Melbourne Rudolf Steiner School

Awakening young people to their destiny

Year 12 VCE Course Outlines for Subject Choice 2016

Our highest endeavour must be to develop
free human beings,
who are able out of their own initiative
to impart purpose and direction
to their lives.

~ Rudolf Steiner

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Year 12 Subject Choices 2016

In making decisions about the future at this time in your school life, you should look for choices that:

- Bring us joy
- Capture our interest
- Allow for the capacity of varying career possibilities into the future (far beyond the choices we currently envisage)

In choosing your subjects for year 12 you may include the following considerations:

- How to further a lively interest you have developed
- How to put yourself in a position to meet university entrance requirements, or requirements, if any, for TAFE or other further training
- How to plan a satisfying final year at school

Generally speaking, we recommend that you choose the subjects that you enjoy and do well in.

Choosing a Year 12 Course for Admission into Tertiary Education

Many tertiary courses have specific prerequisites, sometimes quite surprising ones. You should be aware of those that apply to courses you might be interested in. If you do not have prerequisite subjects you won't be considered for these courses. The prerequisite lists prepared by the tertiary institutions for entry in 2016 are available from VTAC.

To guide you into taking the subjects they consider helpful, the tertiary institutions use several methods.

1. **Definite prerequisites**: Usually one or two specified subjects plus a list from which one must choose a certain number. English is always included.
2. **ATAR (Australian Tertiary Admission Rank)**
3. **Folio and/or Interview**
4. **Selection Kit**

For example:

a) **SCIENCE** e.g. University of Melbourne
Prerequisites Units 3 & 4. ATAR around 80 (variable)
A study score of at least 25 in English and Mathematical Methods and at least 25 in two of Biology, Chemistry, and an additional Maths or Physics.

b) **ARTS** (i.e. Humanities) e.g. University of Melbourne, Monash
Prerequisites Units 3 & 4. ATAR around 85
A study score of at least 25 in English.

c) **ART-ORIENTED COURSES**, particularly those that require a FOLIO of your art work as part of your application, will often recommend taking both Art and Studio Art at Year 12. But, if you are not going into the art field, it probably is not a good idea because your spread of subjects will not be wide enough.

Middle-band selections

When a student's ATAR score is borderline or slightly less than the "clearly in" ATAR, consideration will also be given to the level of performance in a full range of Year 12 studies (study scores and external examinations) and in the whole study of certain more subjects. For example, if you wish to enter into Science, and are in the middle band and you have an extra science or maths subject you may get an extra credit point. This may get you into a course where you scored slightly below "clearly in" marks.

When selecting students using the ATAR, many courses give a bonus of 2 or more points if certain subjects are included in the student's results (check course outline).

Please consider all aspects before choosing subject in Year 12.

When the students return their preliminary subject choice forms, we will try to pick up people who have fallen into little traps and warn them of possible difficulties, given what they can tell us of future aspirations. However, the ultimate responsibility has to rest with the students and parents.

Subjects Offered and Proposed Blockings

Most of the blockings which are determined from these preliminary choices will be similar to the blockings from year 11. This is because most student choices for next year have been predetermined by their choice of subjects this year i.e. Maths units 1 & 2 (year 11) – Maths units 3 & 4 (year 12).

No timetable can please everybody. We hope the final blockings will provide a balanced program with a minimum of compromise necessary, but it pays to be prepared and accept the fact that two of your chosen subjects might be blocked on the timetable. Think of alternative subject choices.

Please remember at this stage the selections made here will, along with other factors, determine the blockings. The blockings may require some compromise on your initial choice.

Every student must satisfactorily complete at least 3 sets of Unit 3 & 4 other than in English. Some VET subjects many also be used as a subject in this minimum VCE assessment criteria.
Students are not required to choose subjects from both Maths/Science and Arts/Humanities streams, as in year 11, but we continue to encourage students to keep their options open by doing so.

Please speak with subject teachers and/or Damo or Trish if you have any questions.

Individual Subject Data

This booklet contains a description of each Unit 3 - 4 subject offered at MRSS. Some technical data is summarized below.

Subject	**Must I take Units 1, 2 to take Units 3,4?**
Art	No, but it helps greatly
Biology	No
Chemistry	Not essential but strongly encouraged
Drama	No, but it helps greatly
Geography	No, but it helps
History	No, but it helps
Literature	No, but it helps
LOTE	Yes
Further Mathematics	See course description
Mathematical Methods	See course description
Specialist Mathematics	Yes
Music Investigation	Yes (units 1 & 2 in Music)
Music Performance	Yes
Physics	Not essential but strongly recommended
Studio Arts	No

Year 12: English

Class 12 English enables students to synthesize, through language, their unique imaginings, feelings and thoughts about the world and themselves. The VCE course which we offer consists of a high degree of critical thinking and creativity, both in written and oral language. Each aspect of the course is called, in the VCE terminology, an *Outcome*, which can be interpreted as the practice of different skills and the 'showing' of different knowledge. Another term which is applied to the work for assessment that the students create, is the famous 'SAC'; or 'school assessed coursework', which form part of the year's assessment. Below is an outline of the course:

Unit 3 (Semester 1, terms 1 and 2: January – June holidays)

Outcome 3.1: Analysis and response to texts

SAC: Analytical essay on how a film, novel, collection of short stories or poems create meaning and convey ideas. (30% of unit 3)

Outcome 3.2: Writing for a specific audience and purpose

SAC: A piece or pieces of writing based on the ideas and/or arguments suggested by a chosen context; and a discussion/analysis of this piece or pieces. (30% of unit 3).

Outcome 3.3 Response to an issue

SAC: Analytical essay on an issue in the news, and a point of view piece; (40% of unit 3).

Unit 4 (Semester 2, terms 3 and 4: July – late October)

Outcome 4.1: Analysis and response to texts

SAC: Analytical essay in which students develop and justify a sustained interpretation of a text (50% of unit 4).

Outcome 4.2: Writing for a specific audience and purpose

SAC: As Outcome 3.2, but 50% of unit 4.

Final Assessment: End of year exam (late October or early November)

In the third week of the September holidays, we hold a full **trial exam** for the students. Term 4 is then taken up with revision for the **exam**. The **exam** is worth the remaining 50% of the year's assessment. It examines the skills and knowledge the students have practiced and acquired throughout the year. The exam consists of:

Section A: Text response essay on a text studied during the year. (1/3 of exam assessment)
Section B: A piece of writing in response to a prompt. (1/3 of exam assessment)
Section C: Two short analyses or one longer analysis unseen opinion articles on an issue (chosen by examiners). (1/3 of the exam assessment).

Year 12: Biology

Units 3 and 4:

Modern biology is wielding enormous power. It is transforming our world through medical and agricultural discoveries. Understanding modern biology gives the student power to understand the huge influences that are transforming our lives, and in fact are transforming the very forests and animals and oceans of our world. From the vantage point of understanding we are then better able to decide where we stand in regard to these changes.

In order that we may understand biology's role in the modern world, the students are asked to include a strong biochemical emphasis to their studies, particularly in unit three.

We start with cell biochemistry and apply this knowledge to the functioning of plants and animals. We consider the ways in which living things maintain their fine inner balance of function while dealing with the necessities of gaining nourishment and avoiding disease and predators. In the case of humans, our greatest 'predators' are nowadays disease, and we study in particular the intricacies of our immune system and its miraculous ability to remember and deal with myriad challenges.

Our second semester involves a study of genetics, and it includes understanding genetic engineering as well as classical approaches to predicting the outcomes of breeding particular plants and animals.

We then relate our work on genetics to the evolution of life upon Earth, and in particular to the evolution of the human being over millions of years. The theories of the causes and mechanisms of evolution are an important part of our studies.

Year 12: Chemistry

Chemistry provides the basis for many studies, from medicine to forestry and forensic science to material manufacturing. It is a pre-requisite for many science courses, so look carefully at what you may wish to study in tertiary studies. Unit 3 is called chemical pathways and is concerned with analytical chemistry. Unit 4 is called chemistry at work and is concerned with the industrial production of chemicals and the energy changes associated with chemical reactions.

Unit 3

Consists of 2 areas of study – chemical analysis where a variety of analytical techniques are used to analyse products and students learn to relate the method used to the chemical structures of the materials being analysed. The second area of study is organic chemical pathways where different organic molecules are investigated. This includes fuels, bio-fuels, forensic analysis using organic chemicals and the role of organic chemicals in the development of medicines.

Unit 4

Again consists of 2 areas of study – industrial chemistry which looks at the factors to be considered in the optimum production of certain industrial chemicals. The second area of study involves supplying and using energy – the different resources available their uses, advantages and disadvantages as well as galvanic and electrolytic cells.

In each unit there will be school assessed coursework which contributes 20% (Unit 3) and 20% (Unit 4) of the study score. There is one exam (in November) which contributes 60% to the study score.

Year 12: Geography

The key focus of the Geography curriculum is the Earth's surface, the realm of life, the home of humanity.

It is a spatial methodology arising out of the 'spirit of place' enabling the 'spirit of place' to be communicated. Geography is both a humanity and a science. In many ways it humanises science.

Geography enables students to understand the universal and varied character of the world as an entity, yet also highlights the uniqueness, shared qualities and differences of given areas on Earth's surface. Students explore, analyse and interpret the interrelationship and dynamic interplay of locations and natural processes, and the human activities and events that shape and determine the Earth's parts and her totality.

Students of Geography not only recognise how human activity shapes the Earth, but also develop the realisation that human beings, as part of the physical and bio-physical realms, are influenced in their human growth, development and activity by the characteristics of the region in which they live. Landscape powerfully influences a region's people, even actuates the cultural and moral nature of its inhabitants.

VCE Geography enables students to examine natural and human phenomena, how and why they change, their interconnections and the patterns they form across the Earth's surface. In doing so, they develop a better understanding of their own place and its spaces and those in other parts of the world. These spatial perspectives, when integrated with historical, economic, ecological and cultural perspectives, deepen understanding of places, environments and human interactions with these. The concept of sustainability underlies all topics studied. An understanding of sustainability involves a study of the environmental processes that may produce degradation of an environmental function; the human actions that may have initiated these processes; and the attitudinal, demographic, social, economic and political causes of these human actions. Essential to it is an examination of policies and strategies initiated to use earth's resources in a sustainable way so life on Earth can continue to flourish.

Sustainability is the capacity of the environment to continue to support life. The consideration of sustainability is used to frame questions, evaluate the findings of investigations, guide decisions and plan actions about environments, places and communities.

Investigative skills develop students' ability to conduct geographic study and inquiry including the collection of primary data through observation, surveys, fieldwork, and the identification, collection, interpretation and analysis of data and information from relevant secondary sources.

Unit 3: 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 etc.

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

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

They analyse these processes, explain their impacts on land cover and discuss responses to land cover change at three different locations in the world – one location for each process. They also evaluate three different global responses to the impacts of land cover change, one global response for each process.
Fieldwork activity in a selected local area supports students to use appropriate fieldwork techniques to understand the scale of change, the reasons for change, the processes involved and its impacts.

Unit 4: 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 responses made by governments, organisations and individuals to those changes in different parts of the world.

Understanding population dynamics over time and space support students to appreciate present-day world population distribution including population characteristics such as birth rate, death rate, infant mortality rate, fertility rate and life expectancy. An overview of world population growth since the 1700s enables students to predict projected changes in the 21st century. The world's population growth from 2.5 billion in 1950 to over 7 billion since 2010 has been on a scale without parallel in human history - much currently occurring within developing countries. In contrast the populations in many developed countries are either growing slowly or declining.

Population movements such as voluntary and forced movements over long or short terms add 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.

Two significant population trends arising in different countries of the world, a growing population of one and an ageing population of another are researched and thoroughly examined.

Students investigate issues arising from each population trend, the economic, social, political and environmental impacts on people and places, and the challenges that arise in coping with the issues.

They examine and evaluate the effectiveness of policies and strategies at different scales in response to such issues and challenges and make a comparison of strategies undertaken within each selected country.

Year 12: Studio Arts

Studio Arts is a subject intended to give students a taste of what it would be like to be an artist or craftsperson or designer or even an architect.
It also attempts to give an introduction to museum practice and the kinds of professions involved in galleries and museums.

Students are asked to work on independent folios, in which they explore influences and play and experiment to see the many different ways their work may be developed and deepened. From this they make finished works.

They will focus on a particular media, such as painting, sculpture or photography.

They study the artistic practice of artists from different times and places.

They study conservation and display of artwork, and issues such as; copyright, ethical conflicts in museum practice and censorship.

Unit 3

SAT 1
Students will choose a theme or subject to explore all year. This is done in the form of a written exploration proposal. They develop a folio of trials, explorations, influences and potential directions which may arise from this folio to the proposal they have set themselves. Students will investigate and research artistic practices of artists from different times and places.
33%

Unit 4

SAT 2
Students will make a second folio of finished, exhibitable works based on the development folio. Students will study museum practice.
33%

SAT 3
Students will sit an exam at the end of the year. Questions will test their understanding of the different ways artists develop ideas and images in different times and places, and their understanding of the way artists work, museums and galleries work and related issues.
34%

Year 12: Drama

Unit 3: Ensemble Performance

Note: ensemble means small groups (4-5 is good)

Unit 3 consists of:

1. An **Ensemble Performance** – 60% of mark for Unit 3
2. **S.A.C** (School Assessed Coursework) – Analysis piece. Students must write an analysis of a play viewed by the student, (from a prescribed list) – 15% of mark
3. **S.A.C** – Students must write an analysis of their own Ensemble Performance – 15%of mark

Basically the students must form small groups ('ensembles'), and write a performance around a given theme. As an example, in previous years the themes were **'Water' and 'Lost & Found'** and gave a broad range of ideas. Each student must create at least 8 minutes of their own writing, (e.g. group of 3 = 24 minutes, 5 = 40 minutes), and must document the process of creating the piece, in a journal. The performance must use **'Non-Naturalism'**. This just means you can use any creative devices, music, lighting effects, and lots of different characters. You can move through time, or become inanimate objects! It is very open.

Unit 4: Solo Performance

Areas of study:

1. Processes used to create **Solo Performances** – students must create a short (1 to 2 minute) solo performance and give a written report. (10 marks)
2. Creating a **Solo Performance** - students must create a minimum 7 minute solo performance 35%.
3. Analyzing the **Solo Performance** – students must write a statement of intention, to be given to the panel of assessors. (15 marks)
4.

End of Year Exams

1. End of year **Solo Performance** – students must perform their Solo Performance to a panel of assessors – 35% of mark
2. End of year **Written Exam** – students must sit a 1 and a half hour examination – 25%of mark

Solo Performance

Each student must create a seven minute, ***Solo Performance*** in the ***Non-Naturalistic*** style. They must choose a theme from a prescribed list, and base a main character around this theme. The themes are varied and range from tragic to comedic. Each student must show; other characters, time and mood changes, use rhythm and music (use all the Dramatic Elements), and create a finely tuned piece of Drama.

Each student must keep a precise journal of their progress, and of the creation of their solo piece, analyzing the piece in the same way they must analyze the prescribed performance. This work forms the Statement of Intention. The Statement of Intention must be presented to the panel of assessors before the Solo Performance begins.

Written Examination

Each student must sit an end of year examination, in which they must analyze a performance they have viewed from a prescribed list of plays being performed professionally. They must understand analysis writing, and be able to express Dramatic Terminology, (e.g. being able to refer to Themes, Dramatic Elements, Stagecraft Elements and Personal Responses).

Scores

Unit 3:

Ensemble Performance _____ 70%

Analysis of Ensemble Performance _____ 15%

Analysis of Prescribed Performance _____ 15%

Total **100%** (become 40% of the total End of Year Score)

Unit 4:

Solo Performance _____ 35%

Written Examination _____ 25%

Total **60%**

Add ***Unit 3*** score **40%**

Final End of Year score **100%**

Year 12: History

History: Revolutions Units 3 and 4

In Units 3 and 4 Revolutions, students investigate the significant historical causes and consequences of political revolution. Revolutions represent great ruptures in time and are a major turning point, which brings about the collapse and destruction of an existing political order resulting in a pervasive change to society. Revolutions are caused by the interplay of ideas, events, individuals and popular movements. Their consequences have a profound effect on the political and social structures of the post-revolutionary society. Revolution is a dramatically accelerated process whereby the new order attempts to create political and social change and transformation based on a new ideology. Progress in a post-revolutionary society is not guaranteed or inevitable. Post-revolutionary regimes are often threatened internally by civil war and externally by foreign threats. These challenges can result in a compromise of revolutionary ideals and extreme measures of violence, oppression and terror.

In these units, students develop an understanding of the complexity and multiplicity of causes and consequences in the revolutionary narrative. They construct an argument about the past using primary sources as evidence and evaluate the extent to which the revolution brought change to the lives of people. They consider how perspectives of the revolution give an insight into the continuity and change experienced by those who lived through dramatic revolutionary moments. Students evaluate historical interpretations about the causes and consequences of revolution and the effects of change instigated by the new order.

In developing a course, we do two revolutions, one for Unit 3 and one for Unit 4:

- The French Revolution of 1789.
- The Russian Revolution of October 1917.
  For the two selected revolutions, both areas of study must be undertaken. Students are expected to demonstrate a progression from Unit 3 to Unit 4 in historical understanding and skills.

Area of Study 1: Unit 3 and Unit 4
Causes of revolution

In this area of study, students analyse the long-term causes and short-term triggers of revolution. They evaluate how revolutionary outbreaks are caused by the interplay of significant events, ideas, individuals and popular movements and assess how these were directly or indirectly influenced by the social, political, economic and cultural conditions.

Students analyse significant events and evaluate how particular conditions profoundly influenced and contributed to the outbreak of revolution. They consider triggers such as, in Russia, World War I, in France, the calling of the Estates-General.

Revolutionary ideologies emerged in opposition to the existing and dominant order, such as Leninism in Russia. These ideologies were utilised by individuals and movements to justify revolutionary action and change. In the French Revolution, students analyse the degree to which the influence of enlightenment thinking was instrumental in promoting change in the French Society. In Russia, they consider to what extent Marxist ideas challenged autocracy.

Revolutions can be caused by the motivations and the intended and unintended actions of individuals who shape and influence the course of revolution. Individuals including Louis XVI and Emmanuel Joseph Sieyès in France, and Tsar Nicholas II and Lenin in Russia had a significant impact on the course of revolution. Popular movements such as the sans-culottes in Paris showed that collective action could be transformed into revolutionary forces that could contribute to or hinder revolution as they sought to destroy the old order. Students evaluate historical interpretations about the causes of revolution and explain why differing emphases are placed on the role of events, ideas, individuals and popular movements.

The key knowledge for this area of study in Units 3 and 4 covers the following timeframes:

- The French Revolution from 1774 to October 1789 (Accession of Louis XVI to the throne to The October Days 1789)
- The Russian Revolution from 1896 to October 1917 (Coronation of Tsar Nicholas to the 25th October Revolution 1917)

Area of Study 2: Unit 3 and Unit 4

Consequences of revolution

In this area of study, students analyse the consequences of the revolution and evaluate the extent to which it brought change to society. The success of the revolution was not inevitable; therefore, students analyse the significant challenges that confronted the new regime after the initial outbreak of revolution. Furthermore, they evaluate the success of the new regime's responses to these challenges and the extent to which the consequences of revolution resulted in dramatic and wide reaching social, political, economic and cultural change, progress or decline.

As new orders attempted to consolidate power, post-revolutionary regimes were often challenged by those who opposed change. They may have unleashed civil war and counter-revolutions, making the

survival and consolidation of the revolution the principal concern of the revolutionary state. Challenges such as the creation of a new political system in America and the civil war in Russia had a profound consequence on the success of the revolution. The consequences of these challenges sometimes resulted in a compromise of revolutionary ideologies, as the leaders of the new order became more authoritarian and responded with violence and policies of terror and repression, initiating severe policies of social control as pragmatic strategies to stay in power. This was seen in France with the policy of 'terror until peace'.

In analysing the past, students engage with the historical perspectives as well as the experiences of those whose conditions of everyday life were affected by the revolution, such as the peasants and workers in Russia. We also look at influence of individuals, such as Lenin and Trotsky in Russia, or Robespierre in France, and their attempts to create significant changes to the fabric of society, as well as the consequences of these actions. These often resulted in opposition and unforeseen reactions.

Students evaluate historical interpretations about the success of the revolution, the new regime's consolidation of power, their compromise of revolutionary ideology and the degree of change brought to the society.

The key knowledge for this area of study in Units 3 and 4 covers the following timeframes:

- The French Revolution from October 1789 to 1795 (The October Days to the dissolution of the Convention Year III)
- The Russian Revolution from October 1917 to 1927 (Early Sovnarkom decrees to the end of the NEP)

Contribution to final assessment

School-assessed Coursework for Unit 3 will contribute 25 per cent to the study score. School-assessed Coursework for Unit 4 will contribute 25 per cent to the study score. The final exam will contribute 50% to the study score.

Year 12: Arts (Unit 3 and 4)

The ART subject has a practical and theoretical aspect, each awarded equal weight in marks, though more time is given to practical work.

This subject encourages students to develop personal ideas and a creative visual language through exploration and experimentation in art making.

During the year students develop a **personal folio** on a theme of their choice, in a range of media which may include

drawing

painting

printmaking

photography, film, animation

mixed media

sculpture and installation

design

illustration

In the theory class students build critical skills in observation, research, analysis, comparison and referencing.

We consider traditional and contemporary practices and use skills in comparative writing to consider the ways artists develop designs, embody personal experience, reflect cultural context and respond to the thinking and art making practices of their times.

We consider contemporary issues in the visual arts and develop personal points of view and the ability to support them through referencing, a key skill required in further study.

The journey involved in the development of their own folio project is deeply engrossing and rewarding.

Year 12: VCE Literature (Unit 3 and 4)

Literature is for those who love to read and discuss novels, plays, poetry, biographies, autobiographies and short stories, who have an interest in film and drama, and who are prepared to think deeply about what it means to be human. It is for those who are interested in not only WHAT happens in a text, but also WHY it happens, and HOW the text is structured.

Those who choose to take this subject should be interested in STORIES, not only for the narrative elements including suspense, surprise and excitement, but for the elements of description, characterization, moral and ethical concern, language, style and structure.

Literature allows students to enter many different worlds, some of them political, social and historical, others more inward, spiritual and personal. Linking the two realms of the inner and the outer is the power of the human imagination. This study encourages students to become more aware of the world of the senses, the realm of feelings and relationship, and the depths of their own human and spiritual natures.

Texts

Texts studied vary from year to year and include both “Classics” whose value has been long established, and texts of a more contemporary kind that explore current contexts and preoccupations. Not all texts are chosen solely for their depth and seriousness: humour and entertainment value are also part of the experience of reading and viewing texts. Literary texts explore the heights and sometimes the depths of human experience.

Assessment

There are five SACs (School Assessed Coursework) worth 50% of the marks for the year.

The other 50% is based on an externally assessed two-hour examination at the end of the year.

Year 12: Mathematical Methods

The course includes algebra, functions and their graphs, trigonometric functions, logarithmic laws and graphs, natural logarithms and exponentials, differential calculus, applications of differentiation, integration and its applications, discrete random variables, the binomial distribution, Markov chains, and the normal or Gaussian distribution.

School-assessed coursework comprises an application task and two tests, and two analysis tasks.

The students work with quite complex concepts, and as their thinking develops become aware of inner resources that they can draw on in all their studies.

Apart from its intrinsic interest, the course provides a good basis for tertiary studies in fields involving science or technology.

Year 12: Specialist Mathematics

The course includes trigonometry, complex numbers, coordinate geometry, integration techniques, integration applications, differential equations, kinematics, vectors, vector calculus, statics, dynamics and momentum.

School-assessed coursework comprises two analysis tasks, an application task and two tests.

This subject is taken in conjunction with Mathematical Methods, and the knowledge and techniques involved in that are taken for granted.

Specialist Math adds to these with advanced applications and extensions. The high level of insight required makes this exciting subject quite challenging, but the quest for mastery is also very satisfying, and the successful student is well equipped for tertiary studies, scientific or otherwise, with a high analytical content.

Year 12: Further Mathematics

Prerequisite: General Mathematics, units 1 and 2

The course is divided into four modules; two in Unit 3 and two in Unit 4.

All schools do the core module of Statistics, and the remaining three are chosen from a possible six.

We will be studying the following modules:

- Core: Data Analysis (Statistics)
- Module 1: Number Patterns & Applications (sequences & series etc)
- Module 2: Geometry & Trigonometry
- Module 3: Graphs & Relations

Assessment is 1/3 school based and 2/3 external exams. (There are two exams at the end of the year). For the school based assessment there is one 'SAC' at the end of each module. The SAC for the core module has double the weight each of the remaining three SACs.

In percentage terms this means: Core: 13.3%
Modules 1, 2&3: 6.7% each
Exam 1&2: 33.3% each

Year 12: Music Performance

Music Performance provides opportunity to develop performance either in a group, or as a soloist. Central to this subject is an emphasis in active listening which is pursued in listening to one another, to recordings and in ear skills. These aural skills are developed from the point of view of melody, rhythm, harmony and the role that instruments both in tonal quality and in their relationship to one another.

Students support their performance skills by developing programmes of technical work which related to their music, and which includes technical, stylistic and expressive exercises. It is an integrated subject in which each area studied supports being a skilled and artistic musician who performs with confidence and individuality.

A good understanding of music theory and performance technique is assumed for this subject, and students may want to discuss this with music teachers before enrolling.

Year 12: Music Investigation

This subject is for self-motivated students who are already undertaking Music Performance and who are able to initiate and pursue an individual performance project for the year. This project, called their Focus Area, is what they pursue in their investigation. In previous years some of the Focus Areas were 'The Dirty Yet Tight Sound in Indie Drumming Music as exemplified in the White Stripes', 'The Development of Bowing in Violin Music' and 'Jazz Flute Improvisation in the 1950s and 60s'.

From these Focus Areas students construct a performance programme. This is supported by a written investigation in which the works are analysed, socio-cultural, geographic and economic factors impacting upon the work are researched, and different performances of pieces are scrutinized. Technical work programmes are also devised by the students which support the development of instrumental techniques around the Focus Area.

Students elect to either prepare a performance of an improvisation, an arrangement or a composition by way of development folio pieces that culminate in a single work. This also has its origins in the Focus Area. It is a creative subject.

A good understanding of music theory and performance technique is assumed for this subject, and students may want to discuss with music teachers before enrolling.

Year 12 Physics

In Year 12 we continue many of the themes that were introduced in Year 11. Physics at this level consists of five topics, four of which are called Areas of Study and the fifth topic is called a detailed study. Mathematical modelling, including calculations is used extensively to organise data, make predictions and link concepts. Students continue to have regular experience in experimental investigation.

Unit 3 Areas of study

We focus on the ideas that underpin much of the technology found in areas such as communications, engineering, commerce and industry.

3.1 Motion in one and two dimensions: Students use the Newtonian model, already introduced in year 11, to analyse motion in the context of transport and related aspects of safety, and motion in space. This study focuses on everyday motion that is familiar, relevant and of interest to students.

3.2 Electronics and photonics: We extend our Class 11 understanding of electric circuits by exploring electronic devices, such as diodes and amplifiers, and explore how light is used to transmit information. Students investigate, describe, compare and explain the operation of electronic and photonic devices, and analyse their uses in domestic and industrial systems.

Unit 4 Areas of study

We focus on the development and limitations of models to explain physical phenomena. Models are used to describe and explain the generation of electricity, and other models are used to explain the interactions between light and matter.

4.1 Electric power: Students investigate and explain the operation of electric motors, generators and alternators. This expands into the exploration of generation, transmission and distribution systems.

4.2 Interactions of light and matter: Light exhibits both wave and particle-like behaviour. Particles also have wave-like properties. This has led to different ways of thinking about light and matter. These ideas are explored using experimental evidence and models and we see how these ideas have lead to developments in technology.

Detailed Study: One of the following topics will be studied in either Unit 3 or 4: Einstein's Special relativity, Materials and their uses in structures, Further electronics, Synchrotron and its applications, Photonics or Sound. Each of these topics explores innovative technologies used by society and hence provides wonderful insights into our scientific understanding of our world. The detailed study chosen is likely to be Einstein's Special Relativity.

Assessment: Level of achievement will be determined by School-assessed course work (40%) and an end-of- year examination (60%). The school assessed course-work consists of a range of interesting tasks. Across the assessment tasks selected for unit 3 and 4 there are two compulsory tasks, one is a student designed experimental investigation and the other is a summary report of selected practical activities.

LOTE YEAR 12 GERMAN CURRICULUM

The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

The study of German develops the students' ability to understand and use a language which has long been recognised as a world language of culture, music, theology and philosophy, as well as a key language in the fields of science, medicine, economics and technology.

As well as being extensively used within communities in Europe, Latin America and Africa, there is a significant German heritage within Australia. Knowledge of the German language provides direct access to the culture, traditions, beliefs, attitudes and values of these communities.

German-speaking countries have emerged as strong international leaders in trade, commerce and politics, and the ability to communicate in German can, in conjunction with other skills, enhance students' opportunities in a wide range of vocational areas.

This study is designed to enable students to:

- use German to communicate with others;
- understand and appreciate the cultural contexts in which German is used;
- understand their own culture(s) through the study of other cultures;
- understand language as a system;
- make connections between German and English, and/or other languages;
- apply German to work, further study, training or leisure.

The areas of study for German comprise themes and topics, grammar, text types, vocabulary and kinds of writing. They are designed to be drawn upon in an integrated way, as appropriate to the linguistic needs of the student and the outcome for the units.

The themes and topics are the vehicle through which the student will demonstrate achievement of the outcomes, in the sense that they form the subject of the activities and tasks the student undertakes.

The grammar, vocabulary, text types and kinds of writing and linked,

both to each other, and to the themes and topics. Together, as common areas of studies, they add a further layer of definition to the knowledge and skills required for successful achievement of the outcomes.

The common areas of study have been selected to provide the opportunity for the student to build upon what is familiar, as well as develop knowledge and skills in new and more challenging areas.

Themes and topics

There are three prescribed themes:

- The individual
- The German-speaking communities
- The changing world

These themes have a number of prescribed topics. The placement of the topics under one or more of the three themes is intended to provide a particular perspective or perspectives for each of the topics.

The length of time and depth of treatment devoted to each topic will vary according to the outcomes being addressed, as well as the linguistic needs and interests of the student.

PRESCRIBED THEMES AND TOPICS

The individual

- Personal identity
- School and aspirations
- Leisure and lifestyles

The German-speaking communities

- People and places
- Past and present
- Arts and entertainment

The changing world

- The world of work
- Youth issues
- Tourism

VOCABULARY

While there is no prescribed vocabulary list, it is expected that the student will be familiar a range of vocabulary and idioms relevant to the prescribed topics.

YEAR 12 FRENCH CURRICULUM

The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

The study of French develops the students' ability to understand and use a language which has long been recognised as a world language of culture, music, theology and philosophy, as well as a key language in the fields of science, medicine, economics and technology.

French is extensively used within communities in Europe, North America, Africa, Latin American and the Caribbean. Knowledge of the French language provides direct access to the culture, traditions, beliefs, attitudes and values of these communities.

French-speaking countries have emerged as strong international leaders in trade, commerce and politics, and the ability to communicate in French can, in conjunction with other skills, enhance students' opportunities in a wide range of vocational areas.

This study is designed to enable students to:

- use French to communicate with others;
- understand and appreciate the cultural contexts in which French is used;
- understand their own culture(s) through the study of other cultures;
- understand language as a system;
- make connections between French and English, and/or other languages;
- apply French to work, further study, training or leisure.

The areas of study for French comprise themes and topics, grammar, text types, vocabulary and kinds of writing. They are designed to be drawn upon in an integrated way, as appropriate to the linguistic needs of the student and the outcome for the units.

The themes and topics are the vehicle through which the student will demonstrate achievement of the outcomes, in the sense that they form the subject of the activities and tasks the student undertakes.

The grammar, vocabulary, text types and kinds of writing are linked, both to each other, and to the themes and topics. Together, as common

areas of studies, they add a further layer of definition to the knowledge and skills required for successful achievement of the outcomes.

The common areas of study have been selected to provide the opportunity for the student to build upon what is familiar, as well as develop knowledge and skills in new and more challenging areas.

Themes and topics
There are three prescribed themes:

- The individual
- The French -speaking communities
- The changing world

These themes have a number of prescribed topics. The placement of the topics under one or more of the three themes is intended to provide a particular perspective or perspectives for each of the topics.

The length of time and depth of treatment devoted to each topic will vary according to the outcomes being addressed, as well as the linguistic needs and interests of the students.

PRESCRIBED THEMES AND TOPICS

The individual

- Personal identity
- School and aspirations
- Leisure and lifestyles

The French-speaking communities

- People and places
- Past and present
- Arts and entertainment

The changing world

- The world of work
- Youth issues
- Tourism

VOCABULARY

While there is no prescribed vocabulary list, it is expected that the student will be familiar a range of vocabulary and idioms relevant to the prescribed topics.

"In the free being of the human

The Universe is gathered up.

Then in the free resolve of your heart

Take your own life in your hand,

And you will find the World.

The Spirit of the World will find itself in you."

~ Rudolf Steiner