A.B. PATERSON COLLEGE

Year 10 - 2026 Subject Selection Handbook

YEAR 10 - 2026

SUBJECT SELECTION HANDBOOK

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SUBJECT SELECTION OVERVIEW

By the time students are ready to enter Year 10, they will have experienced a wide variety of subjects in their younger years. Academically, students have gained valuable insight into subjects and skills on offer which should now be used to make choices about the pathway they want to follow in education. Year 9 and 10 curriculum offerings at A.B. Paterson will allow students the opportunity to narrow the range of subjects they study, but also allow students to keep their options open to be well prepared for their future.

During the process of subject selection in these years, students, parents and guardians should remember that selections should be based on what appears to be the right choice at this point in time. As time progresses, changes can be made if an inappropriate choice had been made. However, a wise and realistic choice of subjects, should make a change of subject unnecessary.

With the recent change to the Queensland Certificate of Education (QCE), new subjects and selection processes will be implemented. Subjects offered will provide many pathways for students to be successful in the future, in addition they will provide students with a variety of 21st century skills and transverse competencies, which can be utilised in any career pathway.

There will be core and elective subjects offered to students. Year 9 students will complete 5 core subjects and select 3 elective subjects for the year. In Year 10, students will continue with these 3 electives, along with a further 2 that will provide principles of a range of Year 11 and 12 subjects across different faculties. Core subjects include, English, Mathematics and Science. Electives offered are outlined further in this document.

Students are advised to choose subjects that they enjoy, and in which they have already experienced reasonable success. Studying a range of subjects will broaden options in the future – few adolescents know precisely what career they want to follow in the next few years; with many future careers still not clearly understood in our ever-changing world.

It will not be possible to offer every subject combination. Obviously, too many or too few requests for a given subject could present problems. The College reserves the right to not offer subjects if student numbers are too low. This could mean that a subject may not be offered; additionally, it could mean that numbers are restricted to one class only.

This handbook contains valuable information about the subjects/courses on offer. Use this information, in conjunction with knowledge gained from the College's Career Expo, to assist with the subject selection process. Students will make their selections via a preference system; which will be made available Term 3.

YEAR 10 ELECTIVE LINES, 2026

LINE 1	LINE 2	LINE 3
DANCE ***DRAMA*** ***VISUAL ART*** ***DIGITAL TECHNOLOGIES*** ***DESIGN TECHNOLOGIES*** ***FOOD TECHNOLOGY*** ***MEDIA ARTS***	***DRAMA*** ***MUSIC*** ***VISUAL ART*** ***DIGITAL TECHNOLOGIES*** ***FOOD TECHNOLOGY*** ***MEDIA ARTS*** ***JAPANESE*** ***SPANISH***	***DRAMA*** ***VISUAL ART*** ***DESIGN TECHNOLOGIES*** ***FOOD TECHNOLOGY*** ***MEDIA ARTS*** ***JAPANESE*** ***SPANISH***

LINE 4	LINE 5
HEALTH AND PHYSICAL EDUCATION BUSINESS AND ECONOMICS ***HISTORY*** ***CIVICS AND CITIZENSHIP*** ***FOUNDATIONAL CHEMISTRY AND PHYSICS*** ***FOUNDATIONAL BIOLOGY AND PSYCHOLOGY*** ***ENGINEERING PRINCIPLES AND SYSTEMS*** ***FURTHER MATHEMATICS***	***HEALTH AND PHYSICAL EDUCATION*** ***BUSINESS AND ECONOMICS*** ***HISTORY*** ***CIVICS AND CITIZENSHIP*** ***FOUNDATIONAL CHEMISTRY AND PHYSICS*** ***FOUNDATIONAL BIOLOGY AND PSYCHOLOGY*** ***ENGINEERING PRINCIPLES AND SYSTEMS*** ***FURTHER MATHEMATICS***

Students will study five different elective subjects. When making selections, students will be asked to choose their main preferences, and a back-up preference, from the subjects listed.

Not studying a subject in Year 10 does not prohibit a student from choosing to study that subject in Year 11 and 12, with the exception of a language.

Should a particular preference not be available (usually due to over or under subscription) then next preference in order will be allocated.

Please note: the final make-up of these Lines may differ to what is shown above, depending on student interest.

The Arts Faculty

Subject	**DANCE**
Head of Faculty	**Contact Details**
Sharyn Walker-Joyce	Email: SWalker-Joyce@abpat.qld.edu.au Telephone: 07 55614105
Why study Dance?	The study of Dance develops individuals who are culturally sensitive, creative, complex and reflective thinkers. It uses the body as an instrument for expression and communication of ideas and encourages the holistic development of a person. Students of Dance learn how to critically examine and reflect on their world through higher order thinking and movement, whilst engaging in creative and critical thinking. Self-confidence is also developed alongside an awareness of, and respect for, the body.
Year 10 Course outline	**Dance for Stage** In this unit, students will study and explore how dance is designed and created specifically for stage performances. Students will practice and refine selected style-specific techniques and skills and how these are manipulated and structured to convey meaning to a live audience. They will continue their development of skills in choreography, performance and responding to the work of others. **Dance for Film** In this unit, students will study and explore how dance is created specifically for film. Students will explore digital and physical environments, and how space and time can be manipulated and used to deepen meaning and intent when capturing dance on film. They will explore and refine dance concepts and skills and how these are structured to convey meaning to a digital audience. Students will continue their development of skills in choreography, performance and responding to the work of others.

Subject	**DRAMA**
Head of Faculty	**Contact Details**
Sharyn Walker-Joyce	Email: SWalker-Joyce@abpat.qld.edu.au Telephone: 07 55614105
Why study Drama?	Students often think Drama is a subject just for aspiring actors and directors, however, it's so much more than that! Future journalists, lawyers and business leaders for example, all need to know how to speak and present with confidence as well as develop creative and critical thinking and improve their planning, performance and teamwork skills. Drama serves as a great boost for a career in the theatre or film industry, advertising, journalism, law, event planning and so much more.
Year 10 Course outline	**Drama for Stage** In this unit, students study a variety of characters and learn how their motivation and physical attributes can be portrayed on a stage. They will learn how to think on their feet by developing improvisation skills, as well as how to devise their own scripts. Students will also learn how to present scripted drama and will explore how to use dramatic language when creating dramatic scenarios. They will have many opportunities to respond to drama by understanding how playwrights use dramatic languages to create meaning. Based on the interest of students, these skills will be developed through a variety of dramatic genres. **Drama for Film** In this unit, students will study method acting, evaluate elements of drama and perform scripted texts in front of a camera. They will practise and refine the expressive capacity of voice and movement to communicate ideas and dramatic action in different performance spaces. Students will also continue to learn how to present scripted drama and will explore how to use dramatic language when creating dramatic scenarios.The students will analyse a range of drama from contemporary and past times to explore differing viewpoint, including dramas of Aboriginal and Torres Strait Islander peoples.

Subject	MUSIC
Head of Faculty	**Contact Details**
Sharyn Walker-Joyce	Email: SWalker-Joyce@abpat.qld.edu.au Telephone: 07 55614105
Why study Music?	Music is a unique art form that uses sound and silence as a means of personal expression. It allows for the expression of the intellect, imagination and emotion, and the exploration of values. The study of Music combines the development of cognitive, psychomotor and affective domains through making and responding to music. In an age of change, Music has the means to prepare students for a future of unimagined possibilities. They will develop highly transferable skills and the capacity for flexible thinking and doing. A study of music provides students with opportunities to develop their intellect and personal growth as well as the capacity for working independently and collaboratively.
Year 10 Course outline	**Can You Hear Me?** In this unit, students will study how music can be used to convey messages in the media and in public spaces. They will develop their skills of performing music from different genres, compose music within the studied styles, and understand the purposes and process of composers who write influential music. **Can You See Me?** In this unit, students will study live music from a variety of genres, cultures and styles. They will also be invited on an excursion to see a live performance. Students will demonstrate their understanding through performing, composing and responding to live music of styles both studied and of their own choice.

Subject	**VISUAL ARTS**
Head of Faculty	**Contact Details**
Sharyn Walker-Joyce	Email: SWalker-Joyce@abpat.qld.edu.au Telephone: 07 55614105
Why study Visual Art?	In this creative and challenging subject, students use their imagination and creativity to solve problems and experiment with visual language. On their individual journey of exploration, students learn to communicate personal thoughts, feelings, ideas, experiences and observations. Visual Art fosters curiosity and imagination and teaches students how to generate and apply new and creative solutions when problem-solving. This ability to think in divergent ways and produce creative and expressive responses, enables future artists, designers and craftspeople to innovate.
Year 10 Course outline	**Click!** Through photography, students will delve into and refine their understanding of the elements and principles of Visual Communication and use this knowledge to demonstrate how artists draw inspiration to impact their work. **Nostalgia** Students will engage in a 9-week exploration of inquiry-based learning in the arts. They will formulate a compelling focus, followed by researching key artists to gain insights into various themes and techniques to be able to create a thought-provoking final artwork. **Artist’s Hand** Using AI and a variety of media, students will explore and refine their painting practice as they investigate what the term ‘painting’ means.

Health and Physical Education Faculty

Subject:	**HEALTH AND PHYSICAL EDUCATION**
Head of Faculty	**Contact details**
Paul Dilkes	Email: PDilkes@abpat.qld.edu.au Telephone: 07 55947947
Why do Health and Physical Education?	In an increasingly complex, sedentary and rapidly changing world it is critical for every young Australian to not only be able to cope with life's challenges but also to flourish as healthy, safe and active citizens in the 21st century. This is a strong investment in the future of the Australian population. Technology and media will continue to transform our lives and change the way we communicate. Some health issues will endure while new ones will emerge. New forms of physical activity will become available. Students need critical inquiry skills to research and analyse knowledge and to understand the influences on their own and others' health, safety, wellbeing and physical activity participation. They also need to be resilient, to develop empathy and to be actively engaged in their own and others' wellbeing, using health, safety and physical activity resources for the benefit of themselves and their communities. In Health and Physical Education, students develop the skills, knowledge, and understanding to strengthen their sense of self, and build and manage satisfying, respectful relationships. They learn to build on personal and community strengths and assets to enhance safety and wellbeing. They critique and challenge assumptions and stereotypes. Students learn to navigate a range of health-related sources, services and organisations. At the core of Health and Physical Education is the acquisition of movement skills and concepts to enable students to participate in a range of physical activities – confidently, competently and creatively. As a foundation for lifelong physical activity participation and enhanced performance, students acquire an understanding of how the body moves and develop positive attitudes towards physical activity participation. They develop an appreciation of the significance of physical activity, outdoor recreation and sport in Australian society and globally. Movement is a powerful medium for learning, through which students can practise and refine personal, behavioural, social and cognitive skills.

Year 10 Course Outline	**Term 1 - Theory Component** ✓ Strengthen your Mental Wellbeing **Term 1 - Practical Component** ✓ Gym Sessions **Unit Focus** How can we use physical activity to promote mental wellbeing in the school community? **Outline** Students will investigate a range of factors that can influence mental health, including physical activity and explore health issues related to sedentary lifestyles. Students will design, implement, and evaluate a health strategy aimed to promote mental health and wellbeing in the school community through participation in regular recreational gym sessions. **Term 2 - Theory Component** ✓ The Power of Social Media **Term 2 - Practical Component** ✓ Touch Football **Unit Focus** How can we influence the community with healthy selfies? **Outline** Students will critically analyse the personal, psychological, and environmental factors, including stereotypes and role models, that influence identities, decisions and behaviours relating to their body image. Students will develop an action plan promoting positive body image messages relating to health, physical activity including a focus on Touch Football and wellbeing in a community context. **Term 3 - Theory Component** ✓ Analyse This **Term 3 - Practical Component** ✓ Volleyball **Unit Focus** What role does biomechanics play in the improvement of physical performance? **Outline** Students will evaluate their own and others' performance of a selected movement sequence in Volleyball. They will make their judgments and provide feedback using criteria based on specialised movement skills and sequences. The use of digital tools (apps, video analysis software) to analyse performance will also be offered.

	Term 4 - Theory Component ✓ Level up **Term 4 - Practical Component** ✓ Basketball **Unit Focus** Where am I going and what do I need to get there? **Outline** Students will identify situations where they may face challenges as they transition into senior school and more autonomy. They will develop self-management and interpersonal skills to successfully navigate change. Students will evaluate the appropriateness and effectiveness of help and support services available for young people in the local community and propose strategies to promote positive health decisions. They will also engage in Basketball to promote positive and healthy decisions around the importance of physical activity.

A.B. PATERSON COLLEGE

EXCELLENCE CARE COMMITMENT

Humanities and Social Sciences Faculty

Subject:	**HISTORY**
Head of Faculty	**Contact details**
Anthony Chetter	Email: AChetter@abpat.qld.edu.au Telephone: 07 55947947
Why do History?	History offers students the opportunity to understand and examine the key developments and roles of individuals that have shaped the ancient and modern worlds. They consider complex issues over time that impact the development of societies and the relationships between individuals. Key concepts and movements that shape civilisations provide deep insights into the past, today and the future. There is a focus on source analysis and evaluation, and the development of engaging topics through the historical inquiry process.
Year 10 Course Outline	**Unit 1 - History Repeats:** World War II (1939-1945) was a global conflict that involved many nations and had a profound impact on the course of history. It emerged as a direct result of unresolved issues and tensions from World War I and the inter-war period; the war was fought between two major alliances: the Allies, consisting of the United States, the Soviet Union, the United Kingdom, and other countries, and the Axis powers, primarily led by Germany, Italy, and Japan. **Unit 2 - Good Vibrations:** Pop culture, short for 'popular culture', refers to the collective ideas, beliefs, attitudes, trends, and activities that are embraced and enjoyed by a significant portion of society; it encompasses a wide range of phenomena, including music, movies, television shows, fashion, art, literature, sports, technology, and more. Pop culture is often driven by the media and entertainment industries, and it reflects the tastes and interests of the general public. **Unit 3 - Talkin' Bout A Revolution:** Civil rights movements are social and political campaigns that strive to secure equal rights and treatment for marginalised and disadvantaged groups within a society; these movements emerge when certain individuals or communities experience discrimination, oppression, or systematic injustice based on their race, ethnicity, gender, sexual orientation, religion, disability, or other protected characteristics.

Subject:	BUSINESS AND ECONOMICS
Head of Faculty	**Contact details**
Anthony Chetter	Email: AChetter@abpat.qld.edu.au Telephone: 07 55947947
Why do Business and Economics?	The subjects of Business, Economics and Accounting are interconnected and influential subject-areas that draw heavily on problem solving, and analytical and evaluative skills for the organisational functions of businesses and the economy. The specialised nature of their areas offers unique opportunities to apply their principles to the current, emerging and future business and economic environments.
Year 10 Course Outline	**Unit 1 - You can't always get what you want:** Important aspects of running a successful business; influencing consumers and improving business productivity are ongoing processes that require a combination of strategic planning, customer-centric approaches, and adaptability. **Unit 2 - Hey, Big Spender!:** Economic performance and Government management of the economy: Economic performance and government management of the economy are interconnected topics that involve the ways governments formulate and implement policies to influence the overall health and growth of an economy: macro-economic stability, fiscal policy, monetary policy, infrastructure, living standards, regulation, international trade and economic planning. **Unit 3** - **$20 BOSS:** A study of entrepreneurship, marketing-, human resource-, financial- and operations management culminates in the practical application of business skills in developing and running a social enterprise within the $20 BOSS program. This hands-on course develops crucial business skills including critical thinking, communication, team work, conflict resolution and time management.

Subject:	**CIVICS AND CITIZENSHIP**
Head of Faculty	**Contact details**
Anthony Chetter	Email: AChetter@abpat.qld.edu.au Telephone: 07 55947947
Why do Civics and Citizenship?	The Principles of Legal Studies lays the foundations for a student's understanding of key legal concepts and principles. They apply this knowledge to current issues and engage in critical thinking about the role of law, the elements of effective law, and the impacts of law on civil and democratic society.
Year 10 Course Outline	Civics and Citizenship serves as the introduction and foundational subject for Senior Legal Studies. Choosing this subject, will serve as an important building block for success in Senior Legal Studies. **Unit 1 - Rule Makers:** Our system of government and its role in the wider Asia-Pacific region; it explores the nature of power, authority, and governance, and explains how societies make collective decisions and allocate resources. **Unit 2 - #activism:** The role of the High Court interpreting the law, safeguarding the Constitution, and ensuring the proper functioning of the Australian legal system; its decisions have far-reaching implications for the legal and constitutional landscape of the country. **Unit 3 - G'day neighbour:** This unit examines Australia's system of government and compares it to other democratic and non-democratic systems within the Asia-Pacific region. It analyses the responsibilities of the Australian Government at both regional and global levels, focusing on diplomacy, trade, and security. **Unit 4 - legal Duties of a Land Down Under:** The protection of fundamental rights, individual freedoms, and the ability of citizens to participate in the decision-making process; key principles and practices that contribute to the sustainability and resilience of democracy: upholding the rule of law, protection of human rights, civic education and engagement, free and fair elections, media freedom and information integrity, civil society and active participation, inclusive, responsive and accountable government, and democratic reform.

Languages Faculty

Subject	JAPANESE
Head of Faculty	**Contact details**
Cheyne Sandercoe	Email: CSandercoe@abpat.qld.edu.au Telephone: 07 55947947
Why do Japanese?	Did you know that there are more multilingual people living on earth than those who are simply monolingual? Or that there are over 300 separately identified languages spoken in Australian homes, and more than one-fifth of Australians speak a language other than English at home? Learning another language is just more than a statistic from a census survey – it has become an essential skill in the 21st Century. By learning a language, you will have the edge over monolingual candidates, providing you a bet er chance of recruitment, and this makes you a more valued employee. Languages can also take your career international – and those who have studied a second language will tell you that it is more than learning words and phrases. Cultural appreciation also gives you a greater understanding when interacting with others, thus equipping you with the skill of being able to adapt bet er in our global society. At Year 10 level, students bring to their learning existing knowledge of their studied language and culture and a range of learning strategies. Activities focus on the use of technology, first-hand experience of the topics beyond the classroom environment and problem-solving activities that position intercultural understanding at the centre of student learning. Students will learn the skills of translation by collecting and organising information and analysing and evaluating information. Independent study, guided and facilitated instruction and collaborative discussion, as well as self-monitoring and reflection are also components of the language courses. What part of our lives hasn't been influenced by Japanese culture, innovation and inventions? From the cars we drive, the technology we use, the white goods we buy… even the food we eat! The Japanese truly are at the forefront of many industries and continue to be our second biggest overseas trade partners. Japan and Australia have strong links through educational and cultural exchanges, tourism, trade and diplomacy, so knowledge of the Japanese language and culture continues to be a desirable skill for many employers looking for a well-rounded global citizen. The youth culture of Japan, such as animation, fashion and design has been embraced by young Australians through popular media, so why not choose Japanese to compliment your creative side? With a large number of Japanese nationals living in Australian, having Japanese in the public service industry – law, healthcare, education, hospitality, government is highly regarded.

Course Outline	**Topic 1: Homestay Welcome to my house!** The unit looks at how Japanese houses differ from Australian houses, both inside and outside the house, and gives students the language and knowledge to discuss the rules of their homes, and the different cultural practices that are carried out in the home. Students will build on their emerging knowledge of the geography and climate of Japan. **Topic 2: Lost!** Don't get lost in the crowd! This unit is an essential part of the course as many students have a great interest in travelling, studying or working in Japan in the near future, or may work in areas where there are many Japanese visitors such as Surfers Paradise, or theme parks on the Gold Coast where tourist may need help with directions. Being able to give clear, concise instructions, and understanding these is a skill students must be able to master. Students will also learn about the different landmarks/places of interest in Japanese and Australian cities. **Topic 3: Seasonal Traveller** The aim of this unit is for students to be able to listen to and understand weather forecasts and weather advisory warnings. They will have a further consolidate their knowledge of how the geography of Japan impacts seasonal changes and activities that are famous in various regions. These skills are vital for when travelling in Japan or giving recommendations for places in Japan. **Topic 4: Shopaholic: Exploring Consumer Culture in Japan** This topic offers Japanese students a unique perspective on consumer behaviour intertwined with traditional cultural practices. Students will delve into the psychology of shopping, examining the motivations, influences, and consequences of consumerism within Japanese society. Through the lens of Furoshiki, the art of fabric wrapping, students will explore the aesthetic, environmental, and cultural dimensions of gift-giving and consumption. Additionally, the course incorporates *keigo*, honorific language, to understand the interpersonal dynamics in retail settings. Students will have the opportunity to role-play scenario between a customer and a sales assistant, simulating real-world interactions and honing their oral communication skills.

Subject	**SPANISH**
Head of Faculty	**Contact details**
Cheyne Sandercoe	Email: CSandercoe@abpat.qld.edu.au Telephone: 07 55947947
Why do Spanish?	Did you know that there are more multilingual people living on earth than those who are simply monolingual? Or that there are over 300 separately identified languages spoken in Australian homes, and more than one-fifth of Australians speak a language other than English at home? Learning another language is just more than a statistic from a census survey – it has become an essential skill in the 21st Century. By learning a language, you will have the edge over monolingual candidates, providing you a bet er chance of recruitment, and makes you a more valued employee. Languages can also take your career international – and those who have studied a second language will tell you that it is more than learning words and phrases, cultural appreciation also gives you a greater understanding when interacting with others, thus equipping you with the skill of being able to adapt bet er in our global society. At Year 9 level, students bring to their learning existing knowledge of their studied language and culture and a range of learning strategies. Activities focus on the use of technology, first-hand experience of the topics beyond the classroom environment and problem-solving activities that position intercultural understanding at the centre of student learning. Students will learn the skills of translation by collecting and organising information and analysing and evaluating information. Independent study, guided and facilitated instruction and collaborative discussion, as well as self-monitoring and reflection are also components of the language courses.
Course Outline	**Topic 1: *Mi Vida Loca* - My Crazy Life** The aim of this unit is for students to be able to communicate in Spanish about one's daily routine, personal care, and household responsibilities. Students will review the present tense and will be introduced to an incredibly useful verb tense, namely reflexive verbs. They will reflect on social and family responsibilities and draw judgements based on these. Students will look at the situation of youth in Australia and compare that of the situation of children of a similar age in Spanish-speaking countries. **Topic 2: *¡Luces, Camera, Acción!* - Lights, Camera, Action!** Students will learn how to reflect on the films they have seen, learning a new verb tense, the present perfect, and give their opinions about them. They will have the opportunity to discuss their favourite actors, as well as their favourite movies. This topic will also allow students to talk about their favourite TV programs and give their opinions on what

	young people in Australia like to watch. There will be opportunity for discussion and debate surrounding various social issues pertinent to Australia and Spanish-speaking communities. Students will also learn to discuss a variety of movie genres and their impact on the viewers. **Topic 3: *Piensa Verde* - Going Green** The aim of this unit is for students to be able to continue to communicate in Spanish about social issues, by consolidating previous learning and expanding cultural and linguistic knowledge. They will review giving opinions and explore the conditional tense in greater depth and learn new grammar, such as the imperative tense, in preparation for their senior course of study. Students will expand their vocabulary to discuss the environment, with a strong focus on ecotourism, and associated issues. They will learn how to describe the environment in which they live and that of Spanish-speaking countries, as well as how to understand environmental issues, and how to discuss and give their opinions on the topic. Students will also research eco-friendly tourist destinations and prepare marketing strategies to promote a destination of their choice. **Topic 4: *Viajeros del Tiempo* – Time Travelers** In this immersive journey, students will embark on a time-travel adventure, mastering the distinctions between the preterite and imperfect tenses while exploring historical events. Engaging in dynamic activities that fuse language learning with creative expression, students will be introduced to the imperfect tense through an 'Imperfect Art Gallery' and 'Time-Traveling Diaries.' The climax involves collaborative efforts in 'Interactive Story Creation,' where students blend both tenses to compose captivating time-travel narratives set in different eras. This unit aims to provide an unforget able, technologically integrated, and culturally rich learning experience.

A.B. PATERSON COLLEGE

EXCELLENCE CARE COMMITMENT

Mathematics Faculty

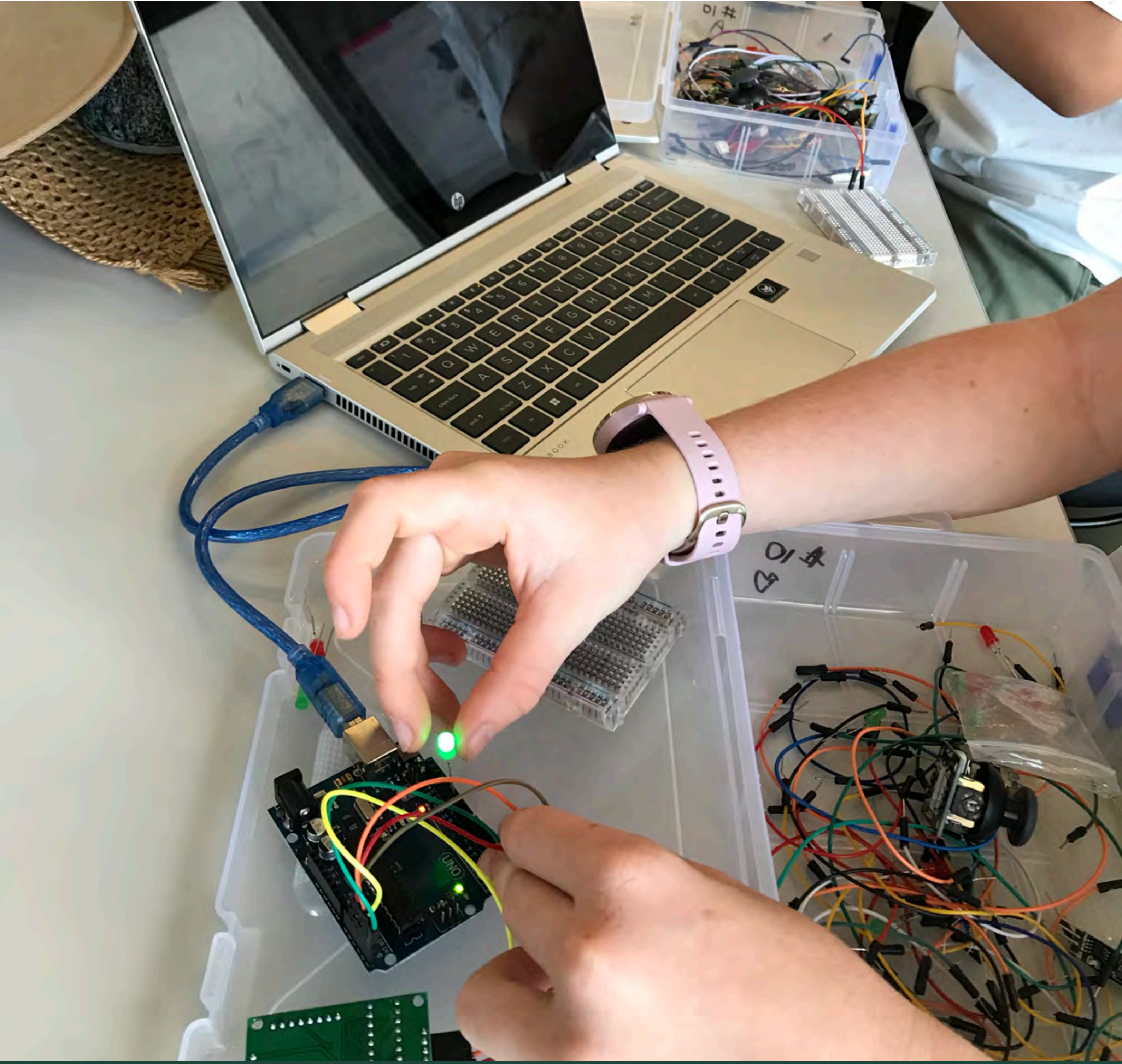
Subject:	FURTHER MATHEMATICS
Head of Faculty	**Contact details**
Jasmine Lange	Email: JLange@abpat.qld.edu.au Telephone: 07 55947947
Why do Further Mathematics?	Further Mathematics aims to extend the competency and confidence of students in mathematics beyond the scope of the Year 10 Mathematics course, to build on and combine many of the concepts introduced in Mathematics (in particular in the study of vectors, matrices and calculus), and to provide further opportunity for students to participate more fully in lifelong learning. Advanced Computational Mathematics involves the study of mathematical concepts such as groups, Real and complex number systems, matrices, vectors, calculus, mathematical structures, linear programming, conics, dynamics, and advanced periodic and exponential functions. These are used to develop: • Knowledge and skills in advanced computation and algebraic methods and procedures; • Mathematical modelling and problem-solving strategies and skills; • Capacity to justify mathematical arguments and make decisions; and • Capacity to communicate about mathematics in a variety of forms.
Year 10 Course Outline	Fractional Exponents and Surds Further Linear Equations Further Quadratic Equations Transformation of Functions Trigonometric Functions and the Unit Circle Exponential and Logarithmic Functions Rates of Change Circle Geometry Statistical Distributions Counting Principles

Science Faculty

Subject:	FOUNDATIONAL BIOLOGY AND PSYCHOLOGY
Head of Faculty	**Contact details**
Ellen Edwards	Email: EEdwards@abpat.qld.edu.au Telephone: 07 55947947
Why do Biology and Psychology?	Biology is concerned with the study of the phenomenon of life, not only human but all life on the planet. It encompasses studies of the origin, development, functioning and evolution of living systems. Biology provides students with a deeper understanding and an enhanced aesthetic appreciation of their physical self and the living world. Students studying Biology gain a greater understanding of the world around them, and the impact that they and their society can have on it. Students are asked to examine the ethics behind many technological breakthroughs that have occurred in the field of biology over the years and that continue today and consider the impacts they may have on us now and in the future. They look to formulate ways that can contribute to their own health, as well as the health of their local environment. Psychology is the study of the human mind and its wide-ranging functions and influences. Psychological research advances our understanding of human emotion, personality, intelligence, memory, perception, cognition, attention and motivation, as well as the biological processes that drive these human functions and behaviours. In essence, psychology studies individuals and groups to better understand how people, communities and societies function and ways to help them thrive. The goal of psychology is not just to study human thinking and behaviour, but to put that knowledge into practice, to help people, communities and society in general to solve day-to-day problems and improve quality of life. At A.B. Paterson College, students studying Biology and Psychology are provided with an educational environment which allows them to study the subject in an historical and modern context through instruction, enquiry, observation, experiment and collaborative learning. The course helps students to develop skills in logical thinking, problem-solving and analysis. Where possible, the concepts are placed in context to enrich the learning experience.
Year 10 Course Outline	**Inside Out:** This unit provides students with an overview of the psychology of emotions. Students will explore the parts of the brain involved in emotion and human behaviour. They will also research and investigate the impact of social media on emotional well-being. Finally, students will conduct a research investigation on how people interpret emotions.

	Get Smart: In this unit, students examine key stages in cognitive and moral development from infancy to adulthood, based on Piaget and Kohlberg. They consider how these stages influence thinking and behaviour. Finally, they learn how publication and peer review are essential to advancing psychological science. **From Little Things Big Things Grow:** In this unit, students examine the macromolecules found in food and the human body, learning about their structures and functions. They investigate methods for testing these molecules and study how enzymes operate through hands-on experiments and data analysis. **Where's Waldo:** This unit examines the importance of biodiversity and the ways it can be measured. Students will explore how abiotic factors vary and interact within ecosystems and affect living organisms. They will also learn practical techniques for measuring and monitoring their local environment and discover how statistics are used to analyse ecological data.

Subject:	**FOUNDATIONAL PHYSICS AND CHEMISTRY**
Head of Faculty	**Contact details**
Ellen Edwards	Email: EEdwards@abpat.qld.edu.au Telephone: 07 55947947
Why do Chemistry and Physics?	We all do chemistry every day! As soon as you wake up in the morning, you start doing chemistry. Chemistry explains why an egg changes when you boil it and why your non-stick pan is non-sticky. Chemistry explains how soap and shampoo make you clean; why you feel tired before coffee and alert after it; and how the petrol in your car gets you to work. Chemistry is about the molecules all around us. It is about matter: specifically, how matter changes. Studying Chemistry will allow you to learn about why the things around us behave the way they do. Most importantly, it is just so fascinating. If you want to understand the workings of the world around you - then Chemistry is for you! Physics is concerned with discovering the basic principles of the universe. The beauty of physics lies in the simplicity of the underlying physical theories, and in the manner in which a small number of fundamental concepts and assumptions can alter and expand our view of the world around us. Physicists explore the energy and forces that shape the physical world, from the interior of the atom to galaxies of stars. In the broadest sense, Physics is the study of matter and energy, and the relationships that exist between these quantities. More specifically, it is the study of the behaviour and structure of matter on a macroscopic, microscopic and subatomic level. At A.B. Paterson College, students of Chemistry and Physics are provided with an academic environment, which allows them to study the subject in a historical and modern context through instruction, enquiry, observation, experiment and collaborative learning. This course is highly mathematical and helps students to develop skills in logical thinking, problem-solving and analysis, as well as practical techniques.
Year 10 Course Outline	**Don't Stop Me Now:** This course introduces students to the fundamentals of motion by teaching them how to calculate speed and analyse the effects of basic air resistance on moving objects. Through hands-on experiments and problem-solving, students explore how velocity and drag interact in real-world scenarios. **The Distance:** An introduction to the nature and impact of cosmic radiation and the life cycle of stars, from stellar formation to supernovae and black holes. Students conduct a research investigation to deepen their understanding of astrophysical phenomena and present their findings using scientific inquiry methods. **Stoichiometry:** This course expands on the chemistry unit in Yr 10 core science, looking at reacting quantities and conversions between moles, masses, volumes and particles. Students will conduct an experimental investigation into chemical yields. **Back in Black:** An introduction to electron dot (Lewis) structures to represent valence electrons and predict molecular bonding. Students also explore the systematic naming of alkanes, helping understand and apply IUPAC conventions to organic molecules.



A.B. PATERSON COLLEGE

EXCELLENCE CARE COMMITMENT

Technology Faculty

Subject	**DIGITAL TECHNOLOGIES**
Head of Faculty	**Contact Details**
James King	Email: JKing@abpat.qld.edu.au Telephone: 07 55947947
Why study Digital Technologies?	Digital Technologies is a subject that touches all aspects of your life - you can't live without it. We use digital technology to work, play, communicate, move around and learn. Understanding and using digital technology wisely is a critical skill in today's world. You will learn how digital systems work, how to create innovative new applications and evaluate the impacts of existing technologies and the potential for using digital technology to create innovative solutions to everyday problems.
Year 10 Course outline	In Year 10 students will build on their knowledge and understanding of digital contexts. They will investigate the component parts of a home computer system and their functions. Find out what is "State of the Art" for home computer systems, what makes them work, and what people are using them for in the home. This will include recent mobile phone and tablet technology. Students will learn how to build advanced featured websites, using integrated professional web design software, such as Adobe Fireworks, Dreamweaver, Flash and Photoshop. Discover the secrets of the coding techniques that make the Internet work. Learn how to edit video and sound files, and integrate these with web pages and presentations. Students will use Microsoft's powerful Access database to store and access data using tables, forms, reports and queries. Databases are used extensively in social media, business and industry, and database skills are much sought after in the job market. This course will give students the foundations to study Digital Solutions in Year 11 and 12.

Subject	DESIGN TECHNOLOGIES
Head of Faculty	**Contact Details**
James King	Email: JKing@abpat.qld.edu.au Telephone: 07 55947947
Why study Design Technologies?	Designers have the opportunity to help shape our world in so many contexts. We use their products and services and live in the environments they have created without even stopping to think where these ideas and designs came from. We only think about design when it is exceptionally good or unimaginably bad as it fits so seamlessly into our lives. Design Technologies provides exciting opportunities for students to apply creative and critical thinking to a variety of design contexts related to present and future needs. It teaches students how to look at real-world problems that relate to them and identify design opportunities and then create solutions. Design Technologies will teach students creative and critical thinking skills as they explore design problems to identify opportunities, innovation, concept development, how to communicate and present ideas to a stakeholder. Future employers are seeking employees with these transferable skills as the workplace pivots to meet future market needs.
Year 10 Course outline	In Year 10 students will refine the techniques learned in Year 9. They will be given open ended design challenges that respond to real-world problems that society faces. Students will refine their drawing skills to include perspective, orthographic, and orthogonal drawing methods and will have the opportunity to use a variety of CAD software such as Inventor, Illustrator, Fusion 360, and Sketchup. Students will create more complex design briefs with design criteria based on good design principles and they will look at how designers create solutions that meet present and future needs. Students will use multimodal methods to present their solutions to a stakeholder. This course will give students the foundations to potentially study Design or Engineering in Year 11 and 12.

Subject	FOOD TECHNOLOGY
Head of Faculty	**Contact Details**
James King	Email: JKing@abpat.qld.edu.au Telephone: 07 55947947
Why study Food Technology?	Students develop essential and valuable life skills as they plan, prepare and present a range of menu items. Students develop an understanding about the importance of making healthy eating choices, whilst selecting, preparing and cooking sweet and savoury menu items. They learn about recipes, cooking skills and techniques originating in French cuisine and understand how these are used and adapted to form the basis for a variety of international cooking styles.
Year 10 Course outline	**A Taste of Italy:** The Mediterranean style of eating has been identified as wholesome and home-made, using healthy foods with few additives. The focus will be on Italian food, examining what makes a balanced eating plan. The research component will focus on the culture, menus and recipes of one region in Italy. Students will visit an Italian restaurant and prepare an Italian themed staff luncheon. Other practical performances may include homemade pasta, pasta dishes, main meals and desserts. **Café Style** Students will plan, prepare and serve café menu items and undertake training, using the espresso machine to prepare a selection of coffee styles. A two-day structured work placement is scheduled at Royal Pines Gold Coast Resort. Students will run a morning tea café for staff. Students who take Food Technology will be able to go onto study Hospitality Practices in Year 11 and 12 and be an entry to the skills required in the hospitality industry.

Subject	MEDIA ARTS
Head of Faculty	**Contact Details**
James King	Email: JKing@abpat.qld.edu.au Telephone: 07 55947947
Why study Media Arts?	The media arts comprise a range of art forms that are composed and transmitted through film, television, radio, print, gaming and web-based media. They excite and extend the imagination, and express, inspire, critique or entertain. The study of Media Arts gives students the opportunity to create and share media artworks that convey meaning and insight. This subject focuses on the role media arts plays in the community and provides opportunities for students to engage with school and/or local community arts activities. A study of Media Arts in Year 9 may lead into a study of Media Arts in Practice (Applied) or Film and Television (General) in Years 10-12.
Year 10 Course outline	Students will continue developing their knowledge of media forms as they study traditional and contemporary media types. They will learn how audiences engage with media and how this can be used when creating outcomes. Students will have the opportunity to work practically to make a variety of short films which offer alternative viewpoints and curate the outcomes. They will be given choices and open-ended tasks leading to a variety of creative products.

Subject:	**ENGINEERING PRINCIPLES AND SYSTEMS**
Head of Faculty	**Contact details**
James King	Email: JKing@abpat.qld.edu.au Telephone: 07 55947947
Why do Engineering?	Engineering is a course of study that provides an opportunity for students to gain an understanding of the underlying principles of engineering in its broadest sense. It is concerned with the theoretical concepts and practical applications related to technology, industry and society, engineering materials, engineering mechanics, and control systems. Integrated throughout is the development of technical communication skills applicable to engineering. The course draws upon the fundamental principles of science, mathematics and technology, reinforcing conceptual ideas through practical workshop and laboratory activities. This course focuses on the contextual areas of Aerospace (aviation), Biomedicine, Communications, Construction, Energy, Manufacturing, Mining, Sustainability and Transport.
Year 10 Course Outline	**Engineering Fundamentals:** Students develop an understanding of the basic principles associated with engineering in today's technological world. **Areas of Engineering Practice:** Students study the nature and range of work undertaken by engineers. They also look at the various companies who employ engineers, as well as the educational institutions in Australia that offer the various courses. **Historical Developments of Engineering:** Students cover the advancements made in engineering from ancient era to modern day. Each era is broken down into the developments achieved and their effect on society. **Crumple Zone Challenge:** Students are challenged to design and make a crumple zone. **Civil Structures:** Students study the historical development of bridges from ancient era to modern day. Engineering innovations in bridges and their effect on society will be covered as an integral part of the study. This includes construction processes and materials used, as well as looking at the associated environmental impacts. **Introductory Mechanics:** Students will study the concepts of mass and force, and scalar and vector quantities. Beams and trusses will be studied and analysed, and students will calculate reaction forces on beams and bridges for a variety of given external forces. **Graphics:** Students will gain skills in freehand drawing, as well as developing skills in pictorial, isometric, oblique and orthographic drawing.

	Machines: Students will study machines, which are mechanical devices. Associated concepts include work, energy, power, conservation of energy, mechanical advantage, velocity ratio, levers, wheels and axles, pulleys, gears, inclined planes and screws. **Dynamics:** Students will be introduced to the mechanics including, displacement, velocity and acceleration. Displacement-time graphs. Velocity-time graphs. Acceleration-time graphs. Linear motion equations and engineering problems. Forces and moving bodies. Mass, force and acceleration problems. Friction formula. Coefficient of friction. **F1 in Schools Challenge:** Students will be given the task of designing, constructing and testing a CO_2 racing car. Students will also be required to analyse the vehicle's performance based on the principles of dynamics, forces and moving bodies.

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