



Suzhou Singapore International School

苏州新加坡外籍人员子女学校

*GRADE 11 & 12*  
**CURRICULUM**  
**GUIDE**



Dear Parents,

Welcome to the Grade 11 and 12 SSIS Diploma Programme. The purpose of this curriculum booklet is to provide sufficient information regarding available student pathways to enable you to select the best possible combination of courses for your child. It is our strong belief that an IB-style education equips students with the skills required for life-long learning and excellence. Our programme presents a combination of academically rigorous, yet holistic curricula that, in the words of the IB, "aim to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect". This booklet outlines the courses offered by the SSIS Diploma Programme.

The SSIS Diploma Programme promotes the education of the whole student, emphasising intellectual, personal, emotional and social growth through all domains of knowledge. By fostering a dynamic combination of knowledge, skills, independent critical and creative thought and international-mindedness, this programme facilitates development of the the whole student as a lifelong learner.

All students who graduate from SSIS receive the SSIS Diploma. We also encourage all students to complete the IB Diploma Programme (IBDP) or gain IB Certificates in subjects of their choice, depending on their academic needs and future plans. IB subjects have varied internal and external assessment structures which offer sufficient scope for students to become independent lifelong learners.

The selection of courses offered under six groups of study offers substantial variety for students. In addition to the six subject areas, Theory of Knowledge (TOK), the Extended Essay (EE), and Creativity, Activity, Service (CAS) form the core of the IBDP. TOK and the EE develop students' critical thinking and research skills beyond the scope of their six academic subjects, thereby fostering development of the academic rigour essential for higher education. Finally, CAS encourages students to participate in creative and service-oriented activities, while emphasising the importance of reflection, and thus fosters development of the whole student.

Irrespective of courses chosen, SSIS provides support and assistance that enables students to reach their goals. Teachers and university counsellors are always available to for discussions with students and to offer advice on subjects and university requirements.

Yours faithfully,

**Cormac Delahunty**

Diploma Programme Coordinator

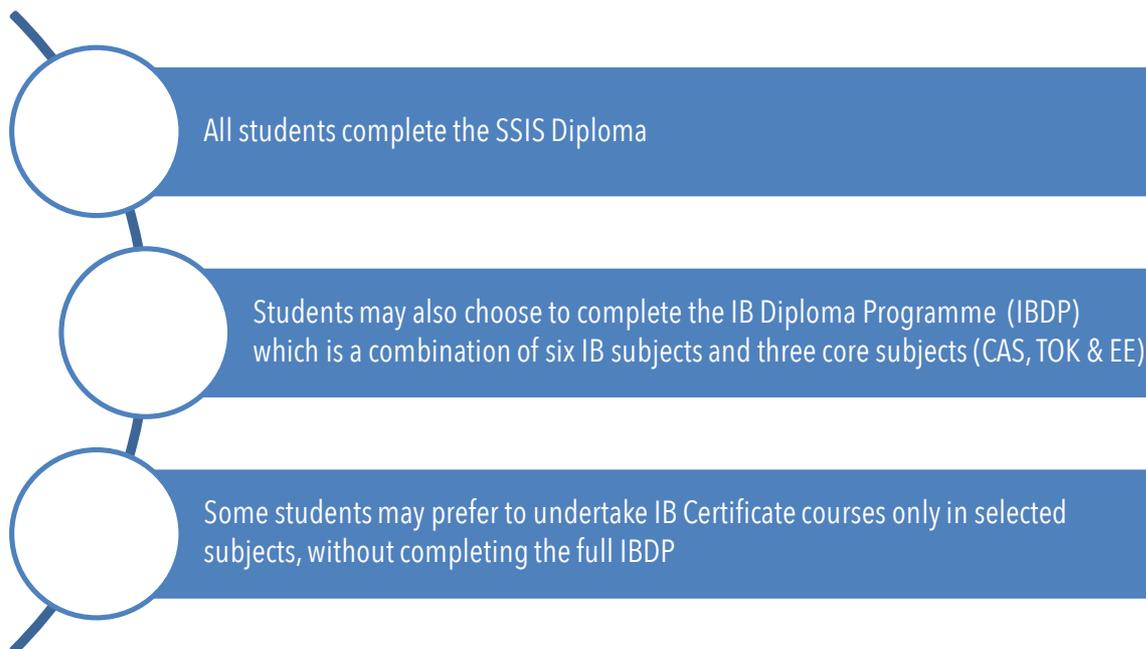
cormacdelahunty@mail.ssis-suzhou.net

## Table of Contents

<b>STUDENT PATHWAYS</b> .....	<b>1</b>
SOME EXAMPLES: .....	1
WHAT IS THE INTERNATIONAL BACCALAUREATE? .....	2
WHY HAS SSIS CHOSEN TO BE AN IB WORLD SCHOOL? .....	2
<b>CURRICULUM</b> .....	<b>2</b>
UNIVERSITY RECOGNITION – IB DIPLOMA .....	2
CURRICULUM TEAM .....	3
<b>SUBJECT OPTIONS</b> .....	<b>4</b>
GROUP 1 – ENGLISH .....	4
GROUP 2 – LANGUAGES .....	4
GROUP 3 – INDIVIDUALS AND SOCIETIES .....	4
GROUP 4 - EXPERIMENTAL SCIENCES .....	4
GROUP 5 – MATHEMATICS .....	4
GROUP 6 – THE ARTS AND ELECTIVES .....	4
STANDARD LEVEL AND HIGHER LEVEL EXPLAINED: .....	5
DIPLOMA COURSES .....	5
COMPULSORY SUBJECTS .....	5
<b>THE CORE PROGRAMME</b> .....	<b>5</b>
CREATIVITY, ACTIVITY AND SERVICE (CAS) .....	5
THEORY OF KNOWLEDGE (TOK) .....	6
THE EXTENDED ESSAY (EE) .....	6
<b>ASSESSMENT</b> .....	<b>7</b>
HOW DOES ASSESSMENT WORK IN THE IBDP? .....	7
FAILING CONDITIONS .....	7
HOW GRADES ARE AWARDED FOR TOK AND EE .....	7
<b>COURSE DESCRIPTIONS</b> .....	<b>8</b>
GROUP 1: ENGLISH A: LANGUAGE AND LITERATURE (HL/SL) .....	8
GROUP 1: ENGLISH B (HL/SL) .....	9
GROUP 2: KOREAN A: LANGUAGE AND LITERATURE   CHINESE A: LANGUAGE AND LITERATURE   GERMAN A: LANGUAGE AND LITERATURE   JAPANESE A: LANGUAGE AND LITERATURE (HL/SL) .....	10
GROUP 2: CHINESE B   FRENCH B   SPANISH B (HL/SL) .....	11
GROUP 2: CHINESE–MANDARIN AB INITIO   FRENCH AB INITIO   SPANISH AB INITIO (SL) .....	12
GROUP 3: BUSINESS MANAGEMENT (HL/SL) .....	13
GROUP 3: ECONOMICS (HL/SL) .....	14
GROUP 3 GEOGRAPHY (HL/SL) .....	15

<b>GROUP 3: HISTORY (HL/SL)</b> .....	<b>16</b>
<b>GROUP 3: PSYCHOLOGY (HL/SL)</b> .....	<b>17</b>
<b>GROUP 4: BIOLOGY (HL/SL)</b> .....	<b>18</b>
<b>GROUP 4: CHEMISTRY (HL/SL)</b> .....	<b>19</b>
<b>GROUP 4: DESIGN TECHNOLOGY (HL/SL)</b> .....	<b>20</b>
<b>GROUP 4: ENVIRONMENTAL SYSTEMS AND SOCIETIES (SL ONLY)</b> .....	<b>21</b>
<b>GROUP 4: PHYSICS (HL/SL)</b> .....	<b>22</b>
<b>GROUP 4: SPORTS, EXERCISE AND HEALTH SCIENCE (HL/SL)</b> .....	<b>23</b>
<b>GROUP 5: MATHEMATICS: ANALYSIS AND APPROACHES (A&amp;A) (HL/SL)</b> .....	<b>24</b>
<b>GROUP 5: MATHEMATICS: APPLICATIONS AND INTERPRETATION (A&amp;I) (HL/SL)</b> .....	<b>26</b>
<b>GROUP 6: MUSIC (HL/SL)</b> .....	<b>28</b>
<b>GROUP 6: THEATRE (SL/HL)</b> .....	<b>29</b>
<b>GROUP 6: VISUAL ARTS (HL/SL)</b> .....	<b>30</b>

## Student pathways



### Some examples:

After consultation with parents, teachers and university counsellors, **student X** chooses to complete courses without undertaking the IBDP. Upon graduation, they receive the SSIS Diploma. They choose to study in the USA and their university also requires them to sit the SAT exam; an external exam developed by the US College Board. As SSIS is an accredited SAT exam center, students can sit the exam at SSIS. Upon successful completion of the two-year programme, they receive the SSIS Diploma.

After consultation with parents, teachers and university counsellors, **student Y** chooses to complete the IBDP. They choose six subjects and complete the three core subjects. Upon successful completion of the two-year programme and the IBDP exams, they receive the SSIS Diploma and an IB diploma from the International Baccalaureate Organisation (IBO).

After consultation with parents, teachers and university counsellors, **student Z**, who has a passion for the arts, chooses to complete an IB Certificate course in visual arts. Upon successful completion of the two-year programme, they receive the SSIS Diploma and an IB certificate in visual arts from the IBO.

## What is the International Baccalaureate?



The International Baccalaureate Organisation (IBO) was established in 1968 to meet the educational needs of students in international schools, and has since grown to an organisation that teaches over one million students in 3,681 schools across 146 countries. The IB is now taught in both international schools and state sector schools across the globe, with the highest number of schools located in the United States. The IBO is based in Geneva.

### Why has SSIS chosen to be an IB World School?



The IB is a holistic curriculum that helps to prepare students for the realities of life in the 21<sup>st</sup> century. Heavily focused on critical thinking and problem solving, the IB encourages international-mindedness, compassion, tolerance and a love for learning.

## Curriculum



The IBDP is a comprehensive two-year pre-university course that aims to prepare students for the rigours of university, but also to be caring, compassionate, global citizens with an appreciation of lifelong learning. Students must study a range of subjects, one taken from each of the six groups, with three subjects studied at Higher Level and three at Standard Level over two years. In addition, students undertake compulsory studies in Theory of Knowledge (TOK), Creativity Service and Action (CAS), and a 4000-word extended research essay (EE). Students are examined by the IB at the end of their second year.

The IBDP's comprehensive range of subjects and core facilitates a diverse breadth of learning opportunities. Accordingly, graduates with IB qualifications are recognised for their endeavours by universities around the world.

### University recognition - IB Diploma

The IBDP is widely recognised and valued by universities, with credit for first-year university subjects often given for subjects studied in the IBDP. Nevertheless, when choosing the SSIS pathways, students should consider the specific requirements of their target universities. Students are provided with clear, informed guidance about university selection and options throughout the two-year IBDP Programme .

**Curriculum team**

<b>Diploma Programme Coordinator</b>	Mr. Cormac Delahunty	cormacdelahunty@mail.ssis-suzhou.net
<b>Extended Essay Coordinator</b>	Ms. Amelie Richeux	ameliericheux@mail.ssis-suzhou.net
<b>Creativity, Activity, Service (CAS) Coordinator</b>	Mr. Simon Greaves	simongreaves@mail.ssis-suzhou.net
<b>Theory of Knowledge Coordinator</b>	Mr. Joe Welch	joewelch@mail.ssis-suzhou.net
<b>University Counselling Coordinator</b>	Ms. Elizabeth Watson	elizabethwatson@mail.ssis-suzhou.net

## Subject options

### Group 1 - English

- English A: Language & Literature HL/SL
- English B HL/SL

### Group 2 - Languages

- Korean A: Language & Literature | Chinese A: Language & Literature | German A: Language & Literature | Japanese A: Language & Literature HL/SL
- Chinese B | | French B | Spanish B HL/SL
- Chinese-Mandarin ab initio | French ab initio | Spanish ab initio SL

### Group 3 - Individuals and Societies

- Business Management HL/SL
- Economics HL/SL
- Geography HL/SL
- History HL/SL
- Psychology HL/SL

### Group 4 - Experimental Sciences

- Biology HL/SL
- Chemistry HL/SL
- Design Technology HL/SL
- Environmental Systems and Societies SL
- Physics HL/SL
- Sports and Exercise Health Science HL/SL

### Group 5 - Mathematics

- Mathematics: Analysis and Approaches HL/SL
- Mathematics: Applications and Interpretation HL/SL

### Group 6 - The Arts and Electives

- Music HL/SL
- Theatre HL/SL
- Visual Arts HL/SL
- Free elective HL/SL

**Note:** The selection of subjects offered is dependent on student interest. SSIS is committed to offering as many subjects as possible to maximise the opportunities for our students..

## Standard Level and Higher Level explained:

IBDP students choose three subjects at Standard Level (SL) and three at Higher Level (HL). SL subjects require 150 hours of teaching time over the two years, whilst HL subjects require 240 hours of teaching time. Note that HL is differentiated from SL by depth and breadth of content studied, not by difficulty.

## Diploma courses

Although the IBDP is academically rigorous, the IB strives to be flexible and inclusive in its educational philosophy. There are, however, some compulsory elements to students' subject selection.

Students must choose one subject from each of the five groups (1 to 5). Students' sixth subject can be in the arts or a subject from any other group.

## Compulsory subjects

- English and Mathematics are compulsory for all students.
- Theory of Knowledge (TOK) is compulsory for IBDP students, and all SSIS Diploma students can choose to opt into TOK.
- Creative, Activity and Service (CAS) participation is compulsory for all students. Students' CAS experiences are often ideal for inclusion in a curriculum vitae and/or for adding depth to personal statements.
- The Extended Essay (EE) is compulsory for IBDP students, and all SSIS Diploma students can choose to opt into the EE.

## The Core programme

### Creativity, Activity and Service (CAS)



CAS is a core requirement for all students, where they participate in extracurricular activities relating to creativity, activity and service that encourage students to “think globally, act locally”. CAS activities happen both inside and outside of school. Students are given a structured and reflective framework through which to explore their passions, talents and skills, thus supporting their holistic education.

CAS allows students to develop their personal interests while learning new knowledge and skills, and is thus critical to developing internationally aware, healthy young people. During the two-year CAS course, students are required to satisfy eight specified outcomes across the three areas of creativity, activity and service, which serves as a fantastic opportunity for students to develop themselves beyond academic rigours of school life.

As noted above, the activities planned and completed as part of the CAS course significantly enhance a student's curriculum vitae and help differentiate them at both university and employment-related interviews.

## Theory of Knowledge (TOK)

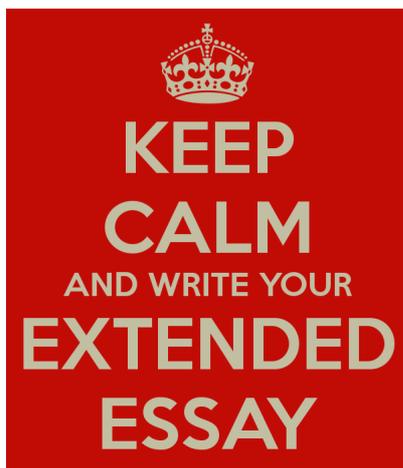


The Theory of Knowledge (TOK) course encourages critical thinking about knowledge that enables students to make sense of the knowledge society in which they participate. By its very nature, TOK is an interdisciplinary course that aims to identify and critically analyse how we learn. TOK transcends and unifies different academic disciplines and encourages appreciation of other cultural perspectives. TOK is taught over the two years of the IBDP.

TOK requires students to consider how knowledge is produced, disseminated, evaluated as well as the very nature of knowledge itself. During lessons, students consider questions such as: What counts as knowledge? How is knowledge produced? What are the limits of knowledge? Who owns knowledge? What is the value of knowledge? What are the

implications of having, or not having knowledge? What are the differences in the ways that knowledge is generated in academic disciplines?

## The Extended Essay (EE)



The Extended Essay (EE) is the final compulsory element of the IBDP. Students are required to plan, research and write a 4000-word essay in a subject of their choice (accompanied by a 500-word reflection about the process). Each student is allocated an EE supervisor who provides comprehensive guidance about planning, drafting and refining the EE. The EE is perceived by universities as a very positive and preparatory undertaking, because completion of the EE ensures that students understand the conventions of academic writing, research and intellectual honesty. EEs often form the basis of university theses and academic journal publications, and as such, the EE constitutes the perfect stepping stone to the rigours of university life.

## ASSESSMENT

### How does assessment work in the IBDP?

The maximum achievable score in the IB Diploma is 45 points. Seven points are available for each of the six subjects and a total of three points is available for the EE and TOK assessments combined (see matrix below). CAS is not formally assessed, but students must document their activities and provide evidence that they have achieved the eight outcomes. Each of the six subjects consists of between 20–35% coursework that is internally assessed by SSIS teachers and externally moderated by the IB. The remainder of the students' assessment is their final examinations, which are externally assessed by IB examiners.

### Failing conditions

The following are failing conditions for the IBDP:

1. CAS requirements have not been met.
2. Candidate's total points are fewer than 24.
3. An N has been given for TOK, EE or for a contributing subject (usually as a result of academic malpractice or failure to submit work).
4. A grade E has been awarded for one or both of TOK and the EE.
5. There is a grade 1 awarded in a subject.
6. Grade 2 has been awarded three or more times (HL or SL).
7. Grade 3 or below has been awarded four or more times (HL or SL).
8. Candidate has gained fewer than 12 points on HL subjects (for candidates who register for four HL subjects, the three highest grades count).
9. Candidate has gained fewer than 9 points on SL subjects (candidates who register for two SL subjects must gain at least 5 points at SL).

*Note: A maximum of three examination sessions is allowed in which to satisfy the requirements for the award of the IB Diploma.*

### How grades are awarded for TOK and EE

The following matrix is used to determine additional TOK/EE points. For example, a student awarded a grade B for their EE and a grade C for TOK would receive two bonus points.

	Theory of knowledge (TOK)					
	Grade awarded	A	B	C	D	E
Extended essay (EE)	A	3	3	2	2	Failing condition
	B	3	2	2	1	
	C	2	2	1	0	
	D	2	1	0	0	
	E	Failing condition				

## Course descriptions

### Group 1: English A: Language and Literature (HL/SL)

In this course, students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type, accompanied by appropriate secondary readings, students investigate the nature of language itself and the ways in which it shapes and is influenced by identity and culture. Approaches to study in the course are intended to be wide ranging, and can include literary theory, sociolinguistics, media studies and critical discourse analysis among others.

#### Course content

In the English A: Language and Literature course, students learn about the complex and dynamic nature of language and explore both its practical and aesthetic dimensions. They explore the crucial role language plays in communication, reflecting human experience and shaping the world. Students also learn about their own roles as producers of language and develop their analytic reading and writing skills. Throughout the course, students explore the various ways in which language choices, text types, literary forms and contextual elements impact meaning. Through close analysis of various text types and literary forms, students consider their own interpretations, as well as the critical perspectives of others, to explore how such positions are shaped by cultural belief systems and to negotiate meanings for texts.

#### Assessment in Grades 11 and 12

Throughout the course, students are required to keep a portfolio of their written work, presentations, class notes and annotations. Further, students are required to develop select items from their portfolios to develop formal assessments. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	<b>Guided textual analysis</b> The paper consists of two non-literary passages, from two different text types, each accompanied by a question	75	135	35	35
2	<b>Comparative essay</b> The paper consists of four general questions. In response to one question, students write a comparative essay based on two works studied in the course.	105	105	35	25
<b>HL essay</b> Students submit an essay (1,200–1,500 words) on one non-literary text or a collection of non-literary texts by one same author, or a literary text or work studied during the course.				-	20
<b>Internal assessment: Individual oral</b> Supported by an extract from both one non-literary text and one literary work, students offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher.				30	20

#### Why choose this course?

This course enables students to study an optimal mix of fictional and non-fictional texts. Accordingly, students gain a thorough knowledge of a range of texts and an understanding of diverse cultural perspectives. They also develop skills in close analysis and the ability to support an argument both orally and in clearly expressed writing. As well as providing an excellent grounding for any arts or humanities-based degree, the course complements higher education courses such as media, education and journalism.

## Group 1: English B (HL/SL)

English B is a language acquisition courses designed for students with some previous experience of the language. The aim of the subject is to help refine language skills in reading, writing, listening, and speaking, with the ultimate aim of helping students to both understand and express complex ideas clearly. Furthermore, students study the English language in the context of learning about diverse cultures where English is spoken. Students continue to develop their knowledge of vocabulary and grammar, as well as their conceptual understanding of how language works, in order to construct, analyse and evaluate arguments on a variety of topics relating to course content and the target language culture.

### Course content

- **Theme 1: Identities** – Students explore the nature of the self and what it is to be human.
- **Theme 2: Experiences** – Students explore and tell the stories of the events, experiences and journeys that shape our lives.
- **Theme 3: Human ingenuity** – Students explore the ways in which human creativity and innovation affect our world.
- **Theme 4: Social organization** – Students explore the ways in which groups of people organize themselves, or are organized, through common systems or interests.
- **Theme 5: Sharing the planet** – Students explore the challenges and opportunities faced by individuals and communities in the modern world.

### Assessment

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	<b>Productive skills: Writing</b> One writing task (250–400 words) from a choice of three, each from a different theme, choosing a text type from among those listed in the examination instructions	75	90	25	25
2	<b>Receptive skills</b> Comprehension exercises on three audio passages and three written texts, drawn from all five themes	105	120	50	50
<b>Internal assessment: Individual oral</b> SL: A conversation with the teacher, based on a visual stimulus, followed by discussion based on an additional theme. HL: A conversation with the teacher, based on an extract from one of the literary works studied in class, followed by discussion based on one or more of the themes from the syllabus.				25	25

### Why choose this course?

English B is designed for students who speak English as an additional language, and who have already studied it for some time, but have chosen their mother tongue as their Language A subject. Ability in languages opens many doors, particularly in areas such as business, law, international relations, hospitality management, interpretation and translation.

## Group 2: Korean A: Language and Literature | Chinese A: Language and Literature | German A: Language and Literature | Japanese A: Language and Literature (HL/SL)

Each language and literature course studies the complex and dynamic nature of language, exploring both its practical and aesthetic dimensions. Each course explores the crucial role language plays in communication, reflecting experience and shaping the world, and the roles of individuals as producers of language. Throughout the course, students explore the various ways in which language choices, text types, literary forms and contextual elements affect meaning. Through close analysis of various text types and literary forms, students consider their own interpretations, as well as the critical perspectives of others, to explore how such positions are shaped by cultural belief systems and to negotiate meanings for texts.

### Course content

Students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type alongside appropriate secondary readings, students investigate the nature of language itself and the ways in which it shapes, and is influenced by, identity and culture. Approaches to study in the course are intended to be wide ranging and can include literary theory, sociolinguistics, media studies and critical discourse analysis among others.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	<b>Guided textual analysis</b> The paper consists of two non-literary passages, from two different text types, each accompanied by a question	75	135	35	35
2	<b>Comparative essay</b> The paper consists of four general questions. In response to one question, students write a comparative essay based on two works studied in the course.	105	105	35	25
<b>HL essay</b> Students submit an essay (1,200-1,500 words) on one non-literary text or a collection of non-literary texts by one same author, or a literary text or work studied during the course.				-	20
<b>Internal assessment</b> <b>Individual oral</b> Supported by an extract from both one non-literary text and one literary work, students offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher.				30	20

### Why choose this course?

This course enables students to study an optimal mix of fictional and non-fictional texts. Accordingly, students gain a thorough knowledge of a range of texts and an understanding of diverse cultural perspectives. They also develop skills in close analysis and the ability to support an argument both orally and in clearly expressed writing. As well as providing an excellent grounding for any arts or humanities-based degree, the course complements higher education courses such as media, education and journalism.

## Group 2: Chinese B | French B | Spanish B (HL/SL)

Language B subjects are language acquisition courses designed for students with some previous experience of the language. The aim of the subject is to help refine language skills in reading, writing, listening, and speaking, with the ultimate aim of helping students to both understand and express complex ideas clearly. Furthermore, students study the target language in the context of learning about diverse cultures where that language is spoken. Students continue developing their knowledge of vocabulary and grammar, and their conceptual understanding of how language works, to construct, analyse and evaluate arguments on a variety of topics relating to course content and the target language culture.

### Course content

- **Theme 1: Identities** – Students explore the nature of the self and what it is to be human.
- **Theme 2: Experiences** – Students explore and tell the stories of the events, experiences and journeys that shape our lives.
- **Theme 3: Human ingenuity** – Students explore the ways in which human creativity and innovation affect our world.
- **Theme 4: Social organization** – Students explore the ways in which groups of people organize themselves, or are organized, through common systems or interests.
- **Theme 5: Sharing the planet** – Students explore the challenges and opportunities faced by individuals and communities in the modern world.

### Assessment

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	<b>Productive skills: Writing</b> One writing task (250–400 words) from a choice of three, each from a different theme, choosing a text type from those listed in the examination instructions	75	90	25	25
2	<b>Receptive skills</b> Comprehension exercises on three audio passages and three written texts, drawn from all five themes	105	120	50	50
<b>Internal assessment: Individual oral</b>					
SL: A conversation with the teacher, based on a visual stimulus, followed by discussion based on an additional theme.					
HL: A conversation with the teacher, based on an extract from one of the literary works studied in class, followed by discussion based on one or more of the themes from the syllabus.				25	25

### Why choose this course?

Language B is designed for students who speak the target language as an additional language, and who have already studied it for some time, but have chosen their mother tongue as their Language A subject. As this is a challenging skills-based course, students who are more engaged naturally take advantage of opportunities to use and improve their skills. Ability in languages opens many doors, particularly in areas such as business, law, media, diplomacy, international relations, teaching, hospitality management, interpretation and translation.

## Group 2: Chinese-Mandarin ab initio | French ab initio | Spanish ab initio (SL)

Ab initio is a language acquisition course designed for students with no previous experience in, or very little exposure to, the language. Ab initio students develop their receptive, productive and interactive skills while learning to communicate in the target language in familiar and unfamiliar contexts. Students develop the ability to communicate through the study of language, themes and texts. At SSIS, students may choose to study Chinese-Mandarin, French or Spanish at the ab-initio level.

### Course content

- **Theme 1: Identities** – Students explore the nature of the self and how we express who we are. The prescribed topics are personal attributes, personal relationships, eating and drinking, physical well-being.
- **Theme 2: Experiences** – Students explore and tell the stories of the events, experiences and journeys that shape our lives. The prescribed topics are daily routine, leisure, holidays, festivals and celebrations.
- **Theme 3: Human ingenuity** – Students explore the ways in which human creativity and innovation affect our world. The prescribed topics are transport, entertainment, media, technology.
- **Theme 4: Social organization** – Students explore the ways in which groups of people organize themselves, or are organized, through common systems or interests. The prescribed topics are neighborhood, education, the workplace, social issues.
- **Theme 5: Sharing the planet** – Students explore the challenges and opportunities faced by individuals and communities in the modern world. The prescribed topics are climate, physical geography, the environment, global issues.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	Format	Time (mins)	Weighting (%)	
External assessment	<b>Paper 1 Productive skills–writing</b> Two written tasks of 70–150 words each from a choice of three tasks, choosing a text type for each task from among those listed in the examination instructions.	60	25	
	<b>Paper 2 Receptive skills</b> Comprehension exercises on three audio passages and three written texts, drawn from all five themes.	Listening	45	25
		Reading	60	25
Internal assessment	Individual oral assessment	7-10	25	

### Why choose this course?

Ab initio enables students to communicate in the target language in a range of contexts and for a variety of purposes. Furthermore, ab initio promotes intercultural understanding and open-mindedness through enabling students to develop their appreciation of language and culture. Ab initio also provides students with a basis for further study, work and leisure through the use of the target language.

### Group 3: Business Management (HL/SL)

Business Management is a challenging and dynamic subject. The role of businesses, as distinct from other organisations and actors in a society, is to produce and sell goods and services that meet human needs and wants by organising resources. Profit-making, risk-taking and operating in a competitive environment characterise most business organizations. Four concepts underpin the course and are explored throughout the two-year course: creativity, change, ethics, and sustainability, innovation and strategy.

#### Course content

- **Unit 1: Business organization and environment** – Students learn to analyse organisations' internal and external environments. Unit 1 also introduces different types of business organisations.
- **Unit 2: Human resource management** – Students explore how businesses recruit, organise, develop, motivate and lead their most important resource; their people.
- **Unit 3: Finance and accounts** – Students learn how businesses represent themselves numerically through accounts, and how to analyse the contents of the accounts.
- **Unit 4: Marketing** – Students learn about the marketing mix of the four Ps: product, price, promotion and place (distribution). At HL, the marketing mix is expanded to the seven Ps: students also explore how people, processes and physical evidence can be applied to the marketing of services.
- **Unit 5: Operations management** – Students learn how organisations manage their operations, whether in terms of achieving an optimal cost-quality ratio or the shortest supply chain; using the most ethical means or the latest innovative techniques; or applying the highest levels of quality assurance.

#### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Based on a case study issued in advance, with additional unseen material	90	90	35	25
2	Based on a series of mini-case studies that have a quantitative focus	90	105	35	30
3	Based on a series of mini-case studies that have a quantitative focus	-	75	-	25
<b>Internal assessment (SL and HL)</b>					
Students produce a research project about a real business issue or problem facing a particular organization using a conceptual lens.				30	20

#### Why choose this course?

Business Management is a suitable subject for students who would like to follow a career in business, encompassing management, administration, finance and economics, accountancy, marketing and human resources. It can also be a useful subject for those who wish to pursue a career in the arts and to establish their own business.

### Group 3: Economics (HL/SL)

Economics is an exciting and challenging subject that enables students to understand the complexities and interdependence of choices made by societies when allocating scarce resources. Economic theories, models, policies, and key concepts are explored through investigation of current real-world issues. Students develop knowledge, critical thinking and writing skills, values and attitudes that will benefit them in university and beyond, while also encouraging them to act responsibly as global citizens.

#### Course content

- 1) **Unit 1: Introduction to economics** – Students explore how economists use models to study the allocation of scarce resources to meet societies' seemingly unlimited wants and needs.
- 2) **Unit 2: Microeconomics** – Students analyse how resources are allocated in individual markets. Students also learn about the role and effectiveness of government intervention when markets fail to distribute resources among firms and households in an allocatively efficient manner.
- 3) **Unit 3: Macroeconomics** – Students examine how individual markets combine to create an economy, and the actions taken by governments to achieve macroeconomic objectives. The effectiveness of government intervention in the macroeconomy is a focus of this unit.
- 4) **Unit 4: The global economy** – Students examine how resources are allocated internationally. Benefits of trade and protectionism are a focus, as are economic development and barriers to economic development.

#### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed through informal assessments including homework and lesson participation. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Extended response (i.e., essay) paper	75	75	30	20
2	Data response paper featuring short-answer questions, calculation questions and an essay	105	105	40	30
3	Policy paper featuring short-answer questions, calculation questions and an essay (HL only)	-	105	-	30
<b>Internal assessment</b> Students produce a portfolio of three commentaries on published news articles relating to different units of the syllabus (excluding the introductory unit). Each commentary is a maximum of 800 words. Students complete the <i>Microeconomics</i> commentary during Grade 11, and the commentaries for the <i>Macroeconomics</i> and <i>The global economy</i> units are completed during Grade 12.				30	20

#### Why choose this course?

Economics provides valuable knowledge and skills relevant to a wide variety of careers including business and finance, economic development, government and public policy, education, law and international trade, marketing and retail, real estate and urban planning.

### Group 3 Geography (HL/SL)

Geography is a dynamic course grounded in the real world, that focuses on the interactions between individuals, societies and physical processes in both time and space. Geography seeks to identify trends and patterns in these interactions. Geography also investigates the way in which people adapt and respond to change, and evaluates management strategies associated with such change. Geography describes and helps to explain the similarities and differences between different places, on a variety of scales and from different perspectives. The course integrates physical, environmental and human geography, and equips students with life skills and an appreciation of, and a respect for, alternative approaches, viewpoints and ideas.

#### Course content

**Part 1: Geographical themes** – Students study two (SL) or three (HL) themes from a choice of seven: freshwater; oceans and coastal margins; extreme environments; geophysical hazards; leisure, tourism and sport; food and health; and urban environments. At SSIS, Geography students select units of study based on class consensus. The choice of geographical themes is important in determining the focus of students' internal assessment, which is based on one of the chosen themes.

**Part 2: Geographical perspectives – global change.** Part 2 of the Geography course is common to both HL and SL students and focuses on three key areas:

- 1) distribution and changes in population,
- 2) vulnerability and resilience to climate change, and
- 3) global resource consumption and security.

**Part 3: Higher level core extension** – The higher-level component of geography focuses on power, places and networks, human development and diversity, and global risks and resilience. Students learn to make synoptic links through understanding how global interactions influence all themes studied in the Geography course.

#### Assessment in Grades 11 and 12

Assessment in Geography takes many forms from short answer questions, designing and testing hypotheses, essay and report writing, presenting information and modelling. The internal assessment requires students to gather primary data to investigate a real-life geographical issue of their choice.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Geographic themes	90	135	35	35
2	Core: Geographic perspectives	75	75	40	25
3	HL only -	-	60	-	20
<b>Internal Assessment</b> Field based study externally moderated by the IBO				25	20

#### Why choose this course?

Geography continues to rise to prominence as a subject of strong relevance to issues that today's students care about. Geography equips students with skills that are highly valued in today's society; such as interpreting data; analysis and understanding of complex issues; problem solving; building logical arguments and critical thinking. Geography is a useful subject for students interested in fields such as urban planning, cartography, environmentalism, and conservation.

### Group 3: History (HL/SL)

History is a rigorous and exhilarating discipline. The history course at SSIS is a world history based on a comparative and multi-perspective approach. Students study a variety of types of history, including political, economic, social and cultural, and the course offers a balance of structure and flexibility.

#### Course content

- 5) **Unit 1: Industrial development** – Students compare and contrast the origin, development and impact of industrial development of Britain and Japan.
- 6) **Unit 2: World War I** – Students investigate causes and effects of the war via a global perspective that considers the motivations underlying countries' actions.
- 7) **Unit 3: Civil War** – Students explore the Russian Civil War from 1917 to 1921, examining the causes, reasons for the outcome, and the effects from multiple perspectives.
- 8) **Unit 4: Japanese expansion** – Students analyse the changes that occurred in Japan from the 1900s onward to investigate causes of Japanese expansion in Asia in the 1920s and 1930s.
- 9) **HL Unit 1: Soviet Union and post-Soviet Russia** – Students investigate political and social aspects of Russian society from 1929 to 2000.
- 10) **HL Unit 2: Europe and World War I** – Students investigate the conditions from 1871 in Europe leading to the World War I. The content covered focuses only on European participants.
- 11) **HL Unit 3: Diplomacy in Europe** – Students explore the end of World War I and the interwar years until the end of World War II. The unit is an investigation into the causes and impacts of World War II.

#### Assessment in Grades 11 and 12

Throughout the History course, students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Based on a case study studied during lessons, the students use source documents to answer questions.	60	60	30	20
2	Based on content studied during lessons, the students answer two essay questions.	90	90	45	25
3	HL only: HL students answer three essay style questions of their choice based on class content.	-	150	-	35
<b>Internal Assessment</b> Historical investigation: Students research and report on a historical topic of their choice via a 2,200-word essay.				25	20

#### Why choose this course?

History offers a range of skills that help to build your analytic abilities. It is especially useful for students pursuing a law or journalism undergraduate course, but knowledge of history is also helpful for students of many other undergraduate courses, including economics, business, English, and political science.

### Group 3: Psychology (HL/SL)

Psychology is the rigorous and systematic study of mental processes and behavior. It is a complex subject which draws on concepts, methods and understandings from a number of different disciplines. There is no single approach that can describe or explain mental processes and behaviour on its own, because human beings are complex animals, with highly developed frontal lobes, cognitive abilities, involved social structures and cultures. The study of behavior and mental processes requires a multidisciplinary approach and the use of a variety of research techniques, whilst recognising that behaviour is not a static phenomenon. Instead, behaviour is adaptive, and as the world, societies and challenges facing societies change, so does behaviour.

#### Course content

- 12) Unit 1: Biological approaches to understanding behaviour** – Students learn about the brain and behaviour, hormones and behaviour, genetics and behaviour, and the role of animal research in understanding human behaviour.
- 13) Unit 2: Cognitive approach to understanding behaviour** – Students examine cognitive processing, reliability of cognitive processes, emotion and cognition, and cognitive processing in the digital world.
- 14) Unit 3: Sociocultural approach to understanding behaviour** – Students examine the individual and the group, cultural origins of behaviour and cognition, cultural influences on individual attitudes, identity and behaviour, the influence of globalisation on individual attitudes, identities and behaviour.
- 15) Unit 4: Abnormal psychology** – Students explore factors influencing diagnosis, etiology of abnormal psychology, and treatment of disorders *or* **Health psychology**, which examines the determinants of stress, problems related to stress and promoting health.
- 16) Unit 5: Psychology of human relationships** – Students explore personal relationships, group dynamics, and social responsibility.

#### Assessment in Grades 11 and 12

Throughout the Psychology course students complete a variety of formal assessments including: tests, projects, presentations and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	CORE: Biological, Cognitive, Sociocultural	120	120	50	40
2	OPTIONS: Human Relationships, Abnormal Psychology	60	120	25	20
3	HL only - Qualitative research methods	-	60	-	20
<b>Internal Assessment</b> Experimental study - externally moderated by the IBO				25	20

#### Why choose this course?

Students interested in human behavior enjoy studying psychology. Psychology is a diverse field with many different career paths. Psychologists conduct research, serve as consultants in organisations, diagnose and provide clinical treatment, and teach disciplines related to mental health. In addition to independent work, many psychologists cooperate with other professionals, including physicians, lawyers, therapists, social workers, teachers and computer programmers in the field of artificial intelligence.

## Group 4: Biology (HL/SL)

Biology is the study of life. The vast diversity of species makes biology both an endless source of fascination and a considerable challenge. Biologists attempt to understand the living world at all levels from the micro to the macro using many different approaches and techniques. Biology is still a young science and great progress is expected in the 21st century. This progress is important at a time of growing pressure on the human population and the environment

### Course content

- **Unit 1: Cell Biology** – Study of cell theory, stem cells, single and multicellular organisms and structure, cell division and function of organelles in cells
- **Unit 2: Molecular Biology** – Study of biology molecules, metabolism, water, carbohydrates and lipids, proteins, enzymes, DNA, RNA, cellular respiration and photosynthesis
- **Unit 3: Genetics** – Genes, chromosomes, mutations, prokaryotic and eukaryotic, meiosis, inheritance, Mendelian genetics, non-Mendelian genetics, genetic modification and biotechnology
- **Unit 4: Unit 4: Ecology** – Communities, populations, ecosystems, species, carbon cycling, flow of energy, climate change
- **Unit 5: Evolution and Heredity** – Natural selection, genetic evidence, classification of biodiversity, cladistics
- **Unit 6: Physiology** – Digestion, circulatory system, immune system, pulmonary system, nervous system, reproductive system

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, laboratory investigations, and exams. Students are also assessed on informal assessments including homework and classroom participation/classwork. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	30 (SL)/ 40 (HL) multiple choice questions	45	60	20	20
2	Data-based, short answer and extended response questions	75	135	40	36
3	Data-based, short answer and extended response	60	75	20	24
<b>Internal Assessment</b> 6–12 -page investigation and write-up on science topic of student's choosing inside the biology curriculum				20	20

### Why choose this course?

Through studying biology, students should become aware of how scientists work and communicate with each other. While the scientific method may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that characterises the sciences. Students interested in the life sciences such as botany, zoology, genetics, medicine, psychology, biophysics, biochemistry, veterinary science, ecology, and pharmacology should take this subject.

## Group 4: Chemistry (HL/SL)

Chemistry provides students with higher-order investigative experiences and activities to promote a deeper understanding of critical concepts in chemistry. Students learn the chemical principles that underpin both the physical environment and biological systems through the study of quantitative chemistry, periodicity, kinetics and other subjects. The chemistry course fosters students' ability to analyse scientific literature critically, and to develop manipulative and experimental skills necessary to perform scientific investigations. To study chemistry successfully, students should also have an interest in mathematics.

### Course content

Core topics – All students	Additional HL topics
Stoichiometric relationships	Atomic structure
Atomic structure	The periodic table – the transition metals
Periodicity	Chemical bonding and structure
Chemical bonding and structure	Energetics/thermochemistry
Energetics/thermochemistry	Chemical kinetics
Chemical kinetics	Equilibrium
Equilibrium	Acids and bases
Acids and bases	Redox processes
Redox processes	Organic chemistry
Organic chemistry	Measurement and analysis
Measurement and data processing	

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, laboratory investigations, and exams. Students are also assessed through informal assessments including homework and classroom participation/classwork. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam Paper	External assessment	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Based on multiple choice questions	45	60	20	20
2	Based on short answer and extended response questions	75	135	40	36
3	Analysis of experimental results and one of 4 options	60	75	20	24
<b>Internal assessment (HL and SL are the same)</b> Students self-design, execute and analyse a scientific investigation, writing it up in 6–12 pages.				20	20

### Why choose this course?

Chemistry is essential for anyone wishing to do further study in areas such as: chemical engineering, medicine, dentistry, environmental sciences, pharmacology, biological sciences, forensics, food science, and laboratory technology. As a science that challenges us to understand complex interactions, it develops a wide range of skills that are also applicable to non-science related fields as diverse as law and accounting.

## Group 4: Design Technology (HL/SL)

Inquiry and problem-solving are at the heart of this subject. Design Technology requires the use of the design cycle as a tool to structure the inquiry and analysis of problems, the development of feasible solutions, and the testing and evaluation of these solutions. A solution can be defined as a model, prototype, product or system that students have developed independently.

By developing critical-thinking and design skills, students achieve a high level of design literacy, which they can apply in practical contexts. While designing may take various forms, it usually involves the selective application of knowledge within an ethical framework. Teacher-directed activities form part of a student's learning experience. These activities are intended to reinforce the understanding of taught topic content and support the internal assessment project.

### Course content

Core topics - All students	HL only
Topic 1: Human factors and ergonomics Topic 2: Resource management and sustainable production Topic 3: Modelling Topic 4: Raw material to final product Topic 5: Innovation and design Topic 6: Classic design	Topic 7: User centered design (UCD) Topic 8: Sustainability Topic 9: Innovation and markets Topic 10: Commercial production

### Assessment in Grade 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, labs, and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam Paper	External assessment	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Based on multiple choice questions	45	60	30	20
2	Based on structured, short answer and extended response questions	90	90	30	30
3	HL only: Structured questions, case study	-	90	-	20
<b>Internal assessment</b> Each student is required to complete a design project. This is a major component of the course and is conducted over four separate core criteria and an additional two criteria for HL students.				40	40

### Why choose this course?

Students explore and study the design process, the role of designers, product development and product innovation as well as developing an understanding and knowledge of materials and environmental awareness in green design. Design Technology may lead students to further study in architecture, design management, furniture design, the fashion and textiles industries, industrial design, interior design, materials science, transport design, advertising, marketing, product design and engineering.

## Group 4: Environmental Systems and Societies (SL only)

Environmental Systems and Societies (ESS) is a unique course that spans both Group 3 and Group 4. As such, ESS is a complex, interdisciplinary course in which students develop skills and explore topics relevant to both the Sciences and Individuals and Societies. Students explore societies' cultural, economic, ethical, political and social interactions with the environment. Students demonstrate and build a wide variety of skills including research, investigation and philosophical discussion grounded in a systems approach. During the ESS course, students study fascinating case studies at a variety of scales from global to national and local.

The ESS course is available at Standard Level only.

### Course content

Core topics - All students
Topic 1: Foundations of environmental systems and societies
Topic 2: Ecosystems and ecology
Topic 3: Biodiversity and conservation
Topic 4: Water and aquatic food production systems and societies
Topic 5: Soils systems and terrestrial food production systems and societies
Topic 6: Atmospheric systems and societies
Topic 7: Climate Change and energy production
Topic 8: Human Systems and resource use

### Assessment in Grade 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, labs, and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam Paper	External assessment	Time (mins)	Weighting (%)
		SL	SL
1	Analysis and evaluation of unseen case study data	60	25
2	Short answer and structured essay questions	120	50
<b>Internal assessment</b> Each student completes an individual investigation to address a research question of their choice. The final product of the investigation is a written report.			25

### Why choose this course?

ESS provides students with an in-depth understanding of the systems approach as a method for investigating. Students combine their Science and Individuals and Societies skills and understandings to study environmental issues in a holistic way. ESS is a very versatile subject within the IBDP because ESS can be taken as a Group 3 or a Group 4 subject. Therefore, for students interested in biology, geography and ecology, ESS represents a flexible pathway to specific university programs. Studying ESS is a useful first step for students who wish to work in areas such as urban or environmental planning, public policy, law, politics, and journalism.

## Group 4: Physics (HL/SL)

Physics is the study of fundamental particles, waves and interactions. It seeks to explain how the universe works and interacts on the most basic level, and on scales from the sub-atomic all the way up to the astronomical. Physics gives you the tools to start answering fundamental questions. For example, "Why do objects fall towards each other?" or "How do electric and magnetic interactions combine in a generator to create electricity?" Physics focuses fundamental principles such as energy and force to try to give answers to these types of question.

### Course Content

**1. Mechanics, Circular Motion and Gravitation** – This is often considered the "basic" topic of Physics. It involves learning how particles, projectiles and real-objects move and interact. Includes force, energy, velocity, acceleration and many more. In HL we go into more detail about gravitational fields and the links between force, energy and fields.

**2. Electromagnetism** – Applies and moves beyond Newton's Laws to explore the world of electricity, especially direct current circuits, batteries and electrical components such as motors . In HL we also learn about electromagnetic induction and go into more mathematical detail on electric fields.

**3. Waves and oscillations**– Includes mechanical waves such as sound and electromagnetic ones such as light and radio waves. Concepts include energy, amplitude, frequency, interference, intensity and more. In HL we go into more mathematical detail about waves and oscillations.

**4. Thermal Physics** – Ideal gases, fluids and solids such as metal are considered. Transfers of energy involving flow of fluids, diffusion of free electrons and radiation of heat from objects such as stars are studied.

**5. Atomic, Nuclear and Quantum Physics** – Digging deeper into fundamental particles and interactions, we look at the structure of the atom and find out which sub-atomic particles they are made of and explain why some atoms may be unstable. In HL, we also look at the dual nature of particles and waves and explain the evidence behind this duality.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, labs, presentations and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade and the majority choose to do the IB assessment.

### IB assessment

Exam paper	External assessment	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Based on multiple choice questions	45	60	20	20
2	Based on structured and short response questions	75	135	40	36
3	Analysis of experimental results and one of four options	60	75	20	24
<b>Internal Assessment (HL and SL are the same)</b> Students self-design, execute and analyse a scientific investigation, up to 12 pages.				20	20

### Why choose this course?

Physics sits at the crossroads of mathematics and everyday experience and seeks to generalise understanding into scientific principles and laws which apply as universally as possible. Physics is essential for anyone wishing to take on an engineering-based or physics-based degree. It is highly recommended for anyone considering any field related to science, mathematics or problem solving. Physics graduates are employed in fields such as IT, insurance or finance, as well as more obvious choices such as engineering or scientific research.

## Group 4: Sports, Exercise and Health Science (HL/SL)

Sports, Exercise and Health Science (SEHS) is an experimental science that combines academic study with the acquisition of practical and investigative skills. The attainment of success in life is the result of innate ability, skill and the dedicated pursuit of a programme of physical and mental training accompanied by appropriate nutrition. SEHS has been designed thoughtfully and analytically, considering physiological, biomechanical and psychological demands of life and sporting activity, to develop student understanding in these areas. In a world where many millions of people are physically inactive and afflicted by chronic disease and ill health, personal knowledge and understanding of how the body functions is an essential life skill that can be obtained from this subject.

### Course content

- 17) **Topic 1: Anatomy** – Helps us understand how the bones, muscles and joints of the body are connected and how these connections guide our movement (biology-based)
- 18) **Topic 2: Exercise Physiology** – Understanding how the cardiovascular and respiratory systems work together to supply the body with oxygen and nutrients according to different fitness levels and situations (biology-based)
- 19) **Topic 3: Nutrition and Energy Systems** – Understanding how diet is digested and absorbed, and how it contributes to energy (ATP) provision during rest and exercise (chemistry and biology-based)
- 20) **Topic 4: Movement Analysis** – Understanding muscle contraction and the forces within and on the body, and the effects of these forces in day-to-day activities and within sporting environment (physics-based)
- 21) **Topic 5: Skill and Skill Learning** – Understanding the factors that influence skill learning, performance and theories of skill learning such as selective attention, memory, practice, feedback (biology and psychology)
- 22) **Topic 6: Measurement in sport** – Understanding experiment design and evaluation principles, fitness components and training principles (biology and mathematics)

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, labs, and quizzes. Students are also assessed on informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)
		SL	HL	SL & HL
1	30 (SL)/40 (HL) multiple-choice questions	45	60	20
2	Short and extended response questions	75	135	35
3	Several short-answer questions (SL & HL) and extended-response questions (HL only) in each of the two options studied	60	75	25
<b>Internal assessment:</b> 12-page scientific investigation and write-up on a topic of student's choosing within the SEHS curriculum.				20

### Why choose this course?

SEHS is an excellent stepping stone to career paths that diagnose, treat and prevent health issues, and promote health and well-being to optimise physical and mental well-being. Examples of careers include nursing, physiotherapy or physical therapy, osteopathy, podiatry, chiropractic, occupational therapy, dietetics, nutrition, performance analytics, sports psychology, public health management, sports management, PE teaching, personal training, and life coaching.

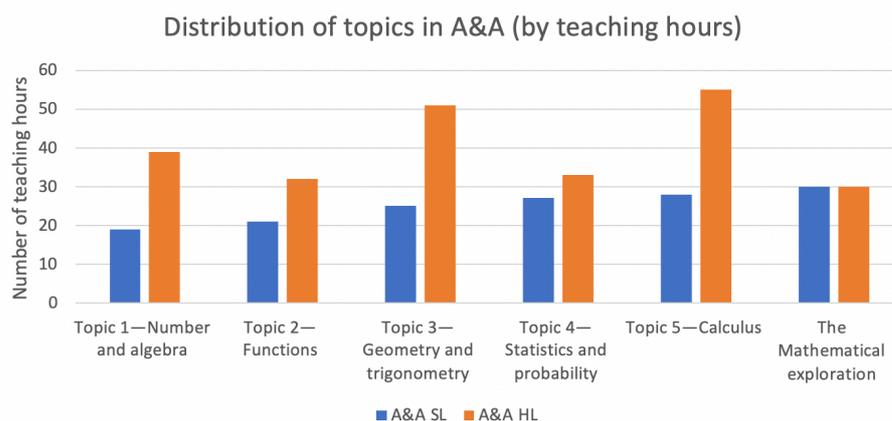
## Group 5: Mathematics: Analysis and Approaches (A&A) (HL/SL)

This course recognises the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. It has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students develop insight into mathematical form and structure, and appreciate the links between concepts in different topic areas.

### Course content

- 23) **Unit 1: Numbers and Algebra** – Numbers and algebra allow us to represent patterns, show equivalencies and make generalisations that enable us to model real-world situations.
- 24) **Unit 2: Functions** – Models are depictions of real-life events using expressions, equations or graphs while a function is defined as a relation or expression involving one or more variables.
- 25) **Unit 3: Geometry and Trigonometry** – Geometry and trigonometry allow us to quantify the physical world, enhancing our spatial awareness in two and three dimensions.
- 26) **Unit 4: Statistics and Probability** – Statistics is concerned with the collection, analysis and interpretation of data and the theory of probability can be used to estimate parameters, discover empirical laws, test hypotheses and predict the occurrence of events.
- 27) **Unit 5: Calculus** – Calculus describes rates of change between two variables and the accumulation of limiting areas. Understanding these rates of change and accumulations allow us to model, interpret and analyse real world problems and situations.

The chart below indicates how much lesson time is dedicated to each of the above topics.



### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

#### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	No technology allowed. Short-response and extended-response questions	90	120	40	30
2	Technology allowed. Short-response and extended-response questions	90	120	40	30
3	Technology allowed. Two extended-response problem-solving questions	–	60	–	20
<b>Internal assessment</b> 12-20 page mathematical exploration of an area of personal interest.				20	20

**Why choose this course?**

Mathematics: A&A is for students who enjoy developing their mathematics to become fluent in the construction of mathematical arguments and to develop strong skills in mathematical thinking. These students will also be fascinated by exploring real and abstract applications of these ideas, with and without technology. Students who take Mathematics: A&A will be those who enjoy the thrill of mathematical problem-solving and generalisation. Mathematics: A&A is often a required prerequisite subject for those wishing to study engineering, mathematics, architecture, physical sciences, and economics at university. Some universities also require Mathematics: A&A for students wanting to study psychology or business.

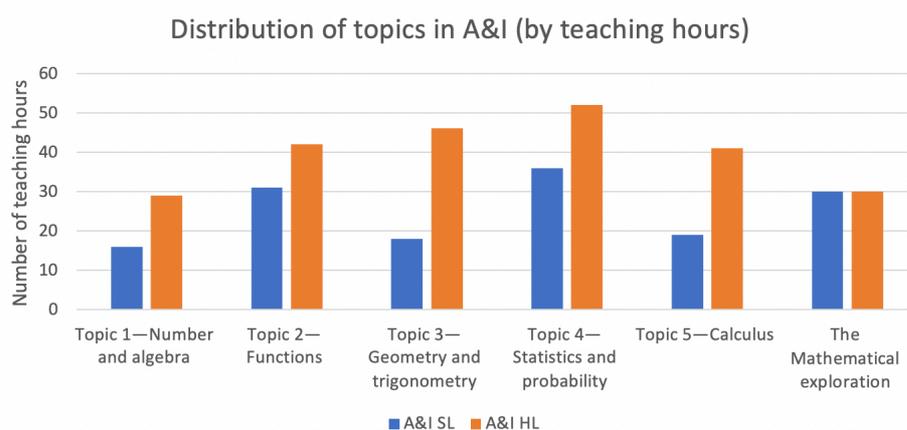
## Group 5: Mathematics: Applications and Interpretation (A&I) (HL/SL)

This course recognises the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasises the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. Students are encouraged to solve real-world problems, construct and communicate this mathematically and interpret the conclusions or generalizations.

### Course content

- 28) **Unit 1: Numbers and Algebra** – Numbers and algebra allow us to represent patterns, show equivalencies and make generalizations which enable us to model real-world situations.
- 29) **Unit 2: Functions** – Models are depictions of real-life events using expressions, equations or graphs while a function is defined as a relation or expression involving one or more variables.
- 30) **Unit 3: Geometry and Trigonometry** – Geometry and trigonometry allows us to quantify the physical world, enhancing our spatial awareness in two and three dimensions.
- 31) **Unit 4: Statistics and Probability** – Statistics is concerned with the collection, analysis and interpretation of data and the theory of probability can be used to estimate parameters, discover empirical laws, test hypotheses and predict the occurrence of events.
- 32) **Unit 5: Calculus** – Calculus describes rates of change between two variables and the accumulation of limiting areas. Understanding these rates of change and accumulations allow us to model, interpret and analyse real world problems and situations.

The chart below indicates how much lesson time is dedicated to each of the above topics.



### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments including: tests, projects, presentations, and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Exam paper	External assessment (Written exams)	Time (mins)		Weighting (%)	
		SL	HL	SL	HL
1	Technology allowed. Short-response questions	90	120	40	30
2	Technology allowed. Extended-response questions	90	120	40	30
3	Technology allowed. Two extended-response problem-solving questions	-	60	-	20
<b>Internal assessment</b>					
12-20 page mathematical exploration of an area of personal interest.				20	20

**Why choose this course?**

Mathematics: A&I is for students who are interested in developing their mathematics for describing our world and solving practical problems. These students will also be interested in harnessing the power of technology alongside exploring mathematical models. Students who take Mathematics: A&I will be those who enjoy mathematics best when used in a practical context. Mathematics: A&I is often considered a suitable pre-requisite for university study in the social sciences, natural sciences, medicine, statistics, and some business programmes.

## Group 6: Music (HL/SL)

Music is grounded in the knowledge, skills and processes associated with the study of music and offers a strengthened approach to student creativity through practical, informed and purposeful explorations of diverse musical forms, practices and contexts. The course ensures a holistic approach to learning, with the roles of performer, creator and researcher afforded equal importance in all course components.

### Course content

The aims of the music course are to enable students to:

- explore a range of musical contexts and make links to, and between, different musical practices, conventions and forms of expression
- acquire, develop and experiment with musical competencies through a range of musical practices, conventions and forms of expression, both individually and in collaboration with others
- evaluate and develop critical perspectives on their own music and the work of others

**An exploration portfolio:** Students complete written work demonstrating engagement with, and understanding of, diverse musical material, along with practical exercises in creating and performing

**An experimentation report:** Students complete written work in the form of a rationale and commentary that supports practical musical evidence of experimentation in creating and performing

**A musical presentation:** Students produce finished works in creating and performing, supported by programme notes

**A collaborative project:** Students undertake a continuous multimedia presentation documenting a real-life project, containing evidence of the project proposal, the process and evaluation, and the realized project, or curated selections of it.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments which may include: projects, presentations, performances, compositions and quizzes. Students are also assessed through informal assessments including homework and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Assessment	Weighting (%)	
	SL	HL
<b>Exploring music in context</b> (external): 2400-word essay and 4-minute recording.	30	20
<b>Experimenting with music</b> (internal): 1500 words and 10 minutes of audio recording	30	20
<b>Presenting music</b> (external): 600-word program notes and 20 minutes of audio recording	40	30
<b>Collaborative contemporary music project</b> (internal): 15-minute presentation recording	-	30

### Why choose this course?

The course is ideal for students who are interested in both the practical and theoretical aspects of music-making, respond to a creative approach to composition and performance, value collaboration, wish to experience a DP arts course, and/or plan to pursue further studies in music.

## Group 6: Theatre (SL/HL)

The theatre course is a multifaceted theatre-making course. It gives students the opportunity to make theatre as creators, designers, directors and performers. It emphasises the importance of working both individually and as part of an ensemble. Students are encouraged to work as inquisitive and imaginative artists, transforming ideas into action and communicating these to an audience. Participation in the theatre course results in the development of both theatre and life skills; the building of confidence, imagination, creativity and a collaborative mindset.

### Course content

- Staging play texts
- Exploring world theatre traditions
- Collaboratively creating original theatre
- Performing theatre theory (HL only)

**Production proposal:** Students choose a published play text not previously studied and formulate a vision for the design and theoretical staging of the entire play for an audience.

**Research presentation:** Students plan, deliver and video record an individual research presentation providing evidence of academic and practical exploration and learning of a world theatre tradition not previously studied.

**Collaborative project:** Students collaboratively create and perform an original piece of theatre from a starting point of choice. The piece is presented to an audience as a fully-realized production.

**Solo theatre piece: (HL only)** Students research a theatre theorist not previously studied, identify an aspect of theory and create and present a solo theatre piece that demonstrates the practical application of this theory for an audience.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments which may include: projects, performances, and formal research. Students are also assessed on informal assessments including homework, process journal and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

External assessment	Weighting (%)	
	SL	HL
<b>Research presentation (External):</b> Video recording of the student's research presentation; list of all sources cited and any additional resources.	30	20
<b>Collaborative project (External):</b> 10 pages of written text and images; list of works cited and video recording (7-10 min max).	40	25
<b>Solo theatre piece (External, HL only):</b> Report (2,500 words maximum); list of all primary/secondary sources cited and continuous unedited video recording (4-7minutes).	-	35
<b>Production Proposal (Internal):</b> 12 pages of written text and images; list of works cited.	30	20

### Why choose this course?

The theatre course is designed for both students who wish to pursue theatre in higher education and for those who wish to further their technical and performance skills. Students of theatre are empowered to become imaginative and skilled creators and collaborators, confident public speakers, and creative problem solvers. The analytical, self-reflective, and evaluation skills developed by the theatre course are invaluable skills which will serve any student in the long term, regardless of career or academic pursuits.

## Group 6: Visual Arts (HL/SL)

The Visual Arts course encourages students to challenge their own creative and cultural expectations and boundaries. It is a thought-provoking course in which students develop analytical skills in problem-solving and divergent thinking, while working towards technical proficiency and confidence as art-makers. In addition to exploring and comparing visual arts from different perspectives and in different contexts, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media.

### Course content

- Visual arts in context
- Visual arts methods
- Communicating visual arts

**Comparative study:** Students produce screens (for example, PowerPoint slides) which examine and compare at least three artworks, of which at least two should be by different artists, plus a list of sources used.

**HL addition:** Screens which analyse the extent to which the student's work and practices have been influenced by the art and artists examined.

**Process portfolio:** Students produce screens which evidence the student's sustained experimentation, exploration, manipulation and refinement of a variety of art-making activities.

**Exhibition:** Students produce a curatorial rationale, a selection of artworks with exhibition text (stating the title, medium, size and intention) for each artwork.

### Assessment in Grades 11 and 12

Throughout the course students complete a variety of formal assessments which may include: projects, presentations, exhibitions, artworks and quizzes. Students are also assessed on informal assessments including homework, art journal and classroom participation. All students are awarded an SSIS Diploma grade.

### IB assessment for students choosing the Diploma or Subject Course option

Assessment	Weighting (%)	
	SL	HL
<b>Comparative study (External):</b> SL – 10 to 15 screens examining 3 artworks and a list of sources used HL – 10 to 15 screens examining 3 artworks plus 3 to 5 screens about the student's own practices and a list of sources used	20	20
<b>Process portfolio (External):</b> SL – 9 to 18 screens which evidence sustained art-making processes HL – 13 to 25 screens which evidence sustained art-making processes	40	40
<b>Exhibition (Internal):</b> SL – 400-word curatorial rationale and 4-7 artworks with exhibition text HL – 700-word curatorial rationale and 8-11 artworks with exhibition text	40	40

### Why should you choose this course?

The course is designed for students who want to pursue further study of visual arts in higher education, as well as for those who are seeking lifelong enrichment through visual arts. This course empowers students to become autonomous, informed and skilled visual artists.