpose of design. Students are introduced to the importance of copyright and intellectual property and the conventions for acknowledging sources of inspiration.

Lastly, students are introduced to four stages of the design process: research, generation of ideas, development of concepts and refinement of visual communications.

ASSESSMENT

1. Folios (70%)
2. Research (15%)
3. Examination (15%)

Unit 2: Semester 2 - Applications of visual communication within design fields

This unit focuses on the application of visual communication design knowledge, design thinking and drawing methods to create visual communications to meet specific purposes in designated design fields.

Students use presentation drawing methods that incorporate the use of technical drawing conventions to communicate information and ideas associated with the environmental or industrial fields of design. They also investigate how typography and imagery are used in these fields as well as the communication field of design. They apply design thinking skills when exploring ways in which images and type can be manipulated to communicate ideas and concepts in different ways in the communication design field. Students develop an understanding of the design process as a means of organising their thinking about approaches to solving design problems and presenting ideas. In response to a brief, students engage in the stages of research, generation of ideas and development and refinement of concepts to create visual communications.

ASSESSMENT

1. Folios (75%)

2. Examination (25%)

Unit 3: Semester 1 - Visual communication design practices

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 and digital methods, media and materials to make informed decisions when developing their own design ideas and concepts.

Students use their research and analysis of the process of visual communication designers to support the development of their own work. They establish a brief and apply design thinking skills through the design process. They identify and describe a client, two distinctly different needs of that client, and the purpose, target audience, context and constraints relevant to each need.

Design from a variety of historical and contemporary design fields is considered by students to provide directions, themes or starting points for investigation and inspiration for their own work. Students use observational and visualisation drawings to generate a wide range of design ideas and apply design thinking strategies to organise and evaluate their ideas. The brief and investigation work underpin the developmental and refinement work undertaken in Unit 4.

Unit 4: Semester 2 - Visual communication design development, evaluation and presentation

The focus of this unit is 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 communication needs.

Having completed their brief and generated ideas in Unit 3, students continue the design process by developing and refining concepts for each communication 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 creates different communication messages with their target audience.

As students revisit stages to undertake further research or idea generation when developing and presenting their design solutions, they develop an understanding of the iterative nature of

the design process. Ongoing reflection and evaluation of design solutions against the brief assists students with keeping their endeavours focused.

Students refine and present two visual communications within the parameters of the brief. They reflect on the design process and the design decisions they took in the realisation of their ideas. They evaluate their visual communications and devise a pitch to communicate their design thinking and decision making to the client.

ASSESSMENT

1. School-assessed Coursework – Unit 3 (25%)
2. School-assessed Task – Units 3 and 4 (40%)
3. End-of-year examination – (35%)

03 English

English

Prerequisites

Nil.

Course Description

Unit 1: Semester 1

In Unit 1, students explore how writers use structures, conventions and language to represent characters, settings, events and explore themes, through a close study of two literary texts. Students develop analytical responses to these texts dealing with the ways in which the writers convey meaning and various points of view on key issues. They also develop creative responses to these texts, making informed choices about structure, conventions and language to develop voice and style. In both forms of writing, students practise skills of planning, drafting, editing and refining for accuracy and effect. In this Unit, students also focus on the analysis and construction of texts that attempt to influence an audience, particularly visual texts. They consider the contention of these texts, the intended audiences, and how composers craft these texts to support and extend the impact of their argument. Additionally, students will develop an understanding of how meaning is affected by the context in which the text is produced. Students will also learn about the conventions of oral communication and consider the persuasive impact of tone, diction and audience engagement in the presentation of a viewpoint. They craft and present their own reasoned, structured and supported arguments and experiment with the use of language to position audiences.

ASSESSMENT

1. Responding analytically to a literary text (25%)
2. Responding creatively to a literary text (25%)
3. Analysing argument (25%)

4. Presenting argument (25%)

Unit 2: Semester 2

In Unit 2, students explore how comparing literary texts can provide a deeper understanding of ideas, issues and themes. They investigate how the reader's understanding of one text is broadened and deepened when considered in relation to another text. Students explore how features of texts, including structures, conventions and language convey ideas, issues and themes that reflect and explore the world and human experiences, including historical and social contexts. Students produce a written comparison of the selected texts, discussing important similarities and differences, and exploring how the texts deal with similar or related ideas, issues or themes from different perspectives. In this Unit, students also build on their understanding of argument and the use of persuasive language in texts that attempt to influence an audience. Students consider a range of non-literary texts where the primary purpose is to convince an audience to share a point of view. They develop an understanding of how texts are constructed for specific persuasive effects by identifying and discussing the impact of argument and persuasive language used to influence an audience. Students practise developing and presenting reasoned points of view in writing on issues of contemporary social relevance.

ASSESSMENT

1. Responding analytically (15%)
2. Responding creatively (15%)
3. Analysing argument (20%)
4. Speaking and listening (15%)
5. Comparing texts (35%)

Unit 3: Semester 1

In Unit 3, students identify, discuss and analyse how the features of two literary texts (selected from the VCAA Text List) create meaning and influence interpretation. In identifying and analysing explicit and implied ideas and values in these texts, students examine the ways in which readers are invited to respond to texts. Students present a sustained creative response to one literary text, demonstrating their understanding of the world of the text and how the writer constructs meaning. Students also prepare a sustained analytical response to another literary text, developing and justifying their own detailed interpretation of the text, discussing

how features of the text create meaning, and using textual evidence to support their response. In both forms of writing, students produce and share drafts, practising the skills of revision, editing and refining for accuracy and effect. In this Unit, students also analyse and compare the use of argument and language in texts that debate a topical issue. Students read and view media texts in a variety of forms and develop their understanding of the way in which language and argument complement one another in positioning the intended audience.

ASSESSMENT

1. Responding analytically to a literary text (30%)
2. Responding creatively to a literary text (30%)
3. Analysing and comparing argument (40%)

School-assessed Coursework for Unit 4 contributes 25% to the study score.

Unit 4: Semester 2

In Unit 4, students explore meaningful connections between two literary texts (selected from the VCAA Text List). They analyse texts, including the interplay between character and setting, voice and structure, and how ideas, issues and themes are conveyed. By comparing the texts, they gain a deeper understanding of the ideas, issues and themes that reflect the world and human experiences. Students produce a written analysis comparing selected texts, discussing important similarities and differences and exploring how the texts deal with similar or related ideas, issues or themes from different perspectives to reflect particular values. They use discussion, planning and drafting to test and clarify their ideas about the selected texts, and edit for clear and coherent expression of them. In this Unit, students also use their knowledge of argument and persuasive language as a basis for the development of their own persuasive texts in relation to a topical issue that has appeared in the media since 1 September of the previous year. Students use their understanding of argument and persuasive language as the basis for the development of an oral presentation of their points of view. In doing so, they consider how oral conventions may be used to influence the audience and refine these through rehearsal.

ASSESSMENT

1. Comparing literary texts (60%)
2. Constructing and presenting argument (40%)

School-assessed Coursework for Unit 4 contributes 25% to the study score.

EXTERNAL ASSESSMENT

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50% to the study score.

English as an additional language

Prerequisites

A student may be eligible for EAL status if they meet two criteria.

For Criterion 1, the student must fit one of the following:

- on the first day of the academic year, the student must not have been a resident in Australia or New Zealand or other predominantly English-speaking country for more than seven years. The period of seven years is to be calculated cumulatively over the student's whole life. The calculation of time spent in Australia is made from the date of last arrival plus any previous periods of time spent in Australia or any predominantly English-speaking country. This calculation of time should not include time spent out of Australia during school vacations.
- the student is an Aboriginal or Torres Strait Islander person whose first language is not English.

For Criterion 2, the student must fit the following:

- English has been the student's major language of instruction for a total period of not more than seven years over the period of their education. Schools must sight the student's overseas school reports to confirm that the language of instruction was no English during this period.

Course Description

Unit 1: Semester 1

In Unit 1, students explore how writers use structures, conventions and language to represent characters, settings, events and explore themes, through a close study of two literary texts.

Students develop analytical responses to these texts dealing with the ways in which the writers convey meaning and various points of view on key issues. They also develop creative responses to these texts, making informed choices about structure, conventions and language to develop voice and style. In both forms of writing, students practise skills of planning, drafting, editing and refining for accuracy and effect. In this Unit, students also focus on the analysis and construction of written, visual and spoken texts that attempt to influence an audience. They consider the contention of these texts, the intended audiences, and how composers craft these texts to support and extend the impact of their argument. In creating their own spoken arguments, students also consider the persuasive impact of tone, diction and audience engagement in the presentation of a viewpoint.

ASSESSMENT

1. Responding analytically to a literary text (25%)
2. Responding creatively to a literary text (25%)
3. Analysing argument (25%)
4. Comprehending a spoken text (25%)

Unit 2: Semester 2

In Unit 2, students explore how comparing literary texts can provide a deeper understanding of ideas, issues and themes. They investigate how the reader's understanding of one text is broadened and deepened when considered in relation to another text. Students explore how features of texts, including structures, conventions and language convey ideas, issues and themes that reflect and explore the world and human experiences, including historical and social contexts. Students produce a written comparison of the selected texts, discussing important similarities and differences, and exploring how the texts deal with similar or related ideas, issues or themes from different perspectives. In this Unit, students also build on their understanding of argument and the use of persuasive language in texts that attempt to influence an audience. Students consider a range of media texts (at least in spoken form) where the primary purpose is to convince an audience to share a point of view. They develop an understanding of how texts are constructed for specific persuasive effects by identifying and discussing the impact of argument and persuasive language used to influence an audience. Students practise developing and presenting reasoned points of view in writing on issues of contemporary social relevance. Throughout the course, students practise their listening and speaking skills through discussion, developing their ideas and thinking in relation to the texts studied.

ASSESSMENT

1. Responding analytically (15%)
2. Responding creatively (15%)
3. Analysing argument (20%)
4. Speaking and listening (15%)
5. Comparing texts (35%)

Unit 3: Semester 1

In Unit 3, students identify, discuss and analyse how the features of two literary texts (selected from the VCAA Text List) create meaning and influence interpretation. Students present a sustained creative response to one literary text, demonstrating their understanding of the world of the text and how the author constructs meaning. Students also prepare a sustained analytical response to another literary text, developing and justifying their own detailed interpretation of the text, discussing how features of the text create meaning, and using textual evidence to support their response. In both forms of writing, students produce and share drafts, practising the skills of revision, editing and refining for accuracy and effect. In this Unit, students also analyse and compare the use of argument and language in written and spoken texts that debate a topical issue. Students read, view and listen to media texts in a variety of forms and develop their understanding of the way in which language and argument complement one another in positioning the intended audience.

ASSESSMENT

1. Responding analytically and creatively (40%)
2. Analysing and comparing argument (40%)
3. Comprehending a spoken text (20%)

School-assessed Coursework for Unit 4 contributes 25% to the study score.

Unit 4: Semester 2

In Unit 4, students explore meaningful connections between one literary text studied in Semester 1 and another literary text (selected from the VCAA Text List). They analyse texts, including the interplay between character and setting, voice and structure, and how ideas, issues and themes are conveyed. By comparing the texts, they gain a deeper understanding of the ideas, issues and themes that reflect the world and human experiences. Students produce a

written analysis comparing selected texts, discussing important similarities and differences and exploring how the texts deal with similar or related ideas, issues or themes from different perspectives to reflect particular values. They use discussion, planning and drafting to test and clarify their ideas about the selected texts, and edit for clear and coherent expression of them. In this Unit, students also use their knowledge of argument and persuasive language as a basis for the development of their own persuasive texts in relation to a topical issue that has appeared in the media since 1 September of the previous year. Students use their understanding of argument and persuasive language as the basis for the development of an oral presentation of their points of view. In doing so, they consider how oral conventions may be used to influence the audience and refine these through rehearsal.

ASSESSMENT

1. Comparing literary texts (60%)
2. Constructing and presenting argument (40%)

School-assessed Coursework for Unit 4 contributes 25% to the study score.

EXTERNAL ASSESSMENT

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 50% to the study score.

Literature

<https://vimeo.com/825688233>

Prerequisites

Nil.

Course Description

Unit 3: Semester 1

In this unit, students focus on how the form of a text contributes to its meaning. Students explore the form of a set text by constructing a close analysis of that text. They then reflect on the extent to which adapting the text to a different form, and often in a new or reimagined context, affects its meaning, comparing the original with the adaptation. By exploring an adaptation, students also consider how creators of adaptations may emphasise or minimise

viewpoints, assumptions and ideas present in the original text.

Students also explore the different ways we can read and understand a text by developing, considering and comparing interpretations of a set text. Students first develop their own interpretations of a set text, analysing how ideas, views and values are presented in a text, and the ways these are endorsed, challenged and/or marginalised through literary forms, features and language. These student interpretations should consider the historical, social and cultural context in which a text is written and set. Students also consider their own views and values as readers.

Students then explore a supplementary reading that can enrich, challenge and/or contest the ideas and the views, values and assumptions of the set text to further enhance the students' understanding. Examples of a supplementary reading can include writing by a teacher, a scholarly article or an explication of a literary theory. Informed by the supplementary reading, students develop a second interpretation of the same text, reflecting an enhanced appreciation and understanding of the text. They then apply this understanding to key moments from the text, supporting their work with considered textual evidence.

ASSESSMENT

1. Adaptations and transformations: Close analysis (20%)
2. Adaptations and transformations: Comparative response (30%)
3. Developing interpretations: Part A: Initial response, and Part B Subsequent interpretation (50%)

Unit 4: Semester 2

In Unit 4, students focus on the imaginative techniques used for creating and recreating a literary work. Students use their knowledge of how the meaning of texts can change as context and form change to construct their own creative transformations of texts. They learn how authors develop representations of people and places, and they develop an understanding of language, voice, form and structure. Students draw inferences from the original text in order to create their own writing. In their adaptation of the tone and the style of the original text, students develop an understanding of the views and values explored. Students develop an understanding of the various ways in which authors craft texts. They reflect critically on the literary form, features and language of a text, and discuss their own responses as they relate to

the text, including the purpose and context of their creations.

Furthermore, students engage in the close analysis of texts, engaging in detailed scrutiny of the language, style, concerns and construction of texts. Students attend closely to textual details to examine the ways specific passages in a text contribute to their overall understanding of the whole text. Students consider literary forms, features and language, and the views and values of the text. They write expressively to develop a close analysis, using detailed references to the text.

ASSESSMENT

1. Creative responses to texts: Creative response (40%)
2. Creative responses to texts: Close analysis and reflection (20%)
3. Close analysis of texts: Close analysis (40%)

04 Equine Studies (VET)



The VCE VET Equine Studies program provides students with a broad range of skills and knowledge in the equine industry leading to roles such as stable-hands or stud hands, or further study in a range of equine or equine related qualifications.

This course is completed on weekends and in holiday periods, and is completed with an external provider.

Students undertaking this course are expected to be able to work without supervision. This course incurs an additional cost. Any interested students should contact the VCE Coordinator to discuss suitability.

05 Health and Physical Education

Health and Human Development

<https://vimeo.com/825675790>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Understanding health and wellbeing

This unit explores the concepts of health and wellbeing, as subject to a variety of perspectives and definitions. Students will investigate the complex combination of all dimensions of health; which can be characterised as an equilibrium in which individuals feel happy, healthy, capable and engaged. Students will also consider wellbeing as an implicit element of health. They will identify personal perspectives and priorities relating to health and wellbeing. Students will also enquire into factors that influence health attitudes, beliefs and practices for a range of populations. They will 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.

ASSESSMENT

1. Structured Questions (25%)
2. Coursework (25%)
3. Examination (50%)

Unit 2: Semester 2 - Managing health and development

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. This unit promotes the application of health literacy skills through an examination of adulthood as a time of increasing independence and responsibility, involving the establishment of long-term relationships, possible considerations of parenthood and management of health-related milestones and changes. 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.

ASSESSMENT

1. Structured Questions (25%)
2. Coursework (25%)
3. Examination (50%)

Unit 3: Semester 1 - Australia's health in a globalised world

This unit looks at health, wellbeing and illness as multidimensional, dynamic and subject to different interpretations and contexts. Students begin to explore health and wellbeing as a global concept and to take a broader approach to inquiry. As they consider the benefits of optimal health and wellbeing and its importance as an individual and a collective resource, their thinking extends to health as a universal right. Students look at the fundamental conditions required for health improvement, as stated by the World Health Organization (WHO). They use this knowledge as background to their analysis and evaluation of variations in the health status of Australians. Area of Study 2 focuses on health promotion and improvements in population health over time. Students look at various public health approaches and the interdependence of different models as they research health improvements and evaluate successful programs. While the emphasis is on the Australian health system, the progression of change in public health approaches should be seen within a global context.

Unit 4: Semester 2 - Health and human development in a global context

This unit examines health and wellbeing, and human development in a global context. Students use data to investigate health status and burden of disease in different countries, exploring factors that contribute to health inequalities between and within countries, including the physical, social and economic conditions in which people live. Students build their understanding of health in a global context through examining changes in burden of disease over time and studying the key concepts of sustainability and human development.

They consider the health implications of increased globalisation and worldwide trends relating to climate change, digital technologies, world trade and the mass movement of people. Area of Study 2 looks at global action to improve health and wellbeing and human development, focusing on the United Nations' (UN's) Sustainable Development Goals (SDGs) and the work of the World Health Organization (WHO). Students also investigate the role of non-government organisations and Australia's overseas aid program. Students evaluate the effectiveness of health initiatives and programs in a global context and reflect on their capacity to take action.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

Physical Education

<https://vimeo.com/825716430>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - The human body in motion

In this unit students explore how the musculoskeletal and cardiorespiratory systems work together to produce movement. Through practical activities students explore the relationships between the body systems and physical activity, sport and exercise, and how the systems adapt and adjust to the demands of the activity. Students investigate the role and function of the main structures in each system and how they respond to physical activity, sport and exercise. They explore how the capacity and functioning of each system acts as an enabler or barrier to movement and participation in physical activity.

Using a contemporary approach, students evaluate the social, cultural and environmental influences on movement. They consider the implications of the use of legal and illegal practices to improve the performance of the musculoskeletal and cardiorespiratory systems, evaluating perceived benefits and describing potential harms. They also recommend and implement strategies to minimise the risk of illness or injury to each system.

ASSESSMENT

1. Structured Questions (25%)
2. Coursework (25%)
3. Examination (50%)

Unit 2: Semester 2 - Physical activity, sport and society

This unit develops students' understanding of physical activity, sport and society from a participatory perspective. Students are introduced to types of physical activity and the role participation in physical activity and sedentary behaviour plays in their own health and wellbeing as well as in other people's lives in different population groups. Through a series of practical activities, students experience and explore different types of physical activity promoted in their own and different population groups. They gain an appreciation of the level of physical activity required for health benefits. Students investigate how participation in physical activity varies across the lifespan. They explore a range of factors that influence and facilitate participation in regular physical activity. They collect data to determine perceived enablers of and barriers to physical activity and the ways in which opportunities for participation in physical activity can be extended in various communities, social, cultural and environmental contexts. Students investigate individual and population-based consequences of physical inactivity and sedentary behaviour. They then create and participate in an activity plan that meets the physical activity and sedentary behaviour guidelines relevant to the particular population group being studied.

Students apply various methods to assess physical activity and sedentary behaviour levels at the individual and population level, and analyse the data in relation to physical activity and sedentary behaviour guidelines. Students study and apply the social-ecological model and/or the Youth Physical Activity Promotion Model to critique a range of individual- and settings-based strategies that are effective in promoting participation in some form of regular physical activity.

ASSESSMENT

1. Structured Questions (25%)
2. Coursework (25%)
3. Examination (50%)

Unit 3: Semester 1 - Movement skills and energy for physical activity

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.

Students investigate the relative contribution and interplay of the three energy systems to performance in physical activity, sport and exercise. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity. Students explore the causes of fatigue and consider different strategies used to postpone fatigue and promote recovery.

Unit 4: Semester 2 - Training to improve performance

In this unit 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. Improvements in performance, in particular fitness, depend on the ability of the individual and/ or coach to gain, apply and evaluate knowledge and understanding of training. Students analyse skill frequencies, movement patterns, heart rates and work to rest ratios to determine the requirements of an activity. Students consider the physiological, psychological and sociological requirements of training to design and evaluate an effective training program.

Students participate in a variety of training sessions designed to improve or maintain fitness and evaluate the effectiveness of different training methods. Students critique the effectiveness of the implementation of training principles and methods to meet the needs of the individual, and evaluate the chronic adaptations to training from a theoretical perspective.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

VET Certificate III in Sport and Recreation

The VET/VCE Sport and Recreation Certificate III course aims to provide students with the knowledge skills and competency that will enhance their training and employment prospects in the sport or community recreation industries. It also enables students to gain a recognised credential and to make an informed choice of vocation or career pathways.

The VET/VCE Sport and Recreation Certificate III programme is a nationally recognised qualification. Students must achieve 15 units of competency to gain their certificate; including 9 core units of competency and 6 elective units of competency.

Year 1 – The course will explore an exciting range of sporting related units and develop a basic level of skills for instructing and officiating in a variety of games and sports.

- Students will also develop knowledge of the sporting industry and relevant workplace skills.
- Students will learn about the preparation and equipment required for sporting and recreation sessions and how to conduct these sessions.
- First aid and how to deal with clients.
- There will be a wide variety of sports covered that will be tailored to their interests.

Year 2 - The course has a focus on fitness training and instruction.

- Students will develop a knowledge of sport and recreation markets and participation patterns and go on to develop public education courses in a related area.
- Students undertaking VET sport and recreation will be involved in a variety of lesson experiences including
 - continuously improving on officiating skills and knowledge

This qualification reflects the multi-skilled role of individuals in operational and customer support positions in the sport or community recreation industries. Pathways may include employment into various workplaces such as fitness centres, sporting grounds or complexes, leisure and aquatic centres, along with community recreation centres. Typical roles in these vocational settings include:

- recreation officers
- activity operation officers
- sport and recreation attendants
- community activities officers

- leisure service officers

The course is recommended to students who have an interest in sport, especially as it complements students who have undertaken Year 10 Sports Science or Year 10 Coaching for Performance electives. Equally, it creates the opportunity to unify the curriculum from VCE Physical Education into a workplace environment. Ultimately, the program provides students greater direction towards vocational offerings post school in the Sport and Recreation industries.

06 Humanities

Accounting

<https://vimeo.com/825319017>

Prerequisites

Nil.

Course Description

Unit I: Semester I - Role of accounting in business

This unit explores the establishment of a business and the role of accounting in the determination of business success or failure. In this, it considers the importance of accounting information to stakeholders. Students analyse, interpret and evaluate the performance of the business using financial and non-financial information. They use these evaluations to make recommendations regarding the suitability of a business as an investment.

Students record financial data and prepare reports for service businesses owned by sole proprietors.

Where appropriate, the accounting procedures developed in each area of study should incorporate the application of the Conceptual Framework and financial indicators to measure business performance and take into account the range of ethical considerations faced by business owners when making decisions, including financial, social and environmental.

There are two areas of study:

1. On completion of this unit the student should be able to describe the resources required to establish and operate a business and select and use accounting reports and other information to discuss the success or otherwise of the business.
2. On completion of this unit the student should be able to identify and record financial data, report and explain accounting information for a service business, and suggest and apply appropriate financial and non-financial indicators to measure business performance.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2 - Accounting and decision-making for a trading business

In this unit students develop their knowledge of the accounting process for sole proprietors operating a trading business, with a focus on inventory, accounts receivable, accounts payable and non-current assets. Students use manual processes and ICT, including spreadsheets, to prepare historical and budgeted accounting reports.

Students analyse and evaluate the performance of the business relating to inventory, accounts receivable, accounts payable and non-current assets. They use relevant financial and other information to predict, budget and compare the potential effects of alternative strategies on the performance of the business. Using these evaluations, students develop and suggest to the owner strategies to improve business performance.

Where appropriate, the accounting procedures developed in each area of study should incorporate application of the Conceptual Framework, financial indicators and ethical considerations for business owners when making business decisions, including financial, social and environmental.

There are three Areas of Study:

1. On completion of this unit the student should be able to record and report for inventory and discuss the effect of relevant financial and non-financial factors, and ethical considerations, on the outcome of business decisions.
2. On completion of this unit the student should be able to record and report for accounts receivable and accounts payable and analyse and discuss the effect of relevant decisions on the performance of the business including the influence of ethical considerations.
3. On completion of this unit the student should be able to record and report for non-current assets and depreciation.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1 - Financial accounting for a trading business

This unit focuses on financial accounting for a trading business owned by a sole proprietor and highlights the role of accounting as an information system. Students use the double entry system of recording financial data and prepare reports using the accrual basis of accounting

and the perpetual method of inventory recording.

Students develop their understanding of the accounting processes for recording and reporting and consider the effect of decisions made on the performance of the business. They interpret reports and information presented in a variety of formats and suggest strategies to the owner to improve the performance of the business.

There are two Areas of Study:

1. On completion of this unit the student should be able to record financial data using a double entry system; explain the role of the General Journal, General Ledger and inventory cards in the recording process.
2. On completion of this unit the student should be able to record transactions and prepare, interpret and analyse accounting reports for a trading business.

Unit 4: Semester 2 - Recording, reporting, budgeting and decision-making

In this unit students further develop their understanding of accounting for a trading business owned by a sole proprietor and the role of accounting as an information system. Students use the double entry system of recording financial data, and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording. Both manual methods and ICT are used to record and report.

Students extend their understanding of the recording and reporting process with the inclusion of balance day adjustments and alternative depreciation methods. They investigate both the role and importance of budgeting in decision-making for a business. They analyse and interpret accounting reports and graphical representations to evaluate the performance of a business. From this evaluation, students suggest strategies to business owners to improve business performance.

There are two Areas of Study:

1. On completion of this unit the student should be able to record financial data and balance day adjustments using a double entry system, report accounting information using an accrual-based system and evaluate the effect of balance day adjustments and alternative methods of depreciation on accounting reports.
2. On completion of this unit the student should be able to prepare budgeted accounting reports and variance reports for a trading business using financial and other relevant information, and model, analyse and discuss the effect of alternative strategies on the performance of a business.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

Australian and Global Politics

<https://vimeo.com/825674291>

VCE Australian and Global Politics is a dynamic and exciting subject in which students consider contemporary power at both national and global levels. Students explore, explain, analyse, and evaluate key national and global issues and events to form a critical understanding of the world in which they live. As a result, students will also develop their skills of critical thinking, analysis, synthesis, and argument. The course provides knowledge and skills that prepare students for formal study at the tertiary level and leads to opportunities in a range of careers, including academia, management, government, journalism, and law. In addition, students will become informed citizens, voters and participants in their local, national and international communities.

There are no pre-requisites for entry to Units 1, 2 and 3. Year 11 students who decide to study Global Politics Units 1 and 2 will have an excellent opportunity to build foundational political knowledge and skills to help them excel in Global Politics Units 3 and 4 in Year 12. Some Year 11 students may choose to study the Unit 3 and 4 course if they meet the academic requirements.

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Ideas, actors and power

In this unit students are introduced to the key ideas relating to the exercise of political power. They analyse and evaluate different approaches to governmental power by comparing Australian democracy with a non-democratic political system. Students will investigate case studies of political parties, interest groups and media issues to analyse the importance of these forms of participation in the Australian political system. They will also explore the ways social media and the 24-hour news cycle influence political debate.

ASSESSMENT:

1. Coursework (60%)
2. Examination (40%)

Unit 2: Semester 2 - Global connections

This unit introduces students to the global community and the global actors that are part of this community. In Area of Study 1 students explore the myriad ways lives have been affected by the increased interconnectedness – the global links – of the world through the process of globalisation. These links include a study of the roles of NGOs, global corporations and social media. Students will also evaluate Australia's participation in the global community. In Area of Study 2, students consider the extent to which global actors cooperate and share visions and goals as part of the global community. They investigate the concept of a global community through considering contemporary case studies of global cooperation and conflict.

ASSESSMENT:

1. Coursework (60%)
2. Examination (40%)

Unit 3: Semester 1 - Global actors

Students investigate the key global actors in twenty-first century global politics, including states, intergovernmental organisations, non-state actors and transnational cooperations. They use contemporary evidence to analyse the key global actors and their aims, roles and power. This helps them to develop an understanding of the key actors through an in-depth examination of the concepts of national interest and power as they relate to the state. Students will also analyse and evaluate the way in which one Asia-Pacific state uses power within the region to achieve its objectives.

Unit 4: Semester 2 - Global challenges

In this unit students investigate key global challenges facing the international community in the twenty-first century. They examine and analyse the debates surrounding two ethical issues, which are underpinned by international law. Students will evaluate the effectiveness of responses to two ethical issues that are selected from the following: human rights, people movement, development (e.g. global poverty) and arms control. Students also explore the context and causes of global crises and consider the varying effectiveness of responses and

challenges to solving them. Two global crises are selected from the following: climate change, armed conflict, terrorism, and economic instability.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination – (50%)

Business Management

<https://vimeo.com/825328381>

Business Management examines the ways businesses manage resources to achieve objectives. The VCE Business Management study design follows the process from the first idea for a business concept, to planning and establishing a business, through to the day-to-day management of a business. It also considers changes that need to be made to ensure continued success of a business. Students develop an understanding of the complexity of the challenges facing decision makers in managing these resources.

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Planning a Business

Businesses of all sizes are major contributors to the economic and social wellbeing of a nation. Therefore how businesses are formed and the fostering of conditions under which new business ideas can emerge are vital for a nation's wellbeing. Taking a business idea and planning how to make it a reality are the cornerstones of economic and social development. 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.

Students investigate how business ideas are created and how conditions can be fostered for new business ideas to emerge. New business ideas are formed through a range of sources, such as identifying a gap in the market, technological developments and changing customer needs. Students explore some of the issues that need to be considered before a business can be established.

The external environment consists of all elements outside a business that may act as pressures or forces on the operations of a business. Students consider factors from the external environment such as legal, political, social, economic, technological, global and corporate social responsibility factors and the effects these may have on the decisions made when planning a business. Students investigate how the internal environment relates to the external environment and the effects of this relationship on planning a business.

The internal environment affects the approach to and success of business planning. The owner will generally have more control over the activities, functions and pressures that occur within a business. These factors, such as business models, legal business structures and staffing, will also be influenced to some extent by the external environment. Students explore the factors within the internal environment and consider how planning decisions may have an effect on the ultimate success of a business.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2 - Establishing a Business

This unit focuses on the establishment phase of a business's life. Establishing a business involves complying with legal requirements as well as making decisions about how best to establish a system of financial record keeping, staff the business and establish a customer base. 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. Students analyse various management practices in this area by applying this knowledge to contemporary business case studies from the past four years.

It is essential to deal with legal and financial matters when establishing a business. Students are introduced to the legal requirements and financial considerations that are vital to establishing a business. They also consider the implications for the business if these requirements are not met.

Establishing a strong customer base for a business is an important component of success. Students develop their understanding that marketing encompasses a wide range of management practices, from identifying the needs of the target market and establishing a

brand presence, through to considerations on price, product features and packaging, promotion, place, people, physical evidence and processes. They also consider effective public relations strategies and the benefits and costs these can bring to a business.

Staff are one of the business's greatest assets and are an important consideration when establishing a business. The quantity and quality of staff has a direct link to business productivity and the achievement of business objectives. Students examine the staffing requirements that will meet the needs and objectives of the business and contribute to productivity and effectiveness. They research the processes undertaken by the business with relation to the recruitment, selection and induction of staff. Students consider the opportunities that the skills and capabilities of staff can contribute to the business, the legal obligations that must be addressed and the relationship between employers and employees within a business.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1 - Managing a Business

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. Students develop an understanding of the complexity and challenge of managing businesses and through the use of contemporary business case studies from the past four years have the opportunity to compare theoretical perspectives with current practice.

Business foundations

This area of study introduces students to the key characteristics of businesses and their stakeholders. Students investigate potential conflicts between and the different demands of stakeholders on a business. They examine a range of management styles and management skills that may be used when managing a business and apply these to contemporary business case studies.

Managing employees

In this area of study students investigate essential factors such as motivation and training involved in effectively managing employees during their time at a business to ensure the business objectives are achieved. They consider Maslow's Hierarchy of Needs, Locke and Latham's Goal Setting Theory and Lawrence and Nohria's Four Drive Theory of motivation. Using the theories and motivation strategies, students propose and justify possible solutions to employee management in contemporary business case studies. Students gain an overview of workplace relations, including the main participants and their roles in the dispute resolution process.

Operations management

The production of goods and services is the core objective of businesses. Effective management of the process of transforming inputs into outputs is vital to the success of a business, both in terms of maximising the efficiency and effectiveness of the production process and meeting the needs of stakeholders. In this area of study students examine operations management and consider the best and most responsible use of available resources for the production of a quality final good or service in a competitive, global environment.

Unit 4: Semester 2 - Transforming a business

Businesses are under constant pressure to adapt and change to meet their objectives. 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. Using a contemporary business case study from the past four years, students evaluate business practice against theory.

Reviewing performance – the need for change

In this area of study students develop their understanding of the need for change. Managers regularly review and evaluate business performance through the use of key performance indicators and use the results to make decisions concerning the future of a business. Managers can take both a proactive and reactive approach to change. Students investigate the ways a business can search for new business opportunities as a source of future business growth and consider current forces for change on a business. They apply Lewin's Force Field Analysis theory to contemporary case studies and consider approaches to strategic management, using Porter's (1985) Generic Strategies.

Implementing change

In this area of study students explore how businesses respond to evaluation data. It is important for managers to know where they want a business to be positioned for the future before implementing a variety of strategies to bring about the desired change. Students consider the importance of leadership in change management, how leaders can inspire change and the effect change can have on the stakeholders in a business. They consider the principles of Senge's Learning Organisation and apply the Three Step Change Model (Lewin) in implementing change in a business. Using a contemporary business case study from the past four years, students evaluate business practice against theory, considering how corporate social responsibility can be incorporated into the change process.

ASSESSMENT

1. Coursework - Unit 3 (25%)
2. Coursework - Unit 4 (25%)
3. Examination (50%)

Economics

<https://vimeo.com/825332316>

Economics is the study of how resources are allocated to meet the needs and wants of society. It attempts to explain how and why individuals behave the way they do and the consequences of their decision making. Studying Economics as a social science enables students to gain valuable insight into the economic problems that they may face on an individual basis and collectively as a society to meet the needs and wants of citizens, and may therefore assist them in making more informed and responsible decisions.

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - The behaviour of consumers and businesses

This unit introduces students to some fundamental economic concepts. They examine basic economic models where consumers and businesses engage in mutually beneficial transactions and investigate the motivations and consequences of both consumer and business behaviour. They examine how individuals might respond to incentives and how technology may have

altered the way businesses and consumers interact. Students are encouraged to investigate contemporary examples and case studies to enhance their understanding of the introductory economic concepts.

On completion of this unit the student should be able to describe the basic economic problem, discuss the role of consumers and businesses in the economy and analyse the factors that influence decision making. As well as explain the role of relative prices and other non-price factors in the allocation of resources in a market-based economy.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2 - Contemporary economics Issues

This unit focuses on the nature of key economic trade-offs; situations where the achievement of one goal may come at the expense of another. There may be a trade-off between the goal of economic growth and the goal of environmental sustainability. Students consider the effect of economic growth on future generations and begin to appreciate some of the current environmental challenges that have been created from past and current economic decisions.

On completion of this unit, the student should be able to explain the factors and policies that may influence equity in the distribution of income and efficiency of resource allocation, and analyse the potential trade-off.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1 - Australia's economic prosperity

In this unit students consider develop an understanding of the macroeconomy. They investigate the factors that influence the level of aggregate demand and aggregate supply in the economy and use models and theories to explain how changes in these variables might influence the achievement of the Australian Government's domestic macroeconomic goals and affect living standards. Students would also analyse key contemporary factors that may have influenced the Australian Government's domestic macroeconomic goals over the past two

years and discuss how achievement of these goals may affect living standards. Finally, student should be able to explain the factors that may influence Australia's international transactions and evaluate how international transactions and trade liberalisation may influence the current account balance, the Australian Government's domestic macroeconomic goals and living standards in Australia.

Unit 4: Semester 2 - Managing the economy

Initially students focus on the role of aggregate demand policies in stabilising the business cycle to achieve the government's domestic macroeconomic goals. Students examine the role of the Reserve Bank of Australia with a focus on its responsibility to alter the cost and availability of credit in the economy. Students consider each of the transmission mechanisms through which changes to interest rates can affect the level of aggregate demand in the economy and how these changes might affect the achievement of the Australian Government's domestic macroeconomic goals. Students examine and analyse the effects of the last two government budgets, and how particular initiatives have helped to stabilise the level of aggregate demand and influenced the achievement of domestic macroeconomic goals.

Students then consider how the government utilises aggregate supply policies to manage the Australian economy. If the productive capacity of the economy is expanding, growth in aggregate demand can be met and economic growth can be maintained both now and into the future. Students investigate the role of both market-based and interventionist approaches to managing the supply side of the economy. They evaluate these policy responses in terms of their effect on incentives and consider how they increase competition and efficiency in the economy.

On completion of this unit the student should be able to discuss the nature and operation of aggregate demand policies and analyse how the policies may influence the Australian Government's domestic macroeconomic goals and living standards. Student should be able to discuss the nature and operation of aggregate supply policies and analyse how the policies may influence the Australian Government's domestic macroeconomic goals and living standards.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

Geography

<https://vimeo.com/825667400>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Hazards and disasters

In this unit students undertake an overview of hazards before investigating two contrasting types of hazards and the responses to them by people.

Hazards represent the potential to cause harm to people and or the environment, whereas disasters are judgments about the impacts of hazard events. Hazards include a wide range of situations including those within local areas, such as fast moving traffic or the likelihood of coastal erosion, to regional and global hazards such as drought and infectious disease. Students examine the processes involved with hazards and hazard events, including their causes and impacts, human responses to hazard events and interconnections between human activities and natural phenomena. This unit investigates how people have responded to specific types of hazards, including attempts to reduce vulnerability to, and the impact of, hazard events.

Types of hazards are commonly classified by their causes:

- geological (or geophysical) hazards include volcanic activity, erosion, earthquakes, tsunamis, landslides and avalanches.
- hydro-meteorological (weather, climate, water) hazards include droughts, floods, storms, storm surges and bushfires.
- biological hazards include infectious diseases such as HIV/AIDS and malaria, animal-transmitted diseases, water-borne diseases, and plant and animal invasion such as blackberries and cane toads in Australia.
- technological hazards are human-induced and exacerbated hazards including oil spills, air pollution, radiation leaks, flooding primarily caused by land clearances, epidemics caused by poor living conditions and hazards caused by current climate change such as rising sea levels or increased intensification of weather events.

There may be considerable interconnection between the causes and types of hazards. For example, a region may be at risk from a number of hazards: high seasonal rainfall may result in

a primary flood hazard which may in turn generate a secondary hazard of landslides. Students undertake fieldwork in this unit.

ASSESSMENT

1. Analysis Task (25%)
2. Fieldwork (25%)
3. Classwork (10%)
4. Examination (40%)

Unit 2: Semester 2 - Tourism

In this unit, students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change, and its impacts on people, places and environments.

They select contrasting examples of tourism from within Australia and elsewhere in the world to support their investigations. Tourism involves the movement of people travelling away from and staying outside of their usual environment for more than 24 hours but not more than one consecutive year (United Nations World Tourism Organization definition). Over one billion tourists a year cross international boundaries with greater numbers involved as domestic tourists within their own countries. The Asia and the Pacific hosts 23 per cent of international arrivals. The scale of tourist movements since the 1950s, and its predicted growth, continues to have a significant impact on local, regional and national environments, economies and cultures. The travel and tourism industry is directly responsible for one in every twelve jobs globally and generates around 5 per cent of its GDP. (UNTWO Annual Reports 2011–2013).

The study of tourism at local, regional and global scales emphasises the interconnection within and between places. For example, the interconnections of climate, landforms and culture help determine the characteristics of a place that can prove attractive to tourists. There is an interconnection between places tourists originate from and their destinations through the development of communication and transport infrastructure, employment, together with cultural preservation and acculturation. The growth of tourism at all scales requires careful management to ensure environmentally sustainable and economically viable tourism.

Students undertake fieldwork in this unit.

ASSESSMENT

1. Analysis Task (25%)

2. Fieldwork (25%)
3. Classwork (10%)
4. Examination (40%)

Unit 3: Semester 1 - Changing the land

This unit focuses on two investigations of geographical change: change to land cover and change to land use. Land cover includes biomes such as forest, grassland, tundra and wetlands, as well as land covered by ice and water.

Land cover is the natural state of the biophysical environment developed over time as a result of the interconnection between climate, soils, landforms and flora and fauna and, increasingly, interconnections with human activity.

Natural land cover has been altered by many processes such as geomorphological events, plant succession and climate change. People have modified land cover to produce a range of land uses to satisfy needs such as housing, resource provision, communication, recreation and so on.

Students investigate three major processes that are changing land cover in many regions of the world:

- deforestation
- desertification, and
- melting glaciers and ice sheets.

Students investigate the distribution and causes of these three processes. They select one location for each of the three processes to develop a greater understanding of the changes to land cover produced by these processes, the impacts of these changes and responses to these changes at different scales.

At a local scale, students investigate land use change using appropriate fieldwork techniques and secondary sources. They investigate the scale of change, the reasons for change and the impacts of change.

Students undertake fieldwork and produce a fieldwork report.

Unit 4: Semester 2 - Human population – trends and issues

In this unit students investigate the geography of human populations. They explore the patterns of population change, movement and distribution, and how governments, organisations and individuals have responded to those changes in different parts of the world.

In this unit, students study population dynamics before undertaking an investigation into two significant population trends arising in different parts of the world. They examine the dynamics of populations and their economic, social, political and environmental impacts on people and places.

The growth of the world's population from 2.5 billion in 1950 to over 7 billion since 2010 has been on a scale without parallel in human history. Much of the current growth is occurring within developing countries while the populations in many developed countries are either growing slowly or are declining.

Populations change by growth and decline in fertility and mortality, and by people moving to different places.

The Demographic Transition Model and population structure diagrams provide frameworks for investigating the key dynamics of population.

Population movements such as voluntary and forced movements over long or short terms add further complexity to population structures and to economic, social, political and environmental conditions. Many factors influence population change, including the impact of government policies, economic conditions, wars and revolution, political boundary changes and hazard events.

ASSESSMENT

UNIT 3

1. Structured questions and Fieldwork report - Unit 3 (50%)
2. Analysis of geographic data - Unit 3 (50%)

UNIT 4

3. Analysis of geographic data - Unit 4 (40%)
4. Structured questions - Unit 4 (60%)

History - Overview

History is a dynamic discipline that involves structured inquiry into the human actions, forces and conditions that have shaped the past and present. The study of history assists students to understand themselves, others, and the contemporary world, and broadens their perspective by examining a range of people, groups, events, ideas, and movements. The potential scope of historical inquiry is vast and formed by the questions that historians pursue, the availability of historical sources, and the capacity of historians to interpret those sources. VCE History

reflects this by enabling students to explore a variety of eras, events and people.

At GGS, we offer Unit 1 and 2 courses in Ancient History and/or Modern History, and Unit 3 and 4 course in History - Revolutions.

Ancient History investigates individuals and societies (Mesopotamia, Egypt, Greece, Rome, and China) across three millennia. Modern History examines the causes and consequences of conflict and change in the modern era. Revolutions explores the causes and consequences of significant social upheaval (in France and Russia) in the modern period.

Ancient History

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Ancient Mesopotamia

In this unit students investigate the emergence of early societies in Ancient Mesopotamia. The lands between the rivers Tigris and the Euphrates have been described as the ‘cradle of civilisation’. Although this view is now contested in ancient history and archaeology, the study of Ancient Mesopotamia provides important insights about the growth of cities and the development of civilisations.

ASSESSMENT

1. Assessment Tasks (70%)
2. Examination (30%)

Unit 2: Semester 2 - Ancient Egypt or Early China (at teacher’s discretion)

Ancient Egypt:

Ancient Egypt gave rise to a civilisation that endured for approximately three thousand years. Unlike Mesopotamia, Egypt was not threatened by its neighbours for the greater part of its history. Kingdoms rose, flourished and fell around the banks of the River Nile – the lifeblood of urban settlements in Upper and Lower Egypt. In this unit students investigate features of the Old Kingdom Egypt and the representation of power, authority, beliefs, values and attitudes in Middle Kingdom Egypt and the Second Intermediate Period.

OR

Early China:

Early China begins with the pre-imperial period (up to 221 BCE) which is known as Ancient China and concludes with the end of the Han Empire in 220 CE. Students initially investigate the development of civilisation in early China and use a range of primary sources to investigate the origins and features of early civilisations. Students will subsequently consider the rise, expansion and fall of the Qin and Han dynasties, and how these dynasties presented their power and authority.

ASSESSMENT

1. Assessment Tasks (70%)
2. Examination (30%)

History (Modern)

<https://vimeo.com/825693485>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Change and Conflict

Modern History provides students with an opportunity to explore the later part of the 19th century and the first half of the 20th century in a global context. Students will initially focus on the topic of ideology and conflict and will examine events, ideologies, individuals, and movements of the period that led to the end of empires and the emergence of new nation states before and after World War One. They will investigate the impact of World War One on nations and how, despite the post-war peace treaties and the establishment of the League of Nations, the world became increasingly hostile and unstable, and a second global conflict began. Students will also consider the significant social, political, economic, cultural, and technological change in the 1920s and 1930s. Through a consideration of change in nations such as the USA, Germany or the USSR, students will examine the patterns of social and cultural change in everyday life and analyse the conditions which influenced these changes.

ASSESSMENT

1. Assessment Tasks (70%)
2. Examination (30%)

Unit 2: Semester 2 - The changing world order

In Unit 2 students explore the nature and impact of the Cold War and challenges and changes to social, political, and economic structures and systems of power in the second half of the twentieth century and the first decade of the twenty-first century. Students will investigate the causes and consequences of the Cold War; the competing ideologies that underpinned events, the course of the war including proxy wars and conflicts, the consequences on people, groups and nations, and the causes of the end of the Cold War and the collapse of the USSR. In addition, there will also be a study of key political and/or social movements that challenged the traditional ideas, values, and political systems of the time. This will include a focus on the anti-apartheid campaign in South Africa, with a consideration of the causes, methods, and achievements of the movement.

ASSESSMENT

1. Assessment Tasks (70%)
2. Examination (30%)

History (Revolutions)

<https://vimeo.com/825679044>

Prerequisites

Nil.

Course Description

Units 3 and 4: Semester 1 and 2 - Revolutions

Revolutions represent great ruptures in time and are a major turning point in the collapse and destruction of an existing political order which results in extensive change to society. Students will investigate the significant historical causes and consequences of two political revolutions: the French Revolution of 1789 and the Russian Revolution of October 1917.

In both units, students will develop an understanding of the complexity and multiplicity of

causes and consequences in the revolutionary narrative. They will learn to ask historical questions and construct arguments using primary sources and historical interpretations as evidence. Students will analyse the different perspectives and experiences of people who lived through dramatic revolutionary moments and use historical interpretations to evaluate the causes and consequences of revolution.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

Across Units 3 and 4, students will complete four pieces of coursework: a historical inquiry, evaluation of historical sources, extended responses, and an essay.

Legal Studies

<https://vimeo.com/825688203>

Prerequisites

Nil.

Course Description

Unit 1: Semester 1 - Guilt and Liability

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 and apply these to actual and/or hypothetical scenarios to determine whether an accused may be found guilty of a crime, or liable in a civil dispute. In doing so, students develop an appreciation of the way in which legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, and the liability of a party in a civil dispute.

On completion of this unit the student should be able to describe the main sources and types of law, and assess the effectiveness of laws

ASSESSMENT

1. Coursework (50%)

2. Examination (50%)

Unit 2: Semester 2 - Remedies and rights

Criminal law and civil law aim to protect the rights of individuals. When rights are infringed, a case or dispute may arise which needs to be determined or resolved, and sanctions or remedies may be imposed. This unit focuses on the enforcement of criminal law and civil law, the methods and institutions that may be used to determine a criminal case or resolve a civil dispute, and the purposes and types of sanctions and remedies and their effectiveness.

Students undertake a detailed investigation of two criminal cases and two civil cases from the past four years to form a judgment about the ability of sanctions and remedies to achieve the principles of justice. Students develop their understanding of the way rights are protected in Australia and in another country, and possible reforms to the protection of rights. They examine a significant case in relation to the protection of rights in Australia.

On completion of this unit the student should be able to explain key concepts in the determination of a criminal case, and discuss the principles of justice in relation to the determination of criminal cases, sanctions and sentencing approaches

ASSESSMENT

1. Coursework (50%)

2. Examination (50%)

Unit 3: Semester 1 - Rights and justice

The Victorian justice system, which includes the criminal and civil justice systems, aims to protect the rights of individuals and uphold the principles of justice: fairness, equality and access. In this unit students examine the methods and institutions in the justice system and consider their appropriateness in determining criminal cases and resolving civil disputes. 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. Students investigate the extent to which the principles of justice are upheld in the justice system. They discuss recent reforms from the past four years and recommended reforms to enhance the ability of the justice system to achieve the principles of justice. Throughout this unit, students apply legal reasoning and information to actual and/or hypothetical scenarios.

On completion of this unit the student should be able to explain the rights of the accused and of victims in the criminal justice system, discuss the means used to determine criminal cases and evaluate the ability of the criminal justice system to achieve the principles of justice.

Unit 4: Semester 2 - The people and the law

The study of Australia's laws and legal system involves an understanding of institutions that make and reform our laws, and the relationship between the Australian people, the Australian Constitution and law-making bodies. 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. They investigate parliament and the courts, and the relationship between the two in law-making, and consider the roles of the individual, the media and law reform bodies in influencing law reform. Throughout this unit, students apply legal reasoning and information to actual scenarios.

On completion of this unit the student should be able to discuss the significance of High Court cases involving the interpretation of the Australian Constitution and evaluate the ways in which the Australian Constitution acts as a check on parliament in law-making.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Examination (50%)

07 Languages

Chinese

Note: From 2024, VCE Chinese will no longer be available.

Statement of Eligibility Criteria for Chinese Second Language, Chinese Second Language Advanced and Chinese Language, Culture and Society (from VCAA).

Chinese Second Language

A student is not eligible for Chinese Second Language if they have one of the following:

- Twelve (12) months or more education in a school where Chinese is the medium of instruction
- 3 years (36 months) or more residence in any of the VCAA nominated countries or regions including China, Taiwan, Hong Kong and Macau.

Chinese Second Language Advanced

A student is eligible for Chinese Second Language Advanced if:

- They have had no more than 7 years of education in a school where Chinese is the medium of instruction
- The highest level of education attained in a school where Chinese is the medium of instruction is no greater than the equivalent of Year 7 in a Victorian school.

The time periods referred to in these criteria will be counted cumulatively since the time of the student's birth. Students may use traditional characters in writing but must be able to read simplified characters.

Prerequisites

Chinese Second Language Units 1 & 2 must be completed before Chinese Second Language Advanced Units 3 & 4.

Course Description

Unit 1: Semester 1

This unit is designed to establish and extend students' knowledge in listening and speaking, and in reading and writing through studying topics relating to themes of the Individual, the Chinese-speaking Communities and The World Around Us. Content areas include personal identities, family and friends, famous people, and film.

Students are required to establish and maintain a spoken or written exchange related to personal areas of experience; listen to, read and obtain information from written and spoken texts, and to present information in writing in Chinese.

Regular exposure to our native Language Assistants in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2

Students continue to develop their knowledge and skills in listening and speaking, and in reading and writing through studying topics related to themes of the Individual, the Chinese-speaking Communities and the World Around Us. Content areas include school life and education, Chinese food, science and technology.

Students are required to participate in spoken or written exchanges related to the content areas; respond in written form to spoken and written texts; analyse and use information from written, spoken or visual texts to produce an extended written response in Chinese; and give an oral presentation in Chinese on a cultural aspect of the topics studied.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1

This unit is designed to extend a student's knowledge and skills in understanding, speaking

and writing, through the themes of the Individual, the Chinese-speaking Communities, and the World Around us. Content areas include legends and fables, festivals and customs, historical events and characters, city and rural life, places of interest in China.

Students are required to participate in a spoken exchange in Chinese to resolve a personal issue, interpret information from texts and write responses in Chinese, and to express ideas in a personal, informative or imaginative piece of writing in Chinese.

The student undertakes to present an object which can be spoken about in detail at the external oral exam.

Regular exposure to our native Language Assistants in small conversation groups helps the students to develop their oral skills.

Unit 4: Semester 2

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing, through the themes of the Individual, the Chinese-speaking Communities, and the World Around us. Content areas include future plans and work, work skills and occupations, technology and lifestyle.

Students are required to analyse information from 3 types of texts for use in a written response in Chinese; share information, ideas and opinions in a spoken exchange in Chinese, and present information, concepts and ideas in evaluative or persuasive writing on an issue in Chinese.

The student undertakes to present an object which can be spoken about in detail at the external oral examination.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Oral Examination (12.5%)
4. Written Examination (37.5%)

French

<https://vimeo.com/825662135>

Prerequisites

French Units 1 & 2 must be completed before Units 3 & 4.

Course Description

Unit 1: Semester 1

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to establish and maintain a spoken or written exchange related to personal areas of experience; listen to, read and obtain information from written and spoken texts and respond in written form; and present information that demonstrates understanding of cultural products and practices.

The content areas are based on the themes of The Individual, The French-Speaking Communities and The World Around Us. Topics include introductions, personal information, family relationships, daily routine and global youth issues.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
3. Examination (50%)

Unit 2: Semester 2

Students continue to extend their knowledge and skills under the prescribed themes of The Individual, The French Speaking Communities and The World Around Us.

Students are required to participate in spoken or written exchanges related to the content areas; respond in written form to spoken and written texts; analyse and use information from written, spoken or visual texts to produce an extended written response in French; and give an oral presentation in French on a cultural aspect of the topics studied.

Content areas include future plans, French music and cinema, the environment, pollution and conservation and holidays and travel.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to participate in a spoken exchange in French to resolve a personal issue, interpret information from texts and write responses in French and express ideas in a personal, informative or imaginative piece of writing in French.

The content areas are based on the themes of The Individual, The French-Speaking Communities and The World Around us and include family structure, the world of work, freedom of the press and immigration.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

The student undertakes to present an object which can be spoken about in detail at the external oral examination.

Unit 4: Semester 2

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to share information, ideas and opinions in a spoken exchange in French; analyse information from written, spoken and viewed texts for use in a written

response in French; and present information, concepts and ideas in evaluative or persuasive writing on an issue in French.

Content areas include France in the past and now and French culture.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

The student undertakes to present an object which can be spoken about in detail at the external oral examination.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Written Examination (37.5%)
4. Oral Examination (12.5%)

German

<https://vimeo.com/825669958>

Prerequisites

German Units 1 & 2 must be completed before German Units 3 & 4.

Course Description

Unit 1: Semester 1

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to establish and maintain a spoken or written exchange related to personal areas of experience, listen to, read and obtain information from written and spoken texts and produce a written text in German relating to personal experiences.

The content areas are based on the themes of The Individual and The World Around Us. Topics areas include classroom communication, duties and rights, relationships, family,

technology, alcohol and smoking, sport and hobbies, health and traffic, German Schools; after school, completing an apprenticeship, studying at University, current topics in education.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to respond in writing in German to spoken, written or visual texts presented in German; analyse and use information from written, spoken or visual texts to produce an extended written response in German; and explain information, ideas and concepts orally in German to a specific audience about an aspect of culture within communities where German is spoken.

Content areas include the German speaking communities and the world around us. Topic areas include industriousness and relationships at work; working in other parts of Europe, benefits at work, part-time work, leisure time; a business success story and a booming economy; concerts, music and pop culture, fashion, earning money with music; the media, changing face of tv, printed books or e-books, new technologies – blessing or curse, cyber mobbing.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to participate in a spoken exchange in German to resolve a personal issue; extract information from three or more written, spoken or visual texts and create written responses to specific questions or instructions in German; create an extended original piece of personal, informative or imaginative writing in German to express ideas, thoughts or responses on an aspect of the selected subtopic.

The content is based on the themes of The Individual, The German-speaking Communities and The World Around Us. Topic areas include fairy tales, traditions and customs, Bavaria – a German state; equal opportunity; animal experiments; stem cell research, cloning, in-vitro fertilisation. Dependence and addiction; smoking bans and debates of legalisation.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

Unit 4: Semester 2

This unit is designed to extend students' knowledge and skills in understanding, speaking and writing the language.

Students are required to share information, ideas and opinions in a spoken exchange in German; analyse information from written, spoken and viewed texts for use in a written response in German and present information, concepts and ideas in evaluative or persuasive writing on an issue in German.

The content is based on the themes of The German-speaking Communities and The World Around Us. Topic areas include the environment and resources; World War II, resistance in World War II; the divided Germany; guest workers, foreigners and emigrants; asylum seekers; reunification of Germany; Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

The student undertakes to present an object which can be spoken about in detail at the external oral examination.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)

3. Oral Examination (12.5%)
4. Written Examination (37.5%)

Japanese Second Language

<https://vimeo.com/825681117>

This subject is for students of non-Japanese speaking background, or those who have completed no more than seven years of first language study prior to Year 11. According to current VCAA rules, some Japanese Nationals may be eligible for this course.

Prerequisites

Japanese Second Language Units 1 & 2 must be completed before Units 3 & 4.

Course Description

Unit 1: Semester 1

Students continue to extend their knowledge and skills under the prescribed themes of: The Individual, The Japanese Speaking Communities and The World Around Us.

Unit 1 involves the study of topics such as: self-introductions, education systems and school activities, festivals and special events.

The student is expected to converse in Japanese on a range of different topics, be familiar with different styles of writing, be able to extract relevant details from a range of spoken or written texts and respond in writing; and extend their knowledge of the Kanji characters. Students undertake a range of coursework assessment tasks throughout the unit.

Weekly individual sessions with our native language assistant are provided for each student which helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 2: Semester 2

Students continue to extend their knowledge and skills under the prescribed themes of The

Individual, The Japanese Speaking Communities and The World Around Us.

Unit 2 involves the study of topics such as: leisure and fitness, health and sickness, and social and environmental issues such as bullying, protecting the environment.

Students are required to participate in spoken or written exchanges related to the content areas; respond in written form to spoken and written texts; analyse and use information from written, spoken or visual texts to produce an extended written response in Japanese; and give an oral presentation in Japanese on a cultural aspect of the topics studied. More Kanji are introduced, and students are expected to consolidate their knowledge of these.

Students undertake a range of coursework assessment tasks throughout the unit.

Weekly individual sessions with the native language assistant are provided for each student which helps the students to develop their oral skills.

ASSESSMENT

1. Coursework (50%)
2. Examination (50%)

Unit 3: Semester 1

Students continue to extend their knowledge and skills under the prescribed themes of The Individual, The Japanese Speaking Communities and The World Around Us.

Unit 3 involves the study of Traditional Japan and Contemporary Japan.

Students are required to participate in a spoken exchange in Japanese to resolve a personal issue, interpret information from texts and write responses in Japanese and express ideas in a personal, informative or imaginative piece of writing in Japanese. Students will consolidate their knowledge of Kanji.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

Unit 4: Semester 2

Unit 4 involves the study of Human Relations including topics such as ideals, lifestyles and

gender roles. Students are required to share information, ideas and opinions in a spoken exchange in Japanese; analyse information from written, spoken and viewed texts for use in a written response in Japanese; and present information, concepts and ideas in evaluative or persuasive writing on an issue in Japanese. Students will continue to consolidate their knowledge of Kanji.

The student undertakes to present an object which can be spoken about in detail at the external oral examination.

Regular exposure to our native language assistant in small conversation groups helps the students to develop their oral skills.

ASSESSMENT

1. Coursework – Unit 3 (25%)
2. Coursework – Unit 4 (25%)
3. Written Examination (37.5%)
4. Oral Examination (12.5%)

08 Mathematics

Foundation Mathematics

<https://vimeo.com/825334576>

Prerequisites: Year 10 Standard Level Maths

Course Description

Foundation Mathematics Units 1 and 2 focus on providing students with the mathematical knowledge, skills, understanding and dispositions to solve problems in real contexts for a range of workplace, personal, further learning, and community settings relevant to contemporary society.

Unit 1: Semester 1

Unit 1 involves the study of algebra, number and structure, including fractions, decimals, percentages, rates and approximations; data analysis, probability and statistics, including collection and representation of data, construction of charts, tables and graphs, and interpretation of data; financial and consumer mathematics, including, personal financial services and information, income calculations and taxation; space and measurement, including standard metric units, reading and interpretation of scales, estimation and approximation strategies, and time and duration conventions, schedules and timetables.

On completion of this unit students should be able to: use and apply a range of mathematical concepts, skills and procedures from selected areas of study to solve practical problems based on a range of everyday and real-life contexts; apply mathematical processes in non-routine practical contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in practical situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 60% (inclusive of a mathematical investigation)
2. Examination: 40%

Unit 2: Semester

Unit 2 involves the study of algebra, number and structure, including construction, use and interpretation of formulas, manipulation of symbolic expressions, and estimation, approximation and reasonableness of calculations and results; data analysis, probability and statistics, including measure of central tendency and simple measure of spread, and interpretation, summary and comparison of related data sets; financial and consumer mathematics, including products and services, managing money and financial and economic data trends over time; space and measurement, including simple and composite shapes, two-dimensional plans, location, maps, routes and itineraries.

On completion of this unit students should be able to: use and apply a range of mathematical concepts, skills and procedures from selected areas of study to solve practical problems based on a range of everyday and real-life contexts; apply mathematical processes in non-routine practical contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in practical situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 60% (inclusive of a mathematical investigation)
2. Examination: 40%

General Mathematics

<https://vimeo.com/825664686>

Prerequisites

Units 1 & 2 – Year 10 Standard Level Maths

Units 3 & 4 – Unit 1 & 2 General Mathematics or for accelerating students, Year 10 Algebra at

least a B average.

Course Description

General Mathematics Units 1 and 2 cater for a range of student interests, provide preparation for the study of VCE General Mathematics at the Units 3 and 4 level and contain assumed knowledge and skills for these units.

Unit 1: Semester 1

Unit 1 involves the study of investigating and comparing data distributions, including types of data, displaying data, summarising data, five number summary and calculation of outliers, back-to-back stem plots and parallel box plots; arithmetic and geometric sequences, first order linear recurrence relations and financial mathematics, including percentage increase and decrease, inflation and comparison of purchase options; linear functions, graphs, equations and models, including interpreting and graphing linear functions, solving simultaneous equations and piecewise functions; matrices, including use of matrices to store and display information, matrices arithmetic, inverse matrices and transition matrices.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a mathematical investigation)
2. Examination 1: 30%
3. Examination 2: 30%

Unit 2: Semester 2

Unit 2 involves the study of investigating relationships between two numerical variables, including response and explanatory variables, scatterplots, informal interpretation of association and strength, fitting a line of best fit and interpretation of the line of best fit; graphs and networks, including notations, conventions, and representations of graphs, planar,

connected and weighted graphs, and trees and minimum spanning trees; variation, including numerical, graphical and algebraic approaches, transformation of data to linearity, and modelling of non-linear data; space, measurement and applications of trigonometry, including units of measure, exact and approximate answers, similar shapes and objects, perimeter, area, volume and surface area, trigonometric ratios and Pythagoras' Theorem, and the sine and cosine rules.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a Mathematical Investigation)
2. Examination 1: 30%
3. Examination 2: 30%

General Mathematics - Units 3 and 4

General Mathematics Units 3 and 4 focus on real-life application of mathematics and consist of the areas of study 'Data analysis, probability and statistics' and 'Discrete mathematics'.

Unit 3: Semester 1

Unit 3 involves the study of data analysis, including data types, representation and distribution of data, location, spread, association, correlation and causation, response and explanatory variables, linear regression, data transformation and goodness of fit, times series, seasonality, smoothing and prediction; and recursion and financial modelling, including the use of first-order linear recurrence relations and the time value of money (TVM) to model and analyse a range of financial situations, and using technology to solve related problems involving interest, appreciation and depreciation, loans, annuities and perpetuities.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes

in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

Unit 4: Semester 2

Unit 4 involves the study of matrices, including the definition of matrices, different types of matrices, matrix operations, transition matrices and the use of first-order linear matrix recurrence relations to model a range of situations and solve related problems; and networks and decision mathematics, including the definition and representation of different kinds of undirected and directed graphs, Eulerian trails, Eulerian circuits, bridges, Hamiltonian paths and cycles, and the use of networks to model and solve problems involving travel, connection, flow, matching, allocation and scheduling.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Unit 3 School-assessed Coursework: 24% (an application task and a problem-solving task)
2. Unit 4 School-assessed Coursework: 16% (two problem-solving tasks)
3. Units 3 and 4 Examination 1: 30%
4. Units 3 and 4 Examination 2: 30%

Mathematical Methods (CAS)

<https://vimeo.com/825688292>

Prerequisites

Units 1 & 2 – Year 10 Algebra at least a C+ average

Units 3 & 4 – Maths Methods (CAS) (Units 1 & 2)

Course Description

Mathematical Methods Units 1 and 2 provide an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts.

Unit 1: Semester 1

Unit 1 involves the study of functions, relations and graphs, including the graphical representation of simple algebraic functions (polynomial and power functions) of a single real variable and the key features of functions and their graphs such as axis intercepts, domain (including the concept of maximal, natural or implied domain), co-domain and range, stationary points, asymptotic behaviour and symmetry; algebra, number and structure, including the algebra of polynomial functions of low degree and transformations of the plane; calculus, including constant and average rates of change and an introduction to instantaneous rate of change of a function in familiar contexts, including graphical and numerical approaches to estimating and approximating these rates of change; data analysis, probability and statistics, including the concepts of experiment (trial), outcome, event, frequency, probability and representation of finite sample spaces and events using various forms such as lists, grids, Venn diagrams and tables.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a mathematical investigation)
2. Examination 1: 20% (technology free)
3. Examination 2: 40%

Unit 2: Semester 2

Unit 2 involves the study of functions, relations and graphs, including graphical representation of circular, exponential and logarithmic functions of a single real variable and the key features of graphs of functions such as axis intercepts, domain (including maximal, natural or implied domain), co-domain and range, asymptotic behaviour, periodicity and symmetry; algebra, number and structure, including the algebra of some simple transcendental functions and transformations of the plane; calculus, including differentiation and anti-differentiation of polynomial functions by rule, different notations, and related applications including the analysis of graphs; data analysis, probability and statistics, including the use of lists, tables and diagrams to calculate probabilities, including consideration of complementary, mutually exclusive, conditional and independent events involving one, two or three events (as applicable), including rules for computation of probabilities for compound events.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a mathematical investigation)
2. Examination 1: 20% (technology free)
3. Examination 2: 40%

Mathematical Methods (CAS) - Units 3 and 4

Mathematical Methods Units 3 and 4 extend the introductory study of simple elementary functions of a single real variable, to include combinations of these functions, algebra, calculus, probability and statistics, and their applications in a variety of practical and theoretical contexts.

Unit 3: Semester 1

Unit 3 follows directly on from Mathematical Methods (CAS) Units 1 and 2 and assumes

knowledge normally acquired in Unit 2. It involves the study of functions, relations and graphs; algebra, number and structure; Calculus, including applications of derivatives and differentiation, and identifying and analysing key features of functions and their graphs; and data analysis, probability and statistics, including the study of random variables, discrete and continuous probability distributions, and the distribution of sample proportions.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

Unit 4: Semester 2

Unit 4 involves the study of calculus, including the treatment of anti-differentiation, integration, the relation between integration and the area of regions specified by lines or curves described by the rules of functions, and simple applications of this content, including to probability distributions of continuous random variables.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Unit 3 School-assessed Coursework: 20% (an application task)
2. Unit 4 School-assessed Coursework: 20% (two modelling or problem-solving tasks)
2. Unit 3 and 4 Examination 1: 20% (technology free)
3. Unit 3 and 4 Examination 2: 40%

Specialist Mathematics

<https://vimeo.com/825754922>

Prerequisites

Units 1 & 2 - Year 10 Higher Level Maths, must also be enrolled in Maths Methods Unit 1 & 2 or Units 3 & 4.

Units 3 & 4 - Specialist Maths Units 1 & 2 and must also be enrolled in Maths Methods Units 3 & 4 or have already completed Maths Methods Units 3 & 4.

Course Description

Specialist Mathematics Units 1 and 2 provide a course of study for students who wish to undertake an in-depth study of mathematics, with an emphasis on concepts, skills and processes related to mathematical structure, modelling, problem-solving, reasoning and proof.

Unit 1: Semester 1

Unit 1 involves the study of: algebra, number and structure, including the development of formal mathematical notation, definition, reasoning and proof applied to number systems, graph theory, sets, logic, and Boolean algebra, and the development of algorithms to solve problems; discrete mathematics, including the study of sequences, series, and first-order linear difference equations, combinatorics, including the pigeon-hole principle, the inclusion-exclusion principle, permutations and combinations, combinatorial identities, and matrices.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a mathematical investigation)
2. Examination 1: 20% (technology free)
3. Examination 2: 40%

Unit 2: Semester 2

Unit 2 involves the study of: data analysis, probability and statistics including the study of linear combinations of random variables and the distribution of sample means of a population, with the use of technology to explore variability of sample means; space and measurement, including trigonometry and identities, rotation and reflection transformations of the plane and vectors for working with position, shape, direction and movement in the plane and related applications; algebra, number and structure, including the arithmetic and algebra of complex numbers, including polar form, regions and curves in the complex plane and introduction to factorisation of quadratic functions over the complex field; functions, relations and graphs, including an introduction to partial fractions; reciprocal and inverse circular functions and their graphs and simple transformations of these graphs; locus definitions of lines, parabolas, circles, ellipses and hyperbolas and the cartesian, parametric and polar forms of these relations.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Coursework: 40% (inclusive of a mathematical investigation)
2. Examination 1: 20% (technology free)
3. Examination 2: 40%

Specialist Mathematics - Units 3 and 4

Specialist Mathematics Units 3 and 4 assumes familiarity with the key knowledge and key skills from Mathematical Methods Units 1 and 2; the key knowledge and key skills from Specialist Mathematics Units 1 and 2; and concurrent study or previous completion of Mathematical Methods Units 3 and 4.

Unit 3: Semester 1

This unit involves the study of discrete mathematics; including logic; functions, relations and graphs, including, rational functions and other simple quotient functions, curve sketching of these functions and relations, and the analysis of key features of their graphs including intercepts, asymptotic behaviour and the nature and location of stationary points and points of inflection and symmetry; algebra, number and structure, including the algebra of complex numbers, including polar form, factorisation of polynomial functions over the complex field and an informal treatment of the fundamental theorem of algebra; space and measurement, including arithmetic and algebra of vectors; linear dependence and independence of a set of vectors and proof of geometric results using vectors; and calculus, including the advanced calculus techniques for analytical and numerical differentiation and integration of a broad range of functions, and combinations of functions; and their application in a variety of theoretical and practical situations, including curve sketching and evaluation of arc length, area and volume.

On completion of this unit students should be able to: define and explain key concepts and apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

Unit 4: Semester 2

This unit involves the study of discrete mathematics; including, proof techniques including mathematical induction; space and measurement, including vector representation of curves in the plane and their parametric and cartesian equations; vector kinematics in one, two and three dimensions; vector, parametric and cartesian equations of lines and planes; calculus, including differential equations and kinematics, and modelling with differential equations drawing from a variety of fields such as biology, economics and science; and data analysis, probability and statistics, including the study of linear combinations of random variables and introductory statistical inference with respect to the mean of a single population, the determination of confidence intervals, and hypothesis testing for the mean using the distribution of sample means.

On completion of this unit students should be able to: define and explain key concepts and

apply a range of related mathematical routines and procedures; apply mathematical processes in non-routine contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics; and apply computational thinking and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring investigative, modelling or problem-solving techniques or approaches.

ASSESSMENT

1. Unit 3 School-assessed Coursework: 20% (an application task)
2. Unit 4 School-assessed Coursework: 20% (two modelling or problem-solving tasks)
3. Unit 3 and 4 Examination 1: 20% (technology free)
4. Unit 3 and 4 Examination 2: 40%

09 Science

Biology

<https://vimeo.com/825326242>

Prerequisites

Biology Units 1 & 2 must be completed before Units 3 & 4.

Course Description

Unit 1: Semester 1 - How living things stay alive?

Area of Study 1: How do organisms function?

Students examine the structure and functioning of cells and how the plasma membrane contributes to survival by controlling the movement of substances into and out of the cell. Although the internal structure of the cell varies, all cells require a relatively stable internal environment for optimal functioning. Despite the great diversity among living things, all individual organisms are faced with the challenge of obtaining nutrients and water, exchanging gases, sourcing energy and having a means of removal of waste products.

Area of Study 2: How do living systems sustain life?

Students examine the structural, physiological and behavioural adaptations of a range of organisms that enable them to survive in a particular habitat and to maintain a viable population size over time. Students consider the distinction between the external and internal environment of an organism and examine how homeostatic mechanisms maintain the internal environment within a narrow range of values. They explore the importance and implications of organising and maintaining biodiversity and examine the nature of an ecosystem. They identify a keystone species, explore an organism's relationship to its habitat and evaluate the impact of abiotic factors on the distribution and abundance of organisms within the community. Factors affecting population size and growth are analysed.

Area of Study 3: Practical Investigation

Survival requires control and regulation of factors within an individual and often outside the individual. Students design and conduct a practical investigation into the survival of an individual or a species. The investigation is related to knowledge and skills developed in Areas of Study 1 and/or 2 and is conducted by the student through laboratory work, fieldwork and/or observational studies.

Unit 2: Semester 2 – How is the continuity of life maintained?

Area of Study 1: How does reproduction maintain the continuity of life?

Students consider the need for the cells of multicellular organisms to multiply for growth, repair and replacement. They examine the main events of the cell cycle in prokaryotic and eukaryotic cells. Students become familiar with the key events in the phases of the cell cycle. They investigate and use visualisations and modelling to describe the characteristics of each of the phases of mitosis. Students describe the production of gametes in sexual reproduction through the key events in meiosis and explain the difference between asexual and sexual reproduction. Finally, students consider the role and nature of stem cells, their differentiation and the consequence for human prenatal development and their potential to treat injury and disease.

Area of Study 2: How is inheritance explained?

Students build on their understanding of the nature of genes and the use of genetic language to read and interpret patterns of inheritance and predict the outcomes of genetic crosses. They gain an understanding that a characteristic or trait can be due solely to one gene and its alleles or due to many genes acting together, or is the outcome of genes interacting with external environmental or epigenetic factors. They apply their genetic knowledge to consider the social and ethical implications of genetic applications in society including genetic screening and decision making regarding the inheritance of autosomal and sex-linked conditions.

Area of Study 3: Investigation of an issue

Students apply and extend their knowledge and skills developed in Areas of Study 1 and/or 2 to investigate an issue involving reproduction and/or inheritance. Students communicate their findings and explain the biological concepts, identify different opinions, outline the legal, social and ethical implications and justify their conclusions.

Unit 3: Semester 1 – How do cells maintain life?

Area of Study 1: How do cellular processes work?

This unit focuses on the cell as a complex chemical system. Students examine the chemical nature of the plasma membrane to compare how hydrophilic and hydrophobic substances move across it. They model the formation of DNA and proteins from their respective subunits. The expression of the information encoded in a sequence of DNA to form a protein is explored and the nature of the genetic code outlined. Students explain gene regulation using the lac operon in prokaryotes in terms of the ‘switching on’ and ‘switching off’ of genes. Students also learn why the chemistry of the cell usually takes place at a relatively low, and within a narrow range, of temperatures. They examine how reactions, including photosynthesis and cellular respiration, are made up of many steps that are controlled by enzymes and assisted by coenzymes. Students explain the mode of enzyme action and the role of coenzymes in the reactions of the cell and investigate the factors that affect the rate of cellular reactions.

Area of Study 2: How do cells communicate?

Students focus on how cells receive specific signals that elicit a particular response. Students apply the stimulus-response model to the cell in terms of the types of signals, the position of receptors, and the transduction of the information across the cell to an effector that then initiates a response. Students examine unique molecules called antigens and how they elicit an immune response, the nature of immunity and the role of vaccinations in providing immunity. They explain how malfunctions in signalling pathways cause various disorders in the human population and how new technologies assist in managing such disorders.

Unit 4: Semester 2 – How does life change and respond to challenges over time?

Area of Study 1: How are species related?

Students study changes to genetic material over time and the evidence for biological evolution. They investigate how changes to genetic material lead to new species through the process of natural selection as a mechanism for evolution. Students examine how evolutionary biology and the relatedness of species is based upon the accumulation of evidence. They learn how interpretations of evidence can change in the light of new evidence as a result of technological advances, particularly in molecular biology. The human fossil record is explored to identify the major biological and cognitive trends that have led to a complex interrelationship between biology and culture.

Area of Study 2: How do humans impact on biological processes?

Students examine the impact of human culture and technological applications on biological processes. They apply their knowledge of the structure and function of the DNA molecule to examine how molecular tools and techniques can be used to manipulate the molecule for a

particular purpose. Students describe gene technologies used to address human issues and consider their social and ethical implications. Scientific knowledge can both challenge and be challenged by society. Students examine biological challenges that illustrate how the reception of scientific knowledge is influenced by social, economic and cultural factors.

Area of Study 3: Practical investigation

A student-designed or adapted investigation related to cellular processes and/or biological change and continuity over time is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4. The investigation is to relate to knowledge and skills developed across Units 3 and 4 and may be undertaken by the student through laboratory work and/or fieldwork.

The investigation requires the student to identify an aim, develop a question, formulate a hypothesis and plan a course of action to answer the question that complies with safety and ethical guidelines. The student then undertakes an experiment that involves the collection of primary qualitative and/or quantitative data, analyses and evaluates the data, identifies limitations of data and methods, links experimental results to science ideas, reaches a conclusion in response to the question and suggests further investigations which may be undertaken. The results of the investigation are presented in a scientific poster format. A practical logbook must be maintained by the student for record, authentication and assessment purposes.

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ASSESSMENT

Assessment is comprised of coursework (class tests and practical work), practical investigation and examination.

Chemistry

<https://vimeo.com/825330671>

Prerequisites

Chemistry Units 1 & 2 must be completed before Units 3 & 4.

Course Description

Unit 1: Semester 1 - How can the diversity of materials be explained?

Area of Study 1: How do the chemical structures of materials explain their properties and reactions?

Students focus on elements as the building blocks of useful materials. They investigate the structures, properties and reactions of carbon compounds, metals and ionic compounds, and use chromatography to separate the components of mixtures. They use metal recycling as a context to explore the transition in manufacturing processes from a linear economy to a circular economy.

Area of Study 2: [How are materials quantified and classified?](#)

Students focus on the measurement of quantities in chemistry and the structures and properties of organic compounds, including polymers. They perform calculations based on the generation of primary data, such as determining the empirical formula of an ionic compound or hydrated salt, and consider how the quality of data generated in experiments can be improved. They may construct models to visualise the similarities and differences between families of organic compounds.

Area of Study 3: [How can chemical principles be applied to create a more sustainable future?](#)

Students undertake an investigation involving the selection and evaluation of a recent discovery, innovation, advance, case study, issue or challenge linked to the knowledge and skills developed in Unit 1 Area of Study 1 and/or Area of Study 2, including consideration of sustainability concepts (green chemistry principles, sustainable development and the transition towards a circular economy).

Unit 2: How do chemical reactions shape the natural world?

[Area of Study 1: How do chemicals interact with water?](#)

Students focus on understanding the properties of water and investigating acid-base and redox reactions. They explore water's properties, including its density, specific heat capacity and latent heat of vaporisation. They write equations for acid-base and redox reactions, and apply concepts including pH as a measure of acidity. They explore applications of acid-base reactions and redox reactions in society.

[Area of Study 2: How are chemicals measured and analysed?](#)

Students focus on the analysis and quantification of chemical reactions involving acids, bases, salts and gases. They measure the solubility of substances in water, explore the relationship between solubility and temperature using solubility curves, and learn to predict when a solute will dissolve or crystallise out of solution. They quantify amounts in chemistry using

volumetric analysis, application of the ideal gas equation, stoichiometry and calibration curves.

Area of Study 3: How do quantitative scientific investigations develop our understanding of chemical reactions?

Students adapt or design and then conduct a scientific investigation related to chemical equations and/or analysis, which must include the generation of primary data. They develop a research question related to the production of gases, acid-base or redox reactions or the analysis of substances in water, and adapt or design and then conduct a scientific investigation to generate appropriate quantitative data. Students organise and interpret the data and reach a conclusion in response to their research question.

Unit 3: Semester 1 – How can chemical processes be designed to optimise efficiency?

Area of Study 1: What are the options for energy production?

Students focus on analysing and comparing a range of energy resources and technologies, including fossil fuels, biofuels, galvanic cells and fuel cells, with reference to the energy transformations and chemical reactions involved, energy efficiencies, environmental impacts and potential applications. Students explore theoretical aspects of, and also design and conduct practical investigations on, the use of the specific heat capacity of water and thermochemical equations to determine the enthalpy changes and quantities of reactants and products involved in the combustion reactions of a range of renewable and non-renewable fuels. Students explore theoretical aspects of, and also conduct practical investigations involving, redox reactions, including the design, construction and testing of galvanic cells, and account for differences between experimental findings and predictions made by using the electrochemical series. They compare the design features, operating principles and uses of galvanic cells and fuel cells, and summarise cell processes by writing balanced equations for half and overall cell processes.

Area of Study 2: How can the yield of a chemical product be optimised?

Students investigate how the rate of a reaction can be controlled so that it occurs at the optimum rate while avoiding unwanted side reactions and by-products. They explain reactions with reference to the collision theory including reference to Maxwell-Boltzmann distribution curves. The progression of exothermic and endothermic reactions, including the use of a catalyst, is represented using energy profile diagrams. Students explore homogeneous

equilibrium systems and apply the equilibrium law to calculate equilibrium constants and concentrations of reactants and products. They investigate Le Chatelier's principle and the effect of different changes on an equilibrium system and make predictions about the optimum conditions for the production of chemicals, taking into account rate and yield considerations. Students represent the establishment of equilibrium and the effect of changes to an equilibrium system using concentration-time graphs. Students investigate a range of electrolytic cells with reference to their basic design features and purpose, their operating principles and the energy transformations that occur. They examine the discharging and recharging processes in rechargeable cells, and apply Faraday's laws to calculate quantities in electrochemistry and to determine cell efficiencies.

Unit 4: Semester 2 – How are organic compounds categorised, analysed and used?

Area of Study 1: How can the diversity of carbon compounds be explained and categorised?

Students examine the structural features of members of several homologous series of compounds, including some of the simpler structural isomers, and learn how they are represented and named. Students investigate trends in the physical and chemical properties of various organic families of compounds. They study typical reactions of organic families and some of their reaction pathways, and write balanced chemical equations for organic syntheses. Students learn to deduce or confirm the structure and identity of organic compounds by interpreting data from mass spectrometry, infrared spectroscopy and proton and carbon-13 nuclear magnetic resonance spectroscopy.

Area of Study 2: What is the chemistry of food?

Students explore the importance of food from a chemical perspective. Students study the major components of food with reference to their structures, properties and functions. They examine the hydrolysis reactions in which foods are broken down, the condensation reactions in which new biomolecules are formed and the role of enzymes, assisted by coenzymes, in the metabolism of food. Students study the role of glucose in cellular respiration and investigate the principles of calorimetry and its application in determining enthalpy changes for reactions in solution. They explore applications of food chemistry by considering the differences in structures of natural and artificial sweeteners, the chemical significance of the glycaemic index of foods, the rancidity of fats and oils, and the use of the term 'essential' to describe some amino acids and fatty acids in the diet.

Area of Study 3: Practical investigation.

A student-designed or adapted practical investigation related to energy and/or food is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4. The investigation relates to knowledge and skills developed across Unit 3 and/or Unit 4.

The investigation requires the student to identify an aim, develop a question, formulate a hypothesis and plan a course of action to answer the question that complies with safety and ethical requirements. The student then undertakes an experiment that involves the collection of primary qualitative and/or quantitative data, analyses and evaluates the data, identifies limitations of data and methods, links experimental results to science ideas, reaches a conclusion in response to the question and suggests further investigations which may be undertaken. Findings are communicated in a scientific poster format. A practical logbook must be maintained by the student for record, authentication and assessment purposes.

ASSESSMENT

Assessment is comprised of coursework (class tests and practical work), practical investigation and examination.

Environmental Science

Prerequisites

Environmental Science Units 1 & 2 must be completed before Units 3 & 4 ????

Course Description: Units 1 and 2

Environmental Science is an exciting and relevant subject that explores the complex interactions between humans and the natural world. Through Units 1 and 2, students will develop an understanding of key environmental concepts, including ecosystems, biodiversity, and sustainability, and investigate the impacts of human activities on the environment.

In Unit 1, students will explore the biotic and abiotic components of ecosystems, including energy flow and nutrient cycles, and investigate the importance of biodiversity and the role of conservation in maintaining ecosystem health. They will also examine the impact of human activities, such as land use change and pollution, on ecosystems.

In Unit 2, students will deepen their understanding of environmental issues, investigating the factors that contribute to environmental change and the ways in which we can manage and

mitigate these impacts. They will explore sustainable practices in agriculture, energy use, and waste management, as well as the social, economic, and political factors that influence environmental decision-making.

Environmental science graduates have a broad range of career options, including working for government agencies, NGOs, and consulting firms. Environmental scientists may work as environmental consultants, conducting research and providing advice to businesses and government agencies on environmental policies and regulations. They may also work as conservation scientists, park rangers, or environmental educators. There is a growing demand for jobs in this field with new jobs arising constantly.

Throughout Units 1 and 2, students will engage in a range of activities, including fieldwork, data analysis, and research, to develop their scientific skills and deepen their understanding of environmental issues. By the end of the course, students will be equipped with the knowledge and skills to make informed decisions about their impact on the environment and to contribute to a sustainable future.

VCE Environmental Science Units 3 and 4

Through Units 3 and 4, students will deepen their understanding of key environmental concepts and investigate the impacts of human activities on the environment, with a focus on sustainability.

In Unit 3, students will explore the impact of climate change on the environment, including the causes and consequences of global warming, strategies for mitigating its effects, and its impact on biodiversity. They will also investigate the role of human activities, such as agriculture and transportation, in contributing to climate change.

In Unit 4, students will deepen their understanding of environmental issues, investigating the factors that contribute to environmental change and the ways in which we can manage and mitigate these impacts. They will explore sustainable practices in agriculture, energy use, and waste management, as well as the social, economic, and political factors that influence environmental decision-making.

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conservation scientists, park rangers, or environmental educators. There is a growing demand for jobs in this field with new jobs arising constantly.

Throughout Units 3 and 4, students will engage in a range of activities, including data analysis, research, and fieldwork, to deepen their understanding of environmental issues and develop their scientific skills. By the end of the course, students will be equipped with the knowledge and skills to make informed decisions about their impact on the environment and to contribute to a sustainable future.

ASSESSMENT

Assessment is comprised of coursework (class tests and practical work), practical investigation and examination.

Physics

<https://vimeo.com/825718158>

Prerequisites

Physics Units 1 & 2 must be completed before Units 3 & 4.

Course Description

VCE Physics Unit 1

Area of Study 1: How are light and heat explained?

Students will study light using the wave model and thermal energy using a particle model forming an understanding of the fundamental physics ideas of reflection, refraction and dispersion. Students will use these ideas to understand observations made of the world such as mirages and rainbows. Students will investigate energy transfers and explore how light and thermal energy relate to one another. They apply light ideas to explain how light is used through optical fibres in communication, and how physics is used to inform global warming and climate change.

Area of Study 2: How is energy from the nucleus utilised?

Students build on their understanding of energy to explore energy that derives from the nuclei of atoms. They learn about the properties of the radiation from the nucleus and the effects of this radiation on human cells and tissues and apply this understanding to the use of

radioisotopes in medical therapy. Students explore the transfer of energy from the nucleus through the processes of fission and fusion and apply these ideas to evaluate the viability of nuclear energy as an energy source for Australia.

Area of Study 3: How do electric circuits work?

Modelling is a useful tool in developing concepts that explain physical phenomena that cannot be directly observed. In this area of study, students develop conceptual models to analyse electrical phenomena and undertake practical investigations of circuit components. Concepts of electrical safety are developed through the study of safety mechanisms and the effect of current on humans. Students apply and critically assess mathematical models during experimental investigations of DC circuits. They explore electrical safety and the use of transducers to transfer energy in common devices.

VCE Physics Unit 2

Area of Study 1: How is motion understood?

Students describe and analyse graphically, numerically and algebraically the energy and motion of an object, using specific physics terminology and conventions. They consider the effects of balanced and unbalanced forces on motion and investigate the translational and rotational forces on static structures. Students apply mathematical models during experimental investigations of motion, and apply their understanding of motion and force through a case study.

Area of Study 2: How do particle accelerators work?

Students will learn about the nature of charged particles in the presence of electric and magnetic fields and how these principles are used in accelerator technologies. Students will review the evolution of, current and future collider technologies. Students will distinguish between the use of particle accelerators to collide particles, eg the Large Hadron Collider, with those accelerators used to produce synchrotron light, such as the Australian Synchrotron, including an excursion to this impressive Melbourne-based facility.

Area of Study 3: How do physicists investigate questions?

Students adapt or design and then conduct a scientific investigation to generate appropriate primary qualitative and/or quantitative data, organise and interpret the data, and reach and

evaluate a conclusion in response to the research question. This practical investigation is related to knowledge and skills developed in Area of Study 1 and/or 2.

VCE Physics Unit 3

Area of Study 1: How do things move without contact?

Students examine the similarities and differences between three fields: gravitational, electric and magnetic. Field models are used to explain the motion of objects when there is no apparent contact. Students explore how positions in fields determine the potential energy of an object and the force on an object. They investigate how concepts related to field models can be applied to construct motors, maintain satellite orbits and to accelerate particles.

Area of Study 2: How are fields used to move electrical energy?

Students use empirical evidence and models of electric, magnetic and electromagnetic effects to explain how electricity is produced and delivered to homes. They explore magnetic fields and the transformer as critical to the performance of electrical distribution systems.

Area of Study 3: How fast can things go?

Students use Newton's laws of motion to analyse relative motion, circular motion and projectile motion. Students compare Newton's and Einstein's explanations of motion and evaluate the circumstances in which they can be applied. They explore the relationships between force, energy and mass.

VCE Physics Unit 4

Area of Study 1: How can waves explain the behaviour of light?

Students use evidence from experiments to explore wave concepts in a variety of applications. They investigate the properties of mechanical waves and examine the evidence suggesting that light is a wave. They apply quantitative models to explore how light changes direction, including reflection, refraction, colour dispersion and polarisation.

Area of Study 2: How are light and matter similar?

Students explore the design of major experiments that have led to the development of theories to describe the most fundamental aspects of the physical world – light and matter.

Area of Study 3: Practical Investigation

A student-designed practical investigation related to waves, fields or motion is undertaken

either in Unit 3 or Unit 4, or across both Units 3 and 4. The investigation relates to knowledge and skills developed across Units 3 and 4 and is undertaken by the student through practical work.

The investigation requires the student to develop a question, formulate a hypothesis and plan a course of action to answer the question and that complies with safety and ethical guidelines. Students then undertake an experiment that involves the collection of primary quantitative data, analyse and evaluate the data, identify limitations of data and methods, link experimental results to science ideas, reach a conclusion in response to the question and suggest further investigations that may be undertaken. The student is expected to design and undertake an investigation involving two continuous independent variables. Results are communicated in a scientific poster format. A practical logbook must be maintained by the student for record, authentication and assessment purposes.

ASSESSMENT

Assessment is comprised of coursework (class tests and practical work), practical investigation and examination.

Psychology

<https://vimeo.com/825748733>

Prerequisites

Psychology Units 1 & 2 must be completed before Units 3 & 4, or by HOF approval.

Overview:

Psychology is the scientific study of mental processes and behaviour in humans. Biological, behavioural, cognitive and socio-cultural perspectives inform the way psychologists approach their research into the human condition.

Psychology provides students with a sophisticated framework for understanding the complex interactions between biological, and psychological factors that influence thought, emotions and behaviour. The study assists students to further develop effective language skills for communication, and numeracy skills for research, data analysis and other applications. In addition, students develop a range of broader skills including those of problem solving, critical evaluation and the application of processes of scientific inquiry.

Course Description

Unit 1: Semester 1 - How are behaviour and mental processes shaped?

In this unit, students investigate criminal psychology to answer the critical question; are criminals born or made? Across the semester students investigate this intriguing question from multiple psychological perspectives. Students consider the interactive nature of hereditary and environmental factors and examine specific factors that may lead to the development of typical or atypical psychological development in individuals. Students will examine multiple social influence aspects to interpret their own behaviour and those around them, including the influence of conformity, power and obedience. Students undertake their own research investigation into this topic, with the aim of drawing a conclusion based on the synthesis of knowledge discovered.

Unit 2: Semester 2 - How do external factors influence behaviour and mental processes?

In this unit students are given the opportunity to explore how the brain enables individuals to make meaning and respond to the world around them. Through a range of practical experiments and activities students learn about their senses and how easily they can be misled. Students analyse the roles of specific areas of the brain and the interactions between different areas of the brain that enable complex cognitive tasks to be performed. Students explore how brain plasticity and brain damage can affect a person's functioning. Semester 2 also focuses on building skills in preparation for Units 3 & 4 by undertaking scientific investigations into the functioning of the brain.

Area of study 3 - Student-directed research investigation

Across the year students engage in a research investigation of their own choosing. In this area of study, students apply and extend their knowledge and skills developed in Areas of Study 1 and/or 2 to investigate a question related to brain function and/or psychological development. Students analyse the scientific evidence that underpins the research in response to a question of interest. They then communicate the findings of their research investigation and explain the psychological concepts, outline contemporary research and present conclusions based on the evidence.

Unit 3: Semester 1 - How does experience affect behaviour and mental processes?

In this unit students examine both macro-level and micro-level functioning of the nervous

system to explain how the human nervous system enables a person to interact with the world around them. They explore how stress may affect a person's psychological functioning and consider the causes and management of stress. Students investigate how mechanisms of memory and learning lead to the acquisition of knowledge, the development of new capacities and changed behaviours.

They consider the limitations and fallibility of memory and how memory can be improved. Students examine the contribution that classical and contemporary research has made to the understanding of the structure and function of the nervous system, and to the understanding of biological, psychological and social factors that influence learning and memory.

Area of study 1: How does the nervous system enable psychological functioning?

In this area of study, students explore the role of different branches of the nervous system in enabling a person to integrate, coordinate and respond to internal and external sensory stimuli. They explore the specialised structures and functioning of neurons that allow the nervous system to transmit neural information. Students evaluate how biological, psychological and social factors can influence a person's nervous system functioning. In particular, they consider the ways in which stress can affect the mind and body, the role that the nervous system plays in these processes and how stress can be managed.

Area of study 2 - How do people learn and remember?

Memory and learning are core components of human identity: they connect past experiences to the present and shape futures by enabling adaptation to daily changes in the environment. In this area of study students study the neural basis of memory and learning and examine factors that influence the learning of new behaviours and the storage and retention of information in memory. They consider the influence of biological, psychological and social factors on the fallibility of memory.

Unit 4: How is wellbeing developed and maintained?

In this unit students examine the nature of consciousness and how changes in levels of consciousness can affect mental processes and behaviour. They consider the role of sleep and the impact that sleep disturbances may have on a person's functioning. Students explore the concept of a mental health continuum and apply a biopsychosocial approach, as a scientific model, to analyse mental health and disorder. They use specific phobia to illustrate how the development and management of a mental disorder can be considered as an interaction between biological, psychological and social factors. Students examine the contribution that classical and contemporary research has made to the understanding of consciousness,

including sleep, and the development of an individual's mental functioning and wellbeing.

Area of study 1 - How do levels of consciousness affect mental processes and behaviour?

Differences in levels of awareness of sensations, thoughts and surroundings influence individuals' interactions with their environment and with other people. In this area of study students focus on states of consciousness and the relationship between consciousness and thoughts, feelings and behaviours. They explore the different ways in which consciousness can be studied from physiological and psychological perspectives and how states of consciousness can be altered. Students consider the nature and importance of sleep and apply biological, psychological and social factors to analyse the effects of sleep disturbances on psychological functioning, including mood, cognition and behaviour.

Area of study 2 - What influences mental wellbeing?

In this area of study, students examine what it means to be mentally healthy. They explore the concept of a mental health continuum and factors that explain how location on the continuum for an individual may vary over time. Students apply a biopsychosocial approach to analyse mental health and mental disorder, and evaluate the roles of predisposing, precipitating, perpetuating and protective factors in contributing to a person's mental state. Specific phobia is used to illustrate how a biopsychosocial approach can be used to explain how biological, psychological and social factors are involved in the development and management of a mental disorder. Students explore the concepts of resilience and coping and investigate the psychological basis of strategies that contribute to mental wellbeing.

ASSESSMENT

Assessment is comprised of coursework and examination.

10 Technology

Agricultural and Horticultural Studies

<https://vimeo.com/825321068>

Prerequisites

Nil.

Course Description

Agricultural and Horticultural Studies is designed to give greater understanding of the operations and practices of agricultural and horticultural systems. The focus is on human interaction with the earth and its organisms. The goal of this interaction is to develop an economically and ecologically sustainable system.

Throughout the study, students apply their acquired knowledge in managing an agricultural or horticultural enterprise.

Unit I: Semester I - Agricultural and Horticultural operations

In this unit students study local agricultural and horticultural operations and the factors that influence these enterprises. Students explore elements that constitute agricultural and horticultural systems; basic animal and plant biology, including identification, classification, structure and growth. They examine the environmental, economic, social and historical factors that influence the development of local agricultural and horticultural systems.

On completion of this unit students should be able to: describe and explain the make-up of agricultural and horticultural systems; identify the range of factors that influence the maintenance and distribution of these systems in this region of Victoria. They will then apply and justify the use of production skills involved in establishing a small agricultural/horticultural enterprise.

ASSESSMENT

1. Coursework (70%)
2. Examination (30%)

Unit 2: Semester 2 - Production

This unit focuses on the analysis of production systems in terms of physical, biological, social and economic factors, sustainability and time. Students examine nutrition, reproduction and genetics in plants and animals. They consider the role of agribusiness and horticultural business in adding value to produce. This unit involves investigating the factors that influence the process of production.

On completion of this unit students should be able to: explain the nutritive and reproductive processes of plants and animals within an agricultural and horticultural production system; discuss the role of these systems in adding value to agricultural and horticultural produce. They will then evaluate and report on the management of a small agricultural enterprise their group established in Unit.

ASSESSMENT

1. Coursework (70%)
2. Examination (30%)

Unit 3: Semester 1 - Technology

Technology in this study refers to the equipment and processes that can be used to maintain and enhance the efficiency and effectiveness of agricultural and horticultural systems. To achieve sustainable agricultural and horticultural systems, operators need to be aware of technology and its role in planning. This unit focuses on the impact of technology on agricultural/horticultural systems, including new methods of obtaining and processing information to improve efficiency in record-keeping and decision-making; production; marketing; and long-term planning. The development of new and improved technology associated with sustainable production, management and marketing will be investigated, and the impact of this production on the environment will be assessed.

Unit 4: Semester 2 - Management

This unit focuses on the management of agricultural/horticultural systems within the context of ecological sustainability.

On completion of this unit students should be able to: compare a natural ecosystem with a

managed ecosystem; apply appropriate production skills to the enterprise; evaluate the outcomes of a business plan; analyse financial performance. Students report on the conduct of an enterprise including factors influencing its productivity and sustainability and students give recommendations for improvement.

ASSESSMENT

1. Coursework - Unit 3 (33%)
2. Coursework – Unit 4 (33%)
3. Examination (34%)

Product Design and Technology

<https://vimeo.com/825743639>

<https://vimeo.com/825729872>

Prerequisites

Nil.

Course Description

In VCE Product Design and Technology, students assume the role of a designer-maker. In adopting this role, students design and make three-dimensional products using one or more materials and systems drawn from:

- RESISTANT MATERIALS (wood, metal, plastics), or
- TEXTILES (fibres, yarns and fabrics).

These units encourage students to produce innovative solutions to various set design problems and develop research skills through a number of investigation assignments. Students work through a series of projects that are designed to encourage students to develop skills in investigation and technical reporting, designing, manufacturing and evaluation.

Unit 1: Semester 1 - Product re-design and sustainability

This unit focuses on the analysis, modification and improvement of product design. It provides a structured approach towards the design process, and looks at examples of design practice used by a designer. The students examine the tools, processes and techniques and knowledge used by a designer to develop a solution to a specific problem.

On completion of the unit, students should be able to: use methods and processes used by the designer to design and manufacture a product. They should know how to use and evaluate the use of materials, tools, equipment and processes applied in the production of a product.

ASSESSMENT

1. Design Folio (30%)
2. Production (30%)
3. Coursework (20%)
4. Examination (20%)

Unit 2: Semester 2 - Collaborative Design

In this unit students work as a member of a team to develop a product range or contribute to the design and production of a group product. This mirrors professional design practice where designers often work within a multidisciplinary team to develop a solution to design problems. The students learn about restrictions and parameters within design set by the end-user's needs, producer's requirements, social conventions and environmental concerns. This unit focuses on the impact of these factors on the design solution.

On completion of this unit students should be able to: work as a member of a team to identify a need and use a structured approach to problem-solving. They should know how to justify, manage, safely use and evaluate appropriate production processes.

ASSESSMENT

1. Design Folio (30%)
2. Production (30%)
3. Coursework (20%)
4. Examination (20%)

Unit 3: Semester 1 - Applying the Product design process

This unit focuses on the design and development of a product for the mass market. It requires students to design for others. Product development in industry is investigated through the study of ways of establishing needs and other considerations that are observed when developing the design and product for a client.

On completion of this unit students should be able to: explain the role of the designer and how products are designed and produced to meet the needs of a client. They also need to explain how products are designed and produced within an industrial/commercial setting.

Finally students are asked to develop a product for a client.

Unit 4: Semester 2 - Product Development and Evaluation

This unit focuses on how judgements about the success of products can be informed by a comparison in terms of a product's quality, usefulness and appeal. The role and influence of product promotion and marketing are also considered.

On completion of this unit students should be able to: explain the relationships linking aesthetic appeal, function of products and user needs. They need to develop a product for a client and evaluate the final design and production in relation to the needs of the client.

ASSESSMENT

1. Coursework – Unit 3 (12%)
2. Coursework – Unit 4 (8%)
3. School Assessed Task (50%)
4. Examination (30%)