Subject Choice Information — Year 10 2017

All subject choices will again be made online. This year choices can be made online between Monday 15 August and Friday 26 August.

Details of how to make the online selections, including an individual password, will be given to students prior to these dates. Students who do not make their selections online during the subject choice period may submit their selection on the form on the following page. However, if classes have been allocated, students who submit forms late may miss out on their preferences.

If submitting late preferences, please include the appropriate signatures.

Year 10 students will study four semesters of elective subjects from the following lists. Students should read the information on the St John’s website or consult their teachers for further information about each elective.

The details of all of the Year 10 courses are shown below. Please note that the core courses (English, Mathematics, Science, History, Personal Learning Plan, Physical Education, Religious and Values Education, and Workplaces Practices) are listed first with the elective courses following them. Because a choice between three Mathematics courses is offered in Year 10, these subjects are listed along with the elective courses on the subject choice form. Stage 1 Mathematics is only available to students who successfully complete the Year 10 program in 2016.

The classes being offered for study in 2017 are listed on the next page. This should be used to clarify your choices before making your final selection online. If submitting choices on paper instead of online, the form on the next page may be used with appropriate signatures.

To help us form classes, select the Mathematics course and an additional 7 semesters of courses in order of preference by placing the numbers 2 to 8 in the Preferences column.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Preferences</th>
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<tbody>
<tr>
<td>List preferences from 2 to 8 for the elective subjects listed below.</td>
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<tr>
<td>10 Drama (1 Semester)</td>
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<td>10 Drama (2 Semesters)</td>
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<tr>
<td>9 - 10 Food Tech - Asian Cuisine (1 Semester)</td>
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<td>9 - 10 Food Tech - Baked Goodies (1 Semester)</td>
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<td>10 Geography (1 Semester)</td>
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<td>10 History – World (1 Semester)</td>
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<td>9 - 10 IT Elements (1 Semester)</td>
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<td>Stage 1 Information Technology (1 Semester)</td>
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<td>Stage 1 Indonesian (2 Semesters)</td>
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<td>Stage 1 Japanese (2 Semesters)</td>
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<td>9 - 10 Media Studies (1 Semester)</td>
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<td>Stage 1 Media Studies (1 Semester)</td>
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<td>9 - 10 Technology - Manufacturing 2 (1 Semester)</td>
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<td>10 Technology - Manufacturing 3 (1 Semester)</td>
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<td>9 - 10 Technology – CAD (1 Semester)</td>
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<td>Stage 1 Technology – CAD (1 Semester)</td>
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<td>9 - 10 Technology - Systems 2 (1 Semester)</td>
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<td>10 Technology - Systems 3 (1 Semester)</td>
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<td>10 Visual Arts - Art (1 Semester)</td>
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<td>10 Visual Arts - Art (2 Semesters)</td>
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<td>10 Visual Arts - Design (1 Semester)</td>
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<td>10 Visual Arts - Design (2 Semesters)</td>
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(If submitting late preferences using this form, please include the appropriate signatures.)

Student’s signature __________________________ Date __________________________

Parent’s signature __________________________ Student Name __________________________

Success, wisdom, balance
Core Subjects – Year 10 2017

Year 10 ENGLISH

The Year 10 English course revolves around language and texts. Novels, films, plays and poetry are studied with attention given to theme, plot, characters and setting. The aim is to broaden students’ knowledge of a range of literary genres, including contemporary and classical, Australian and international, and to relate this literature to society and personal experience. Most students will study a Shakespearean play but those who do not will study a contemporary drama script and respond to the themes and issues raised as well as looking at the conventions of a script. Students will also study film, exploring the techniques used by film makers to convey ideas and influence the audience’s response.

There will be an emphasis on ensuring students can speak confidently and appropriately in a range of situations. Students will be encouraged to write creatively, analytically and correctly in a range of forms. Students will be expected to continue developing their skills and knowledge of software available to publish their work.

Students will be assessed in the areas of responses to literature, spoken presentation skills, writing for creative purposes and critical reading. In addition, there will be an examination at the end of the year to enable students to develop study and time management skills.

There is an Extension English class in Year 10 that will cover the core components outlined above and also undertake additional units of study that broaden students’ skills in literary criticism and comparative analysis, thus providing a useful introduction to SACE Stage 1 English Literary Studies. The smaller English Foundation class in Year 10 will focus on providing more individual attention and improving basic literacy skills.

Year 10 MATHEMATICS

At Year 10, students can choose one of three Year 10 options in Mathematics; Mathematics 10/10A, Mathematics General or Mathematics Essential. Students who have completed the Year 10/10A in an accelerated program may choose a Stage 1 Mathematics course (two semesters).

Year 10 MATHEMATICS (10/10A)

Mathematics 10/10A prepares students for the demands of any Mathematics subject at SACE Stage 1 level. This course continues to build on the concepts and methods taught in Year 9. Students will work with linear and quadratic functions, simple and compound interest, statistical relationships, measurement and trigonometry. Students’ skills in the appropriate use of graphics calculators and computer applications continue to be developed. The importance of presenting, rationalising and applying mathematical knowledge is a focus of the program.

Year 10 MATHEMATICS GENERAL

The second option for studies in Mathematics at Year 10 is the Mathematics General course. This program prepares students for Year 11 Mathematics General – a two semester courses at SACE Stage 1. Topics include financial mathematics, measurement, linear equations and graphs, trigonometry and statistics. The use of spreadsheets, geometry software and scientific and graphic calculators is extensive.

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Year 10 MATHEMATICS ESSENTIAL

The third option at Year 10 is Year 10 Essential Mathematics. This course prepares students for Year 11 Essential Mathematics. Topics will include calculations, some without calculators, simple straight line graphs, ratios, financial mathematics and some measurement.

All of the Year 10 courses include the assessment tasks of summative and formative tests, investigations, projects and assignments. Students of each course will sit an examination paper at the end of both Semesters 1 and 2.

Year 10 HISTORY – Core Subject - One Semester
The Australian Curriculum

TITLE: The Modern World and Australia: 1918 to the present
Overview

The Overview content identifies important features of the period (1918 to the present) as part of an expansive chronology that helps students understand broad patterns of historical change. The overview provides the broader context for the teaching of depth study content and will be built into various parts of a teaching and learning program. The overview content will be used to give students an introduction to the historical period; to make the links to and between the depth studies, and to consolidate understanding through a review of the period.

Overview content for the Modern World and Australia includes the following:

1. the inter-war years between World War I and World War II, including the Treaty of Versailles, the Roaring Twenties and the Great Depression
2. continuing efforts post-World War II to achieve lasting peace and security in the world, including Australia’s involvement in UN peacekeeping
3. the major movements for rights and freedom in the world and the achievement of independence by former colonies
4. the nature of the Cold War and Australia’s involvement in Cold War and post-Cold War conflicts (Korea, Vietnam, The Gulf Wars, Afghanistan), including the rising influence of Asian nations since the end of the Cold War
5. developments in technology, public health, longevity and standard of living during the twentieth century, and concern for the environment and sustainability

Depth Studies

1. The Second World War
2. Rights and Freedoms 1945 to the present
3. The Globalising World: Popular Culture 1960s to the present OR The Environment

Year 10 PHYSICAL EDUCATION – Core Subject - Half Year

Students will further develop their skills and knowledge of physical activity by choosing from a range of individual, partner and team sports and recreational activities. They will choose from weight training, archery, tennis, cricket, softball, basketball, volleyball, badminton and soccer. Students will test their fitness using the SASI FitnessTest. Students will be assessed in practical aspects of the course. They will be assessed through a combination of performance checklists, teacher observation, peer assessment and personal management skills.

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Year 10 SCIENCE – Core Subject

Specific Year 10 topics studied include:

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<thead>
<tr>
<th>Inheritance and Genetics</th>
<th>Motion and Road Science</th>
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</thead>
<tbody>
<tr>
<td>Space Science</td>
<td>Investigating Chemical Reactions</td>
</tr>
<tr>
<td>Evolution</td>
<td>Our Energy</td>
</tr>
<tr>
<td>Earth Systems</td>
<td>Electrochemistry</td>
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<tr>
<td>The Periodic Table</td>
<td>Future</td>
</tr>
<tr>
<td>Exploring the Universe</td>
<td>Explaining Chemical Reactions</td>
</tr>
</tbody>
</table>

Students in Year 10 are provided with the option of studying their Chemistry and Physics topics at “core” or “extended” level. The “extended” level option allows students who are intending to study SACE Stage 1 Chemistry and/or Physics the opportunity to treat the Year 10 topics at a greater depth to provide a more rigorous preparation for Year 11.

Year 10 RELIGIOUS AND VALUES EDUCATION - Core Subject – One Semester

The course begins with students identifying and writing about their ideals, motivations, hopes and dreams. Are Science and Spirituality complementary or in opposition to one another? This question is examined and evokes stimulating discussion. Through a comparison of the film The Matrix with the Gospel of John, questions of life after death, the concept of Messiah (chosen one) and the nature of reality are explored. The world religion of Islam is studied with a view to gaining an understanding of its origin and current influence in world affairs. The ethics of current events are examined as well as the ethics of relationships and how our values determine our decision making.

Year 10 PERSONAL LEARNING PLAN - SACE Stage 1 – Core Subject – One Semester (10 Credits)

The Stage 1 Personal Learning Plan (PLP) is a 10-credit subject designed to help students to make informed decisions about their personal development, education, and training. The program of learning provides students with time to work with their teachers and other experts to develop knowledge and skills in planning for their SACE and their future beyond school.

The Personal Learning Plan is a compulsory requirement of the SACE. Students must complete 10 credits of the Stage 1 Personal Learning Plan with a C grade or better to gain their SACE.

The PLP is designed to develop students’ capabilities. Students learn how to develop, implement, review, and adjust personal learning goals and choices to prepare for their education and their future career and life pathways.

Four assessment tasks are undertaken, involving a number of formats, the final being a presentation by each student to a small panel.

Year 10 WORKPLACE PRACTICES - SACE STAGE 1 - Core Subject - One Semester (10 Credits)

This is a SACE Stage 1 10-credit subject in which students explore the world of work, their place in it and the skills that are required to be successful. They will look at the requirements of the workplace and both employer and employee responsibilities to maintain a safe working environment. They will explore career options.

Students will secure, prepare for, undertake and evaluate a one week Work Experience placement.

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Students will undertake a unit in financial literacy and carry out simulation activities and run an enterprise in order to develop the enterprise skills that will equip them to become lifelong learners and to contribute productively to Australian society. Students will have the opportunity to develop skills such as identifying opportunities, planning, teamwork, communication and evaluation through carrying out their enterprises.

**Elective Subjects – Year 10 2017**

**Year 10 DRAMA - Elective Subject – One Semester**

Students will extend and refine performance skills through improvisation and polished work to a live audience. Students will view live professional theatre and develop the ability to analyse drama through discussion and writing. Students will discover the past and present context of drama through analysis and enactment. A willingness to work in groups, and to rehearse and perform outside of school hours is essential.

This course is designed to foster self-confidence, higher order thinking skills (analysis, evaluation, synthesis) and creative problem solving. Students will experience creating and making their first whole group production and experience the rewards of performing to the school community.

**Pre-requisites:** While it is not a prerequisite to have studied Drama in the Middle School it is certainly an advantage, as students cover a lot of ground work in regards to skill development. Students must be prepared to work in team situations, spend time rehearsing outside of school hours and be willing to perform to the school community.

**Semester 1: Exit Stage Left**

**The key areas studied are:**
- Theatre Performance Skills
- Technical skills for Theatre – Lighting & Sound (off-stage roles)
- Designers – Costumes, Set & Props (off-stage roles)
- Group Production Performance (on stage/public audience)

**Elements of study**
- Group Production
- Monologue
- Shakespeare / Soliloquy / Sonnets
- Improvisation
- Technical Theatre (Level 3)
- Review Writing - A Day at the Theatre with State Theatre Company.
  (Students will attend 2 professional productions each)

**Semester 2: Now for Something Completely Different**

**The key areas studied are:**

Alternative Theatre
- Anti-Theatre

Physical Theatre
- Technical skills for Theatre – Lighting & Sound (off-stage roles)
- Designers – Costumes, Set & Props (off-stage roles)

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Elements of study:

- Improvisation
- Stage Craft
- Performance Skills
- Theatre of Alienation (Bertolt Brecht)
- Theatre of Cruelty (Artaud)
- Surrealism
- Expressionism
- Review Writing - A Day at the Theatre with State Theatre Company.
  (Students will attend 2 professional productions each semester)

Year 10 FOOD TECHNOLOGY - ASIAN CUISINE- Elective Subject- One Semester

Students will discover the delights of the Asia Pacific Rim. Through their study they will develop an appreciation of the diversity of tastes and produce used in this style of cuisine as well as some of the cultural issues associated with the region. In addition, an exploration of the development of ‘Fusion’ cuisine Australia will be investigated, as will the desirable health benefits of incorporating an Asian perspective. Students will be required to cook regularly for their families.

The assessment for this elective will comprise both theory (40%) and practical (60%) assessments and will require students to use their information technology skills both in research and presentation of responses.

Year 10 FOOD TECHNOLOGY – BAKED GOODIES - Elective Subject- One Semester

Assumed knowledge - ‘Basic Cooking Techniques’ or ‘Simple Meals’. Students will be introduced to the wonders of pastry (both sweet and savoury) in its various styles, cakes, biscuits, muffins and slices. An understanding of the variety of uses and cultural applications of different types of pastry will also be explored. The baking process will be explored as will the broad range of food product made using this process.

Food Culture studies leading into the festive season focus on Italian food and the Christmas Traditions of Germany, France, Italy and Austria. A study of food appropriate to festive occasions, its preparation and decoration will also be addressed as will budgetary concerns within the framework of sound nutritional practices.

The assessment for this elective will comprise both theoretical (40%) and practical (60%) assessments and will require students to use their information technology skills both in research and presentation of responses.

Year 10 GEOGRAPHY – Elective Subject – One Semester

There are two units of study in the Year 10 Geography curriculum: Environmental change and management and Geographies of human wellbeing.

Environmental change and management focuses on investigating environmental geography through an in-depth study of a specific environment.

The unit begins with an overview of the environmental functions that support all life, the major challenges to their sustainability, and the environmental worldviews - including those of Aboriginal and Torres Strait Islander Peoples - that influence how people perceive and respond to these challenges.

Students investigate a specific type of environment and environmental change in Australia and one other country. They apply human-environment systems thinking to understand the causes

Success, wisdom, balance
and consequences of the change and geographical concepts and methods to evaluate and select strategies to manage the change.

**Geographies of human wellbeing** focuses on investigating global, national and local differences in human wellbeing between places.

This unit examines the different concepts and measures of human wellbeing, and the causes of global differences in these measures between countries.

Students explore spatial differences in wellbeing within and between countries, and evaluate the differences from a variety of perspectives. They explore programs designed to reduce the gap between differences in wellbeing. These distinctive aspects of human wellbeing are investigated using studies drawn from Australia, India and across the world as appropriate.

Students will sit an end of semester exam.

**Year 10 HISTORY - Elective Subject - One Semester**

**TITLE: World History**

- The Vietnam War
- Persecution and Hope: Apartheid in South Africa
- China in Revolution 1911 -1949. Communist China under Mao Zedong

Students will develop skills in interpretation, analysis, empathy, research and communication to prepare them for Year 11 and/or Year 12 Modern History.

Assessment will be through a variety of means including coursework, essays, oral presentations, sources analysis tasks and an end of semester examination.

**Stage 1 INDONESIAN - Elective Subject - Full Year (20 Credits)**

This course seeks to extend on the communication skills acquired in previous years and to build on the number of useful language functions upon which students may draw in realistic situations. It focuses around topics which students are likely to encounter in the Indonesian context.

This course will develop student's ability to express themselves in a variety of genres and will cover the language and grammar necessary to;

- Compare and contrast important cultural ceremonies and celebrations in their culture with those in various places in Indonesia.
- Give and justify their opinions on film, social media and music
- Discuss their future aspirations
- Discuss the impact and sustainability of the tourism industry in Bali

Assessment is in accordance with the SACE Stage One guidelines. Assessment tasks will come under the three SACE strands of Communication, Understanding Language and Understanding Culture.

**Years 10 IT ELEMENTS – Elective subject - One Semester (10 Credits)**

Students develop skills and deep understanding in the design and creation of multimedia products including web pages, computer graphics, and animations, and are introduced to a variety of programming languages including Action Scripting, Visual Basic and Game Maker, producing a variety of applications for both desktop and mobile devices.

Programs used include Adobe Photoshop, Adobe Animate, Microsoft Visual Studio, and GameMaker Studio.

Success, wisdom, balance
Students are required to enroll in this subject if they wish to study Stage 1 Information Technology.

Pre-requisite – It is strongly recommended that students complete Graphic Tales prior to enrolling in this course. Students who would like to enroll in this course but have not completed Graphic Tales should discuss this option with the Head of Department, Riccardo Rosadoni.

Stage 1 - INFORMATION TECHNOLOGY - One Semester (10 Credits)

This course is designed as a foundation for Stage Two Information Technology.

Students develop an understanding of computer based systems and their role in supporting efficient and effective use of technology. They learn how people use computers to communicate, and how to develop software solutions that meet the needs of individuals, organisations and communities.

Computer Systems investigates information system components and how they interact. It also looks into how data is processed into information and then transferred from one location to another.

Application Programming focuses on need identification and the development of programs that use data to produce useful information. Microsoft Visual Studio is used.

Multimedia Programming provides students with the opportunity to develop and deploy mobile device applications using AS3 Action Script and Adobe Animate.

Pre-requisite – Students must have successfully completed the IT Elements course.

Stage 1 JAPANESE - Elective Subject- Full Year

Year 10 SACE Stage 1 Japanese course aims to extend written and spoken communication skills and allow students to take their learning to the next level. Sound knowledge of Hiragana and Katakana and Kanji studied at Year 9 are assumed. Students will use a text book called Kokoseikatsu supplemented with ‘flipped classroom’ videos and posted work on the school’s Japanese 365 page. There will be a focus on social learning with online educational tools used to support student’s personalized learning needs.

There will be a focus on social learning with online educational tools used to support student’s personalised work.

In this course, students will learn language to discuss ordering and buying food in restaurants and supermarkets, designing a travel itinerary, lifestyle while on exchange in Japan and writing in conversational style, as well as research certain aspects of traditional and modern Japan in an Investigative Tasks. This can then be used authentically as students in Year 9, 10 and 11 have the opportunity to be part of the biannual trip to Japan in the even school years allowing them to experience another culture first hand. As in previous years, oral, listening and writing skills are emphasized. Now authentic audiences are sourced with new technology allowing us to Skype our sister school students Japan while in class.

Assessment is planned to cater for a variety of learning styles and involves listening, oral and writing tasks and tests. Tasks include oral interviews and presentations, short essays, letters and stories. More complex written and oral tasks are designed to prepare students for SACE Stage 2 Japanese. Students start to develop a more independent approach to language acquisition, and are encouraged to build a personally relevant store of vocabulary to suit differing situations.

Success, wisdom, balance
**Year 10 MEDIA STUDIES- Elective Subject- One Semester**

The media are among the most powerful cultural influences in society today. The media inform, educate, entertain, and offer an interpretation of the world.

Through investigating issues involving the media and their effect on society, and exploring, on a practical level, aspects of the media industry, students will be better equipped to cope with social and technological change.

In this course students will participate in examining and producing media materials. By working in a team to produce media materials, students will develop the skills of cooperation, collaboration, problem-solving, and communication.

Students will have the opportunity to plan, direct, record, and edit their work after studying the way in which media is used to communicate ideas and information in our society. Students will create a range of media products such as films, podcasts, billboards and other media forms.

**Stage 1 MEDIA STUDIES— One or Two Semesters (10 or 20 Credits)**

Students who have successfully completed the Year 9/10 Media Studies elective can apply to take the Stage 1 course in either Year 10 or Year 11. Students who have not studied the Year 9/10 Media Studies elective but wish to take the Stage 1 course in either Year 10 or Year 11 must complete both semesters.

Students of Media Studies can gain an understanding of how ideas are communicated and how audiences and individuals interpret, interact with, and respond to media. Students will gain knowledge, technical skills, and a critical understanding of media texts, products, and industries. For the purpose of Stage 1 and 2 Media Studies, a media text is any form of expression that is communicated by audio-electronic, visual, digital and/or print means. Students of Media Studies will develop media literacy and production skills by critically observing media practice, critically analysing media texts, and creating media products.

Stage 1 Media Studies is a 1-unit (10 Point) semester program. Students can elect to study this subject in one or both semesters. There will be two focus topics studied each semester from a list that includes - Careers in the Media, Representations in Media, Advertising, and Media Audiences.

Assessment consists of 3 components:

- Assessment Type 1: Folio
- Assessment Type 2: Interaction Study
- Assessment Type 3: Product.

**Year 10 MUSIC – Elective Subject – One or Two Semesters**

Students can elect to do Year 10 Music for a semester or a full year. Students are encouraged to choose music for the full year. These students are expected to have had pre musical training and theory knowledge, and at least 2 years of instrumental tuition on their chosen instruments. These students should have completed year 8-9 Music before choosing to continue in Senior School.

When choosing Year 10 Music students are divided into two different music streams. This allows advanced Year 10 students to easily be accelerated and many of these students complete Stage 1 Music in Year 10. The two streams become two independent classes that are run concurrently and are divided between two staff members.

The two different streams of music are:

- Music Advanced
- Music Industry (Music Experience)

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Students who aim to continue music into Year 12 are placed in the Music Advanced stream. This course allows students to refine their theory skills and prepares these students for Solo Performance and Musicianship to a Year 12 standard. Students who enjoy music, but are not strong in theory can choose to complete the Music Industry course. This stream focuses on elements of the music industry and allows students the opportunity to learn about sound recording, musical performance and the technical aspects of the music industry.

For the practical component students are assigned to a small ensemble consisting of members from the class. Students are expected to research or arrange repertoire, rehearse, perform and evaluate their musical performance within these ensembles, with the aim that the ensemble is student directed.

Assessment

Assessments include theory and aural tests, arranging and composing assignments, a solo performance each term and group performances to the public.

Year 10 Music Pre-requisites:
- A minimum of 2 Years instrumental tuition prior to entering the Year 10 course.
- Students should be of AMEB grade 2 standard or equivalent or by negotiation with Cinzia Cursaro. (Head of Music)
- Continuation of private instrumental tuition throughout the Year.

Year 10 PHILOSOPHY - Elective Subject - One Semester

This course traces philosophical themes from the Ancient Greeks to modern philosophers. It includes a mixture of the Philosophy of Science, Religion, Politics and Ethics. The course encourages students to think critically about issues, to see other viewpoints, to appreciate the concept of a worldview, and to identify their own worldviews.

Critical and creative thinking skills are encouraged. Students are also encouraged to examine the evidence for their beliefs and to appreciate sound reasoned arguments. Discussions are obviously very important as students explore their ideas. Assessment focuses both on factual knowledge of the ideas of some of the philosophers and on the sound development of each student’s own ideas.

The web address for this course is:
10philosophycm.wikispaces.com

Year 10 PHYSICAL EDUCATION Elective Subject – One Semester

This course is an introduction to Senior School PE courses and the concepts involved. Topics will include:
- Energy systems as they apply to physical activity
- Fitness principles and methods of training
- Skill learning
- Game analysis and tactical development

Students will have the opportunity to use current sports technology such as gps tracking devices, heart rate monitors and video analysis to analyse and improve their performance. Students will also further develop their skills, knowledge and tactical understanding in a range of physical activities. There will be an emphasis on tactical awareness.

Assessment will be 40% theory – 2 lessons, and 60% practical – 3 lessons. There will be a combination of performance checklists, tests, assignments and laboratories used to assess students.
Year 10 TECHNOLOGY - MANUFACTURING 2 - Elective Subject - One Semester

Aimed primarily at Year 9 students, this semester course focuses on the areas of:
Designing: - Problem solving, researching, communicating ideas, technical drawing, introduction to CAD.
Making - Safety, development of the use of tools, machines and equipment in manufacturing techniques.
Critiquing - Evaluation of commercial products, the student’s own work and processes used, an investigation into the impact of an aspect of technology on society or the environment, futures.

Year 10 TECHNOLOGY - MANUFACTURING 3 - Elective Subject - One Semester

Aimed primarily at Year 10 students, this semester course focuses on the areas of:
Designing - Problem solving, researching, communicating ideas, technical drawing, CAD, developing a design folio.
Making - Safety, further development of the use of tools, machines and equipment in more advanced manufacturing techniques.
Critiquing - Evaluation of commercial products, the students’ own work and processes used, an investigation into the impact of an aspect of technology on individuals, society or the environment.

Year 10 TECHNOLOGY – CAD - Elective Course – One Semester

This one semester course is aimed at students interested in design, engineering or architecture. Two major topics are covered, Mechanical Design and Architectural Design.

In Mechanical Design students learn how to use Autodesk Inventor to create parts, assemblies, animations and advertisements. Introductory tasks include small printable designs with final products manufactured by the schools 3D printer. The development of a gadget is the major assignment.

In Architectural Design students are introduced to Autodesk Revit, creating floor plans, walls, building features like doors and windows, and rendering. The design of a future house is the major assignment. Autodesk 3DS Max is also introduced as an animation tool for developed content.

Pre-requisite – It is strongly recommended that students complete Graphic Tales prior to enrolling in this course.

Stage 1 TECHNOLOGY – CAD — One Semester Elective Course (10 Credits)

Stage 1 Computer Aided Design enables students to extend and apply their knowledge and understanding of digital technologies to create and share technical products in both Mechanical and Architectural design fields.

Course focus is on creating designs that effectively communicate and showcase student developed concepts.

In Mechanical Design students engage in a range of skills tasks before designing and developing a children’s toy. The final product is printed on the schools 3D printer with product effectiveness tested on a target audience in the Junior School.

In Architectural Design students create and showcase a futuristic school building of their own design, ultimately developing an animation of an alternate school layout that includes all buildings developed by the class.

Students can choose either Mechanical or Architectural design as the platform for their major product, researching, designing, developing and evaluating a product based on an identified need.

Success, wisdom, balance
Students should choose this subject if they are interested in a career in Engineering, Manufacturing, Construction, Architecture, Design or Drafting.

Pre-requisite – Students must have completed Year 9 & 10 Computer Aided Design.

Year 10 TECHNOLOGY - SYSTEMS 2 - Elective Subject - One Semester

Aimed primarily at Year 9 students this semester course focuses on the areas of:

- **Electronics** - Electronic devices, sensing circuits, semiconductors, output devices, construction techniques.
- **Machines and mechanisms** - Simple machines, machine efficiency, mechanical advantage, CO2 powered vehicles.
- **Robotics** - Robolab construction, Explorer programming. Futures

Year 10 TECHNOLOGY - SYSTEMS 3 - Elective Subject - One Semester

This semester course focuses on the areas of:

- **Energy** – Renewable and non-renewable energy sources. Alternative energy.
- **Electronics** - Semiconductors, Integrated circuits, modelling circuits, operational applications.
- **Digital Electronics** - Boolean logic circuits, digital control, digital computers
- **Robotics** - Automatic control programs, sequential control, sensors, Robolab construction, NXT programming, futures. Students designing and building Robots

Year 10 VISUAL ARTS Elective Subject – One or Two Semesters

This course is a continuation from the Year 9 Art-Design course but can also be started at this point. It is a recommended prerequisite for Stage 1 Design or Art.

This course is a recommended pre-requisite for Stage 1 Art and/or Design and provides opportunities for students to further develop their skills and abilities in the Visual Arts. Greater emphasis will be placed on the generation of original ideas and the development of appropriate support material for major art works.

The process of design is explored in greater depth as students refine their skills and abilities to research and communicate their ideas using a variety of media and forms of presentation. Students will have opportunities to integrate and build upon computing skills used in the presentation of final concepts.

Students are encouraged to develop their ability to work independently using selected media and approaches. The students have the opportunity to develop their skills using a wide range of media that they can apply to their ideas in the Visual Arts.

An historical overview of major Movements is undertaken at this level. Greater emphasis is placed on the refinement of written analysis and the use of subject specific terminology.

Success, wisdom, balance
Year 10 VISUAL ARTS – DESIGN Elective Subject – One or Two Semesters

This course is a continuation from the Year 9 Art-Design course but can also be started at this point. It is a recommended prerequisite for Stage 1 Design or Art.

Distinct areas of **Graphics and Visual Communication, Product Design** and **Environmental Design and other areas of Design** will be explored. This course reinforces prior learning in Design and Craft and specifically looks at the construction of 'briefs' and their formulation.

Design as applied within the Crafts is also an area of study where Photography, multimedia and jewellery are included. Students will have opportunities to integrate and build upon computing skills used in the presentation of final concepts.

This course looks at terminology used in the field of design and gives the students an opportunity to work on their own ideas using the skills they form in the earlier part of the course in a more independent manner.

Written analysis of both their ideas and using the ideas of other designers is undertaken at this level and leads to the more formal aspects of SACE Stage 1 Design.

**Students in Year 11 will be required to complete a semester unit of either Art and/or Design if intending to pursue a study of The Visual Arts at Stage 2. However, TWO semester units (a full year of study) is strongly recommended.**