



Takapuna Grammar School



International Baccalaureate Diploma Programme Handbook for Students 2018-2019

IB Diploma Co-ordinator
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The IB Learner

The IB programme aligns with Takapuna Grammar School's Teaching and Learning philosophy "Aspiring to Personal Excellence through Knowing, Connecting, Relating and Supporting". This seeks to produce a **lifelong learner** who is:

- Challenged to academic and personal excellence
- A critical, creative and reflective learner
- A self-motivated and active lifelong learner
- A connected, compassionate and global citizen
- A participator and contributor



The IB programme is designed to support students to attain the qualities in the Learner Profile diagram above. They will:

- Ask challenging questions
- Learn how to learn
- Develop a strong sense of their own identity and culture
- Gain the ability to communicate with and understand people from other countries and cultures.
- Be internationally-minded
- Be academically honest, reflective and principled

This meets the **IB Mission Statement**:

"The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

Its programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right."

How the IB Diploma Programme works



IB Diploma Programme students study six courses, 3 at **higher level (HL)** and 3 at **standard level (SL)**. Students must choose one subject from each of groups 1 to 5, thus ensuring breadth of experience in languages, social studies, the experimental sciences and mathematics. The sixth subject may be an arts subject chosen from group 6, or the student may choose another subject from groups 2 to 5. In addition all students participate in all three parts of the core: **The Extended Essay, Theory of Knowledge and Creativity, Action and Service**. These are compulsory, and are central to the philosophy of the Diploma and to the Learner Profile.

The following subjects in bold will be available in 2018. Those not highlighted will be determined by student numbers and staffing availability.

GROUP	SUBJECTS 2018
Group 1	Literature: English, Chinese (HL and SL)
Group 2	English (SL/HL), Spanish (SL), French (SL), Japanese (SL), Spanish ab initio (SL)
Group 3	Economics, Geography, History
Group 4	Biology, Chemistry, Physics, Sports Exercise and Health Science (SL)
Group 5	Mathematics (SL), Mathematics (HL), Mathematical Studies (SL)
Group 6	Theatre Arts, Visual Arts / Design Technology

The Core Subjects

At the heart of the IB Diploma are three compulsory core requirements which all students must complete: Theory of Knowledge (TOK), Extended Essay (EE) and Creativity, Action and Service (CAS).

1. Theory of Knowledge

Theory of Knowledge is a course designed to encourage each student to reflect on the nature of knowledge by critically examining different ways of knowing (perception, emotion, language and reason) and different kinds of knowledge (scientific, artistic, mathematical and historical).

The course is organised in four broad categories with linking questions:

- Knowledge issues
- Knowers and knowing
- Ways of knowing
- Areas of knowledge

The course will be taught partially as a class in a timetabled slot, but also within each of the 6 subjects.

Theory of Knowledge Assessment

There is no examination in TOK. However students have to complete a TOK essay from a list of prescribed titles. The TOK essay is externally assessed. Students must also complete a TOK oral presentation which is internally assessed but externally moderated. It is combined with the results from the Extended Essay to contribute up to 3 points for the IB Diploma.

2. The Extended Essay

The Extended Essay is an in-depth study on a topic chosen from the list of approved Diploma subjects, usually one of the student's six chosen subjects for the IB Diploma. This part of the programme focuses on analysis, evaluation and reasoning. It provides students with an opportunity to engage in personal research on a topic of their own choice, under the guidance of a supervisor (most likely a teacher from Takapuna Grammar School).

This leads to a major piece of formally presented, structured writing of 4000 words, in which ideas and findings are communicated in a reasoned and coherent manner. It is suggested it will take about 40 hours to complete.

Extended Essay Assessment

The Extended Essay is assessed externally against common criteria interpreted in ways appropriate to each subject. In combination with the grade for Theory of Knowledge, it contributes up to three points to the total score for the IB Diploma. It concludes with a short interview between the student and the supervising teacher called the *viva voce*.

The Core Subjects Matrix

		Theory of Knowledge					
Extended Essay		Excellent A	Good B	Satisfactory C	Mediocre D	Elementary E	Not Submitted
	Excellent A	3	3	2	2	Fail	Fail
	Good B	3	2	2	1	Fail	Fail
	Satisfactory C	2	2	1	0	Fail	Fail
	Mediocre D	2	1	0	0	Fail	Fail
	Elementary E	Fail	Fail	Fail	Fail	Fail	Fail
	Not Submitted	Fail	Fail	Fail	Fail	Fail	Fail

3. Creativity, Activity and Service

The aim of CAS is to foster responsible, compassionate citizens by encouraging their participation in three strands:

Creativity: Arts, and other experiences that involve creative thinking

Activity: Physical exertion contributing to a healthy lifestyle

Service: An unpaid and voluntary exchange that has a learning benefit for the student.

CAS enables students to enhance their personal and interpersonal development through experiential learning. For this personal development to occur, it should involve:

- Real, purposeful activities with significant outcomes
- Personal challenge—tasks must extend the student and be achievable in scope
- Thoughtful consideration such as planning, reviewing progress and reporting
- Reflection on outcomes and personal learning

Successful completion of CAS is a requirement for the award of the IB Diploma.

Creativity, Activity and Service Assessment

CAS is not formally assessed but students will need to document their activities and provide evidence that they have achieved eight key learning outcomes. The documentation will be largely done online but will also involve meetings and discussions with the Co-ordinator.

How to gain the Diploma

All subjects (with the exception of CAS) are assessed using both internal and external assessors. The **externally assessed** examinations are held in November of the second year of the Diploma course. Each exam usually consists of two or three papers, generally written on the same or successive weekdays. The different papers may have different forms of questions, or they may focus on different areas of the subject syllabus. The grading of all external assessments is done by independent examiners appointed by the IB.

The nature of the **internal assessment** varies by subject. There may for example be oral presentations, practical work or written works. Internal assessment accounts for 20 to 50 percent of the mark awarded for each subject and is marked by a teacher in the school. A sample of at least five per subject at each level will also be graded by a moderator appointed by the IB for external moderation.

Finally points from 1-7 are awarded in each of the six subjects studied. Up to 3 additional points are awarded depending on the grades achieved in the Extended Essay and Theory of Knowledge. Therefore the maximum possible point total in the IB Diploma is 45.

To gain the Diploma students must:

Gain a minimum of 24 points of a possible 42 points in their six subjects Note: Literacy requirements for Auckland University: 26 points
Gain a minimum of 12 points from their Higher Level subjects and a minimum of 9 points from their Standard Level subjects
Complete all of the requirements for the EE, CAS and TOK

Failing conditions that will prevent a student from being awarded a diploma, regardless of points received, are:

Non-completion of CAS
Plagiarism or malpractice
Grades A (highest) to E (lowest) have been awarded for both Theory of Knowledge and an Extended Essay, with a grade of at least D in one of them.
There is no grade 1 in any subject.
There is no grade 2 at higher level.
There is no more than one grade 2 at standard level.
At least 12 points have been gained on higher level subjects
At least 9 points have been gained on standard level subjects
More than three scores of 3 or below

Academic Honesty

Takapuna Grammar School expects that all students enrolled in the school will submit work that is **authentic**. Authentic work is based on the students' individual and original ideas with the ideas and work of others fully acknowledged through referencing. Other people's creations are their **intellectual property** and cannot be copied without permission – this includes art and music, discoveries and inventions, trademarks and slogans and even some words and phrases.

Academic Dishonesty and Malpractice

Although the following list is not exhaustive, academic dishonesty or **malpractice** can take a number of forms:

Cheating	Communicating with another candidate in an examination or assessment, bringing unauthorised material into an examination room, or consulting such material during an examination in order to gain an unfair advantage
Collaboration	Supporting another student by allowing your work to be copied or submitted for assessment
Duplication	Presenting the same work for more than one assessment
Falsifying data	Creating or altering data and presenting it as if it had been collected in an appropriate way.
Plagiarism	Copying and representing the ideas or work of another person as your own

It is acknowledged that there are instances in internal assessment when collaboration with other students is permitted or even encouraged eg in data collection, group work, productions etc. This may require some work to be presented that has been created by the whole group. However if the final work for submission is to be a student's own, it must be produced independently. The most appropriate way for a student to ensure that they do not intentionally or unintentionally commit plagiarism is to **reference** any material has been used from another source.

Consequences of Malpractice: Where malpractice is discovered and proven:

In draft work prior to submission or in course work	Dealt with by Takapuna Grammar School IB Diploma Coordinator informed Parents informed Information filed Work may be resubmitted if there is sufficient time
In work submitted as a final copy prior to submission and cover sheet signed	Dealt with by Takapuna Grammar School IB Diploma Coordinator Parents informed Information filed Work will not be submitted
In work that has been submitted to the IB with cover sheet signed	The school through the IB Diploma Coordinator informs the IB Examination Board. This may result in a student being excluded from the IB Diploma programme

Assessment Information

Absence from Assessment:

Internal assessments

Students are responsible for ensuring that they follow the procedures below if they are unable to meet a deadline for handing in work or will be absent from an internal assessment for any of the following reasons.

- Illness or injury
 - Family trauma
 - Participation in activities sanctioned by the school
1. The student must complete Request for Extension for Internal Assessment Form [*IB Student Form 1*] and hand it to his/her subject teacher. This form is available from the school's IB Co-ordinator. The form must be signed by parent/guardian before being handed to the teacher. In the case of extension because of absence rather than illness, this must be negotiated prior to the hand in date.
 2. In other cases the student must provide the teacher with written evidence of a valid reason for absence on the day of return to school. For illness a doctor's certificate must be provided for that day.
 3. In the instance where an extension is granted the student must sit the assessment at the first opportunity offered. Lack of formal written communication or unacceptable absence will result in no award for the assessment.

External Assessment

If a student is unable to attend an external examination in the November sessions because of illness or misadventure he or she must inform the Dean and the IB Co-ordinator immediately. The student should attend the examination if possible and provide a medical certificate or other documentation within 24 hours of the examination. The IB Co-ordinator will then complete the appropriate forms and forward them to the IB. Evidence to support any claims for compassionate consideration can only be made, however, if the candidate has completed 50% of the external assessment in each course. A candidate cannot apply for compassionate consideration in more than two of the six subjects

Authenticity statements:

In accordance with the school's Academic Honesty policy, students will be required to sign an authenticity statement on their entry to the school and each year subsequently. This will acknowledge that they are ultimately responsible for ensuring all work submitted for assessment is authentic, with the work or ideas of others fully and correctly acknowledged. This is in addition to any candidate's declaration on coversheets submitted for final assessment or moderation.

Course Outlines:

All students in the IB programme will be issued with course outlines in each subject at the start of the year which will detail the internal and external assessment requirements, the objectives of these assessments and timings.

Ethical Behaviour in Assessment Opportunities:

Students are required to act in a responsible and ethical manner throughout their participation in the Diploma Programme and examinations. The IB Organisation is entitled to refuse to mark or moderate assessment material if a candidate has acted in an irresponsible or unethical manner in connection with any part of assessment for the Diploma Programme, for example, if a candidate includes offensive or obscene material that is unrelated to the content of the assessment. In such cases the IB Final Award Committee is entitled to award a mark of zero for the component that is assessed due to such irresponsible or unethical behaviour.

Final Examinations:

Students will be notified of the external examination timetable at the beginning of the second year of IB. The school's IB Co-ordinator will ensure all students are fully aware of the requirements of the examination and of the conduct required.

Examination results are released to schools and students through the IB website. The school's IB Co-ordinator will provide students with an individual PIN to access these results.

Candidates' examination results may be further checked and their externally assessed work may be re-marked if a school requests an enquiry into results. Any such requests must be made through the school's IB Co-ordinator and will be at the student's expense. Re-marking a candidate's externally assessed material may lead to a higher grade or a lower grade for a subject.

Internal Assessment:

Takapuna Grammar School has a policy and procedures in place to ensure that assessment is fair, valid and consistent.

To be eligible for a subject grade, the student must submit all work for all components in a given subject by the set deadlines. Deadlines for the checking of TOK, CAS and Extended Essay work will be set by the co-ordinators for each of these areas. Students must comply with these dates.

The grades for internally assessed components of the IB Diploma Programme are forwarded to IBCA and form part of the final subject grade awarded.

Special Assessment Conditions:

Where normal examination conditions and assessment procedures would put a candidate at a disadvantage and prevent them from being able to demonstrate their skills and knowledge adequately, special assessment conditions may be authorised. Takapuna Grammar School has procedures in place for the identification of students who qualify for special assessment conditions. Application to the IB for special assessment conditions must be made at least 12 months prior to the final Diploma examinations.

The following information detailing course outlines comes from the IBO website:
<http://ibo.org/diploma/curriculum/>.

Course Outlines:

GROUP 1: Literature English, Chinese (HL and SL)

It is a requirement of the programme that students study at least one subject from Group 1.

In Group 1, students will study literature, including selections of literature in translation, and may choose to combine this with language or performance studies, depending on their choice of course. Students will choose to study their group 1 subject(s) in a language in which they are academically competent.

In studying the group 1 courses, students are able to develop:

- a personal appreciation of language and literature
- skills in literary criticism
- an understanding of the formal, stylistic and aesthetic qualities of texts
- strong powers of expression, both written and oral
- an appreciation of cultural differences in perspective

The course is organized into four parts, each focussed on a group of literary works. Together, the four parts of the course add up to a comprehensive exploration of literature from a variety of cultures, genres and periods. Students learn to appreciate the artistry of literature, and develop the ability to reflect critically on their reading, presenting literary analysis powerfully through both oral and written communication.

- Available at higher and standard levels
- Higher level study requires a minimum of 240 class hours, while standard level study requires a minimum of 150 class hours
- Students study 13 works at higher level and 10 works at standard level from a representative selection of genres, periods and places
- Students develop the ability to engage in close, detailed analysis of literary works, building understanding of the techniques involved in literary criticism
- The study of literary works in context is emphasised, and through the study of literature in translation the student is challenged to reflect on the role of cultural assumptions in interpretation
- Students are assessed through a combination of formal examinations, written coursework and oral activities
- The formal examination comprises two essay papers, one requiring the analysis of a passage of unseen literary text, and the other a response to a question based on the works studied
- Students also produce a written assignment based on the works studied in translation, and perform two oral activities presenting their analysis of works read

GROUP 2: Language Acquisition

Spanish ab initio

It is a requirement of the programme that students study at least one subject from group 2: either a Language B or an ab initio course.

Ab initio languages

Ab initio courses are for beginners (that is, students who have little or no previous experience of learning the language they have chosen). These courses are only available at standard level.

The language ab initio course is a language acquisition course for students with little or no experience of the language.

The course is organized into three themes: individual and society, leisure and work, and urban and rural environment. Each theme comprises a list of topics that provide students with opportunities to practice and explore the language and to develop intercultural understanding.

Through the development of receptive, productive and interactive skills, students develop the ability to respond and interact appropriately in a defined range of everyday situations.

Key features of the curriculum and assessment

- Only available at standard level (SL)
- The minimum prescribed number of hours is 150
- Interactive, productive and receptive skills are developed through contextualized study of language, texts and themes
- Intercultural understanding is a key goal of the course
- Students are exposed to a variety of authentic texts and they produce work in a variety of communicative contexts
- Students are assessed both externally and internally
- External assessment consists of exercises to demonstrate understanding of authentic print texts (receptive skills), two short writing exercises (productive skills), and a written assignment (integrating receptive and productive skills)
- Internal assessment tests students' abilities in listening and speaking in a genuine conversation format (integrating receptive, productive and interactive skills). Internal assessment consists of a presentation and follow-up questions based on a visual stimulus, and a general conversation with the teacher based in part on the written assignment

GROUP 2: Language Acquisition

Language B: French (SL), Japanese, (SL), Spanish (SL), English (HL & SL)

Language B Standard Level (SL) and Higher Level (HL) are language acquisition courses for students with some previous experience of learning the language. While studying the language, students also explore the culture(s) connected with it.

All languages with the exception of English are at Standard Level only.

Higher and standard levels are differentiated by the recommended teaching hours, the depth of syllabus coverage, the required study or literature at HL, and the level of difficulty and requirements of the assessment tasks and criteria.

The range of purposes and situations for using language in the language B courses extends well beyond those for language ab initio.

The course is organized into themes. Three core themes are required: communication and media, global issues, and social relationships. In addition, at both HL and SL, teachers select two more themes from five options provided. Finally, two works of literature are studied at HL only.

Key features of the curriculum and assessment models

Available at standard (SL) and higher levels (HL)

The minimum prescribed number of hours is 150 for SL and 240 for HL

Interactive, productive and receptive skills are developed through contextualized study of language, texts and themes

Intercultural understanding and plurilingualism are key goals of the course

Students are exposed to a variety of authentic texts and they produce work in a variety of communicative contexts

Students are assessed both externally and internally

External assessment at SL consists of exercises to demonstrate understanding of authentic print texts based on the core themes (receptive skills), a writing exercise based on the options (productive skills), and a written assignment based on the core themes (integrating receptive and productive skills)

External assessment at HL consists of exercises to demonstrate understanding of authentic print texts based on the core themes (receptive skills), two writing exercises, one based on the core and the other based on the options (productive skills), and a written assignment based on one of the literary texts (integrating receptive and productive skills)

Internal assessment at both SL and HL tests students' abilities in listening and speaking in a genuine conversation format (integrating receptive, productive and interactive skills).

Internal assessment consists of an individual oral based on the options (presentation and discussion with the teacher), and an interactive oral based on the core (three classroom activities assessed by the teacher)

GROUP 3: Individuals and Society Economics (HL and SL)

The IB Diploma Programme Economics course forms part of group 3—individuals and societies. The study of economics is essentially about dealing with scarcity, resource allocation and the methods and processes by which choices are made in the satisfaction of human wants. As a dynamic social science, economics uses scientific methodologies that include quantitative and qualitative elements

The course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms and markets, and the economic theories of macroeconomics, which deal with economic variables affecting countries, governments and societies. These economic theories are not to be studied in a vacuum—rather, they are to be applied to real-world issues. Prominent among these issues are fluctuations in economic activity, international trade, economic development and environmental sustainability.

The ethical dimensions involved in the application of economic theories and policies permeate throughout the economics course as students are required to consider and reflect on human end-goals and values.

The economics course encourages students to develop international perspectives, fosters a concern for global issues, and raises students' awareness of their own responsibilities at a local, national and international level. The course also seeks to develop values and attitudes that will enable students to achieve a degree of personal commitment in trying to resolve these issues, appreciating our shared responsibility as citizens of an increasingly interdependent world.

At both standard level and higher level, candidates are required to study four topics: microeconomics, macroeconomics, international economics and development economics with some sub-topics within these reserved solely for higher level. These sections are assessed by two examinations at standard level and three examinations at higher level.

In addition to the examinations, candidates must submit an internal assessment. Both standard level and higher level economics students must produce a portfolio of three commentaries based on articles from published news media.

GROUP 3: Individuals and societies

Geography (HL and SL)

The Diploma Programme geography course integrates both physical and human geography, and ensures that students acquire elements of both scientific and socio-economic methodologies. Geography takes advantage of its position to examine relevant concepts and ideas from a wide variety of disciplines. This helps students develop an appreciation of, and a respect for, alternative approaches, viewpoints and ideas.

The geography course embodies global and international awareness in several distinct ways. It examines key global issues, such as poverty, sustainability and climate change. It considers examples and detailed case studies at a variety of scales, from local to regional, national and international.

Paper 1 - Core Theme - Patterns and Change [HL and SL Students]

The core theme provides an overview of the geographic foundation for the key global issues of our times. The purpose is to provide a broad factual and conceptual introduction to each topic and to the United Nations' Millennium Development Goals (MDGs), in particular those concerning poverty reduction, gender equality, improvements in health and education and environmental sustainability. The progress made towards meeting these goals is also evaluated.

Syllabus outline

There are four compulsory topics in this core theme:

1. [Population in Transition](#)
2. [Disparities in Wealth and Development](#)
3. [Patterns in Environmental Quality and Sustainability](#)
4. [Patterns in Resource Consumption](#)

Paper 2 - Optional Themes

HL students study three options. SL students study two options

The options are:

- A. [Freshwater - Issues and Conflicts](#)
- B. [Oceans and their Coastal Margins](#)
- C. [Extreme Environments](#)
- D. [Hazards and Disasters - Risk Assessment and Response](#)
- E. [Leisure, Sport and Tourism](#)
- F. [The Geography of Food and Health](#)
- G. [Urban Environment](#)

Paper 3 - HL Extension - Global Interactions

There are seven compulsory topics in the HL extension:

1. [Measuring Global Interactions](#)
2. [Changing Space - The Shrinking World](#)
3. [Economic Interactions and Flows](#)
4. [Environmental Change](#)
5. [Sociocultural Exchanges](#)
6. [Political Outcomes](#)
7. [Global Interactions at the Local Level](#)

Internal Assessment

The fieldwork study involves 20 hours of teaching time for both HL and SL students. The fieldwork must be on a local scale and involve the collection of primary information. The internal assessment is completed as one 2500 word report.

GROUP 3: Individuals and societies

History (HL and SL)

History is more than the study of the past. It is the process of recording, reconstructing and interpreting the past through the investigation of a variety of sources. It is a discipline that gives people an understanding of themselves and others in relation to the world, both past and present.

The history course focuses on 20th century world history. The course provides both structure and flexibility, fostering an understanding of major historical events in a global context. It requires students to make comparisons between similar and dissimilar solutions to common human situations, whether they be political, economic or social. It invites comparisons between, but not judgments of, different cultures, political systems and national traditions.

Syllabus outline summary:

Prescribed subject (one to be studied) SL and HL	1. The Move to Global War
World History—topics (two to be studied) SL and HL	1. Causes and effects of 20 th century wars 2. Democratic states—challenges and responses 3. Authoritarian States (20 th century)
Higher Level options (one to be studied) HL only	1. History of Europe: Italy (1815-1871) and Germany (1815-1890) 2. Europe and the First World War (1871-1918) 3. European States in the inter-war years (1918-1939)
Internal assessment SL and HL	Historical investigation

GROUP 4: Experimental Sciences

Biology (HL and SL)

Through studying biology, students should become aware of how scientists work and communicate with each other. In all group 4 subjects there is an emphasis on a practical approach through experimental work.

The biology course is organized by topics, SL students study six topics and HL students study a further five, with some of these taking the first six topics to greater depth. In addition to this, both SL and HL students study two out of a choice of seven (at SL) or five (at HL) option topics. There are four basic biological concepts that run throughout:

- Structure and function; this relationship is probably one of the most important in a study of biology and operates at all levels of complexity. Students should appreciate that structures permit some functions while, at the same time, limiting others.
- Universality versus diversity; at the factual level, it soon becomes obvious to students that some molecules (for example, enzymes, amino acids, nucleic acids and ATP) are ubiquitous and so are processes and structures. However, these universal features exist in a biological world of enormous diversity. Species exist in a range of habitats and show adaptations that relate structure to function. At another level, students can grasp the idea of a living world in which universality means that a diverse range of organisms (including ourselves) are connected and interdependent.
- Equilibrium within systems; checks and balances exist both within living organisms and within ecosystems. The state of dynamic equilibrium is essential for the continuity of life.

Key features of the curriculum and assessment models

- Available at both SL and HL
- The minimum prescribed number of hours is 150 for SL and 240 for HL

- Biology students at SL and HL undertake a common core syllabus, a common internal assessment (IA) scheme and have some overlapping elements in the options studied.
- While the skills and activities related to biology are common to both SL and HL students, students at HL are required to study some topics in greater depth, to study additional topics and to study extension material of a more demanding nature in the common options. The distinction between SL and HL is one of breadth and depth.
- An experimental approach to the course delivery is emphasised.
- Students are assessed both externally and internally
- The external assessment of biology consists of three written papers. In paper 1 there are 30 (at SL) or 40 (at HL) multiple-choice questions. Paper 2 has two sections; section A contains one data-based question and several short-answer questions on the core (and AHL material at HL) which are all compulsory.
- Paper 2, section B consists of one extended-response question on the core from a choice of three at SL and two extended-response questions on the core and the AHL from a choice of four at HL.
- Paper 3 consists of several compulsory short-answer questions in each of the two options studied. In addition, at HL there is one extended-response question in each of the two options studied.
- Internal assessment accounts for 24% of the final assessment and consists of the interdisciplinary group 4 project and a mixture of both short-term and long-term investigations. The internal assessment allows students to demonstrate not only their scientific knowledge but also personal skills and manipulative skills. Student work is internally assessed by the teacher and externally moderated by the IB.

GROUP 4: Experimental Sciences Chemistry (HL and SL)

Through studying chemistry, students should become aware of how scientists work and communicate with each other. In all of the group 4 subjects there is an emphasis on a practical approach through experimental work.

The chemistry course is organized by topics, with SL students having to study eleven topics and higher level (HL) students having to investigate nine of these topics to a greater depth. Both SL and HL students are responsible for covering two of seven option topics.

The power of scientific knowledge to transform societies is unparalleled. It has the potential to produce great universal benefits or to reinforce inequalities and cause harm to people and the environment. In line with the IB mission statement, group 4 students need to be aware of the moral responsibility of scientists to ensure that scientific knowledge and data are available to all countries on an equitable basis and that they have the scientific capacity to use this for developing sustainable societies.

Key features of the curriculum and assessment models

- Available at both standard level (SL) and higher level (HL)
- The minimum prescribed number of hours is 150 for SL and 240 for HL
- While the skills and activities related to chemistry are common to both SL and HL students, students at HL are required to study some topics in greater depth and to study extension material of a more demanding nature in the common options. The distinction between SL and HL is one of breadth and depth.
- An experimental approach to the course delivery is emphasised.
- Students are assessed both externally and internally
- External assessment consists of three written papers and provides opportunities for students to display their scientific understanding through the application, use, analysis and evaluation of scientific facts, concepts, methods, techniques and explanations.
- Internal assessment accounts for 24% of the final assessment and consists of an interdisciplinary project, a mixture of both short- and long-term practicals/investigations/labs and subject-specific projects. The internal assessment allows students to demonstrate not only their scientific knowledge but also personal skills and manipulative skills.

GROUP 4: Experimental Sciences Physics (HL and SL)

Through studying physics, students should become aware of how scientists work and communicate with each other. The scientific processes carried out by the most eminent scientists in the past are the same ones followed by working physicists today and, crucially, are also accessible to students in schools. In all group 4 subjects there is an emphasis on a practical approach through experimental work. The group 4 project (which all science students must undertake) mirrors the work of real scientists by encouraging collaboration between schools across the regions.

The physics course is organized by topics; SL students study eight topics and HL students study a further six. In addition to this, both SL and HL students study two out of a choice of seven (at SL) or six (at HL) option topics. The order in which the syllabus is arranged is not the order in which it must be taught and it is up to individual teachers to decide on an arrangement that suits their circumstances. Option material may be taught within the core or the AHL material, if desired.

Past experience shows that students will be able to study a group 4 subject at standard level (SL) successfully with no background in, or previous knowledge of science.

Key features of the curriculum and assessment models

- While the skills and activities related to physics are common to both SL and HL students, students at HL are required to study some topics in greater depth, to study additional topics and to study extension material of a more demanding nature in the common options. The distinction between SL and HL is one of breadth and depth.
- The external assessment of physics consists of three written papers. In paper 1 there are 30 (at SL) or 40 (at HL) multiple-choice questions. Paper 2 has two sections; section A contains one data-based question and several short-answer questions on the core (and Additional Higher Level (AHL) material at HL) which are all compulsory. Section B consists of one extended-response question on the core from a choice of three at SL, and two extended-response questions on the core and the AHL from a choice of four at HL. Paper 3 consists of several compulsory short-answer questions in each of the two options studied. In addition, at HL there is one extended-response question in each of the two options studied.
- Internal assessment accounts for 24% of the final assessment and consists of the interdisciplinary group 4 project and a mixture of both short-term and long-term investigations. Student work is internally assessed by the teacher and externally moderated by the IB.

GROUP 4: Experimental Sciences

Sports, Exercise and Health Science (SL)

The Diploma Programme course in Sports, Exercise and Health Science involves the study of the science that underpins physical performance and provides the opportunity to apply these principles. The course incorporates the traditional disciplines of anatomy and physiology, biomechanics, psychology and nutrition, which are studied in the context of sport, exercise and health.

The subject is one of the most exciting ways to study and apply science, and this is reflected in the key aims of the course. For example, the knowledge and understanding of exercise science can play a prominent role in offering solutions to increasing levels of physical inactivity and global obesity. Furthermore, major sporting events highlight the importance of sports scientists in optimising mental and physical performance across time zones and in varied environmental conditions. This positions the study of Sport, Exercise and Health Science as a vital area of study in the 21st century for the inclusive and sustainable development of populations worldwide

Students will cover a range of core and option topics and carry out practical (experimental) investigations in both laboratory and field settings. This will provide an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyse human performance. Where relevant, the course will address issues of international dimension and ethics by considering sport, exercise and health relative to the individual and in a global context.

The SL core syllabus covers:

- Topic 1: Anatomy
- Topic 2: Exercise physiology
- Topic 3: Energy systems
- Topic 4: Movement analysis
- Topic 5: Skill in sport
- Topic 6: Evaluation of human performance

The four options are

- (A) Optimising physiological performance
- (B) Psychology of sport
- (C) Physical activity and health
- (D) Nutrition for sport, exercise and health

An internally assessed individual research study is worth 20% of the overall mark. Students design and investigate a scientific inquiry of their own choice.

GROUP 5: Mathematics

Mathematics (HL)

The course focuses on developing important mathematical concepts in a comprehensible, coherent and rigorous way. This is achieved by means of a carefully balanced approach. Students are encouraged to apply their mathematical knowledge to solve problems set in a variety of meaningful contexts. Development of each topic should feature justification and proof of results. Students embarking on this course should expect to develop insight into mathematical form and structure, and should be intellectually equipped to appreciate the links between concepts in different topic areas. They should also be encouraged to develop the skills needed to continue their mathematical growth in other learning environments.

The internally assessed component, the exploration, offers students the opportunity for developing independence in their mathematical learning. Students are encouraged to take a considered approach to various mathematical activities and to explore different mathematical ideas. The exploration also allows students to work without the time constraints of a written examination and to develop the skills they need for communicating mathematical ideas.

This course is a demanding one, requiring students to study a broad range of mathematical topics through a number of different approaches and to varying degrees of depth.

Course Outline:

HL core

Topic 1: Algebra

Topic 2: Functions and Equations

Topic 3: Circular functions and Trigonometry

Topic 4: Vectors

Topic 5: Statistics and Probability

Topic 6: Calculus

Option

Topic 7: Statistics and Probability

A graphics display Calculator is required for this course.

GROUP 5: Mathematics

Mathematics (SL)

This course caters for students who already possess knowledge of basic mathematical concepts, and who are equipped with the skills needed to apply simple mathematical techniques correctly. The majority of these students will be expected to have a sound background in mathematics to prepare for and assist them in future studies such as chemistry, economics, psychology and business administration. The Mathematics SL course will provide students with the opportunity to approach mathematical concepts with a variety of mathematical techniques.

Students will learn to think both logically and creatively, and be able to apply abstract concepts to practical situations. Student will be engaged in mathematical modelling processes and learn to develop, apply and critically analyse models. Technology will be incorporated throughout the course, and students will get the opportunity to utilize it to enhance visualisation and analysis of mathematical data and ideas.

This course will allow students to explore the usefulness, relevance and occurrence of mathematics in the real world, and encourage them to approach mathematics via inquiry and with international mindedness.

Course Outline:

SL core

Topic 1: Algebra

Topic 2: Functions and Equations

Topic 3: Circular Functions and Trigonometry

Topic 4: Vectors

Topic 5: Statistics and Probability

Topic 6: Calculus

Mathematical Exploration: internal written component

GROUP 5 Mathematics

Mathematical Studies (SL)

This course caters for students with varied backgrounds and abilities. More specifically, it is designed to build confidence and encourage an appreciation of mathematics in students who do not anticipate a need for mathematics in their future studies. Students taking this course need to be already equipped with fundamental skills and a rudimentary knowledge of basic processes.

The course concentrates on mathematics that can be applied to contexts related as far as possible to other subjects being studied, to common real-world occurrences and to topics that relate to home, work and leisure situations. The course includes project work, a feature unique within this group of courses: students must produce a project, a piece of written work based on personal research, guided and supervised by the teacher. The project provides an opportunity for students to carry out a mathematical investigation in the context of another course being studied, a hobby or interest of their choice using skills learned before and during the course. This process allows students to ask their own questions about mathematics and to take responsibility for a part of their own course of studies in mathematics.

Course Outline:

SL core

Topic 1: Number and algebra
Topic 2: Descriptive Statistics
Topic 3: Sets, logic and probability
Topic 4: Statistical Applications
Topic 5: Geometry and trigonometry
Topic 6: Mathematical Models
Topic 7: Introduction to differential calculus

Project work: internal individual written piece of work involving the collection of information or the generation of measurements, and the analysis and evaluation of the information or measurements

A graphics display Calculator is required for this course.

GROUP 6: The Arts

Performing Arts (HL and SL)

Students will work inside the NCEA class sharing much of the theatre experience enjoyed at Years 12 and 13. The first year introduces the areas of study which are Theatre Making, Theatre in Performance and World Theatre. Students will experience work in areas and are expected to record their learning and developing understanding of how theatre is made.

They study forms of theatre such as Japanese Kabuki and Shakespeare and theorists like Bertolt Brecht and attend theatre productions, analysing and critiquing the works they meet. Students must also perform different roles as actors and also act as directors, dramaturgs and technical assistants in the productions done by the Drama classes.

In the second year they present projects for assessment based on their experiences over the two years including an independent Research Investigation of a theatrical area of interest and an Independent Project the student has conceived and undertaken independently of class work.

Course Outline:

HL and SL

Topic 1: Theatre Making

Topic 2: Theatre in Performance

Topic 3: Theatre in the World

Key features of the assessment model

- Available at Standard (SL) and higher levels (HL)
- The minimum prescribed number of hours is 150 for SL and 240 for HL

Students are assessed both internally and externally

External assessment tasks	SL	HL
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Task 1: Solo theatre piece (HL only)

- Students at HL research a theatre theorist they have not previously studied, N/A 35% identify an aspect(s) of their theory and create and present a solo theatre piece (4–8 minutes) based on this aspect(s) of theory.

Task 2: Director's notebook (SL and HL)

- Students at SL and HL choose a published play text they 35% 20% have not previously studied and develop ideas regarding how it could be staged for an audience.

Task 3: Research presentation (SL and HL)

- Students at SL and HL plan and deliver an individual presentation (15 minutes maximum) to their peers in 30% 20% which they outline and physically demonstrate their research into a convention of a theatre tradition they have not previously studied.

Internal assessment task	SL	HL
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Task 4: Collaborative project (SL and HL)

35% 25%

GROUP 6: The Arts

Visual Arts (HL and SL)

The IB Visual Arts program aims to develop students' skills and techniques of investigation- both written and visual. They will learn to extend individual investigations to inform their practical work, and be able to make connections between ideas and practice. Students will learn to explore art concepts and will develop confidence and expertise in the use of various media. They will develop and use the processes of art criticism and analysis, and share their work through exhibitions and displays.

Course Outline:

HL and SL

Year 1

Students will explore a range of ideas and media around a proposed topic that is supported by a statement of intent.

Year 2

Using in-depth and critical research, students will extend their ideas towards an independent project that shows an understanding of applied art knowledge

To fully prepare students for the demands of the assessment tasks, teachers should ensure that their planning addresses each of the syllabus activities outlined below, the content and focus of which is not prescribed. Students are required to investigate

	VISUAL ARTS IN CONTEXT	VISUAL ARTS METHODS	COMMUNICATING VISUAL ARTS
<i>Theoretical practice</i>	Students examine and compare the work of artists from different cultural contexts. Students consider the contexts influencing their own work and the work of others.	Students look at different techniques for making art. Students investigate and compare how and why different techniques have evolved and the processes involved.	Students explore ways of communicating through visual and written means. Students make artistic choices about how to most effectively communicate knowledge and understanding.
<i>Art-making practice</i>	Students make art through a process of investigation, thinking critically and experimenting with techniques. Students apply identified techniques to their own developing work.	Students experiment with diverse media and explore techniques for making art. Students develop concepts through processes that are informed by skills, techniques and media.	Students produce a body of artwork through a process of reflection and evaluation, showing a synthesis of skill, media and concept.
<i>Curatorial practice</i>	Students develop an informed response to work and exhibitions they have seen and experienced. Students begin to formulate personal intentions for creating and displaying their own artworks.	Students evaluate how their ongoing work communicates meaning and purpose. Students consider the nature of "exhibition" and think about the process of selection and the potential impact of their work on different audiences.	Students select and present resolved works for exhibition. Students explain the ways in which the works are connected. Students discuss how artistic judgments impact the overall presentation.

Philosophy of assessment

The International Baccalaureate® (IB) assesses student work as direct evidence of achievement against the stated goals of the Diploma Programme courses.

The Diploma Programme goals provide students with:

- a broad and balanced, yet academically demanding, programme of study
- the development of critical-thinking and reflective skills
- the development of research skills
- the development of independent learning skills
- the development of intercultural understanding
- a globally recognized university entrance qualification.

Diploma Programme assessment procedures measure the extent to which students have mastered advanced academic skills in fulfilling these goals, for example:

- analysing and presenting information
- evaluating and constructing arguments
- solving problems creatively

FIVE YEAR SUBJECT PLAN

These are Takapuna Grammar School's requirements each year:

Year 9	Year 10	Year 11
English Maths Science Social Studies Health and Physical Education 2 Languages Arts Technology	English Maths Science Social Studies Health and Physical Education Enterprise & Financial Literacy Three options –Arts, Languages, Technology	A course of English A course of Mathematics A course of Science 3 other subjects

		Level 1
Visual Art	Visual Art	Visual Art Digital Art
Drama Dance Music	Drama Dance Music Musical Theatre	Drama Dance Music Musical Theatre
English English as a Second Language	English English as a Second Language	English English for Academic Purposes (L1) <i>English Second Language (double option)</i> Media Studies
<i>Literacy Support</i>	<i>Literacy Support</i>	<i>Literacy Support</i>
	Enterprise & Financial Literacy	Accounting Business Studies Economics Economics & Accounting Combined
French Asian Languages Spanish Te Reo Maori	French Japanese Spanish Te Reo Maori	French Japanese Spanish Te Reo Maori Maori Culture
Mathematics	Mathematics	Mathematics Computer Science
Technology	Design and Visual Communication Technology - Food Technology – Resistant Materials Technology – Soft Materials	Design and Visual Communication Technology - Food & Nutrition Technology - Resistant Materials Technology- Soft Materials
Science	Science	<i>Science Applied</i> Science Biology Chemistry Physics
Social Studies	Social Studies	Geography History Classical Studies
Health and Physical Education Sports Institute	Health and Physical Education Sports Institute	Physical Education Health

Subjects in *Italics* are mainly Unit Standard.

University approved subjects for **Year 13** are in **bold**.

* indicates scholarship subjects.

Year 12 A course of English 5 other subjects	Year 13 6 subjects (may include Study)
International Baccalaureate (2 Year Course) Choose one subject from each of Groups 1 to 6 OR replace the Group 6 subject with an additional Group 2, 3 or 4 subject - at least 3 subjects must be at Higher Level (HL)	

Level 2	Level 3 & Scholarship * (Level 4)	International Baccalaureate
Visual Art Design Visual Art Photography Visual Art Painting Art History	Visual Art Design * Visual Art Photography * Visual Art Painting * Art History *	Visual Arts (G6) HL/SL
Drama Dance Music Musical Theatre	Drama * Dance * Music * Musical Theatre	Theatre Arts (G6) HL/SL
English English for Academic Purposes (L1 or 2) <i>English Second Language (double option)</i> Media Studies	English * English for Academic Purposes (L2) Media Studies *	English Literature (G1) HL/SL Chinese Literature (G1) HL/SL
<i>Learning Support</i>	<i>Learning Support</i>	
Accounting Business Studies Economics	Accounting * Business Studies Economics *	
Chinese French Japanese Spanish Te Reo Maori Maori Culture	Chinese * French * German * Japanese * Spanish * Te Reo Maori* Maori Culture	English B (G2) SL French (G2) SL Japanese (G2) SL Spanish (G2) SL Spanish ab initio (G2) SL
Mathematics Mathematics with Statistics Computer Science	Mathematics with Statistics * Mathematics with Calculus * Computer Science	Mathematics (G5) HL/SL Mathematical Studies (G5) SL
Design and Visual Communication <i>Technology - Furniture and Construction</i> <i>Technology - Hospitality</i> Technology - Resistant Materials Technology- Soft Materials	Design and Visual Communication * <i>Technology - Furniture and Construction</i> <i>Technology - Hospitality</i> Technology - Resistant Materials * Technology- Soft Materials *	
Biology Chemistry Physics	Biology * Chemistry * Physics *	Biology (G4) HL/SL Chemistry (G4) HL/SL Physics (G4) HL/SL Sports, Exercise and Health Science (G4) SL
Geography History Classical Studies <i>Tourism</i>	Geography * History * Classical Studies * <i>Tourism</i>	Geography (G3) HL/SL History (G3) HL/SL Economics (G3) HL/SL
Physical Education Performance Physical Education Health	Physical Education * Health	Extended Essay, CAS, TOK