



IB Course Descriptions 2021–22

Students enrolled in the IB Diploma Programme take a course from each of the six subject groups and are also required to complete the IB Diploma Programme Core (CAS, Extended Essay and TOK). Students choose courses from the following subject groups: Studies in Language and Literature, Language Acquisition, Individuals and Societies, Laboratory Science,; Mathematics and The Arts. Students may opt to study an additional course in the area of Laboratory Sciences, Individuals and Societies or Language Acquisition in place of a course in The Arts.

Generally, students take three Higher Level courses (HL) and three Standard Level courses (SL). On occasion, a student may be recommended to take four HL subjects depending on the student and their overall program. HL and SL courses are the same in terms of core content and skills, with HL courses engaging students in further topics, projects and assessments. Standard level courses take 150 instructional hours over two instructional years while Higher Level courses comprise 240 instructional hours over two years.

Group 1: Language and Literature

Literature HL

The IB HL literature course develops understanding of the techniques involved in literary criticism and promotes the ability to form independent literary judgments. In English IB HL, the formal analysis of texts and wide coverage of a variety of literature — both in the language of the subject and in translated texts from other cultural domains — is combined with a study of the way literary conventions shape responses to texts. Students completing this course will have a thorough knowledge of a range of texts and an understanding of other cultural perspectives. They will also have developed skills of analysis and the ability to support an argument in clearly expressed writing, sometimes at significant length. This course will enable them to succeed in a wide range of university courses, particularly in literature, but also in subjects such as philosophy, law and language.

Prerequisite: successful completion of English II

Group 2: Language Acquisition

Latin IB SL

Throughout this intermediate course, students will read Cicero's court speeches, produce a research dossier explicating 7–9 ancient sources in order to answer a research question, and read the works of Latin love poets and Roman historians. Successful performance on the IB examination may result in students receiving college credit. **Prerequisite:** successful completion Latin II



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Latin IB HL

Throughout this upper intermediate course, students will read Cicero's court speeches, produce a research dossier explicating 10–12 ancient sources in order to answer a research question, and read the works of Latin love poets and Roman historians. Successful performance on the IB examination may result in students receiving college credit. **Prerequisite:** successful completion of Latin III and departmental recommendation

French IB SL

This is an intermediate course in which students establish a strong communicative foundation in the four skill areas: reading, writing, listening and speaking. Via authentic and varied texts, audio and video, students explore themes such as health, media, education, art, history, cultural diversity and global issues relevant to the French-speaking world and beyond. Students develop proficiency in increasingly complex functions such as narrating past events, describing future plans, expressing opinions, hypothesizing, synthesizing information and giving advice. The course emphasizes acquisition and application of more sophisticated vocabulary. **Prerequisite:** successful completion of French II

French IB HL

Building on the skills practiced in previous levels, this upper intermediate course aims to develop fluency in written and spoken communication. Students express themselves in writing via a variety of text types such as formal persuasive essays, emails, blogs and articles. Students describe and analyze images and read for comprehension and literary analysis. Course content is comprised of authentic texts and media with a global emphasis, organized around themes such as science, health, identity, customs, current events and community. This course is conducted entirely in French, and students fine-tune their use of register, diction and intonation. **Prerequisites:** successful completion of French III and departmental recommendation

Spanish IB SL

This is an intermediate course in which students establish a strong communicative foundation in the four skill areas: reading, writing, listening and speaking. Via authentic and varied texts, audio and video, students explore themes such as health, media, education, art, history, cultural diversity and global issues relevant to the Spanish-speaking world and beyond. Students develop proficiency in increasingly complex functions such as narrating past events, describing future plans, expressing opinions, hypothesizing, synthesizing information and giving advice. The course emphasizes acquisition and application of more sophisticated vocabulary. **Prerequisite:** successful completion of Spanish II



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Spanish IB HL

Building on the skills practiced in previous levels, this upper intermediate course aims to develop fluency in written and spoken communication. Students express themselves in writing via a variety of text types such as formal persuasive essays, emails, blogs and articles. Students describe and analyze images, as well as read for comprehension and literary analysis. Course content is comprised of authentic texts and media with a global emphasis, and organized around themes such as science, health, identity, customs, current events and community. This course is conducted entirely in Spanish, and students fine-tune their use of register, diction and intonation. **Prerequisite:** successful completion of Spanish III and departmental recommendation

Chinese IB SL

This is an intermediate course in which students establish a strong communicative foundation in the four skill areas: reading, writing, listening and speaking. Via authentic and varied texts, audio and video, students explore themes such as health, media, education, art, history, cultural diversity and global issues relevant to the Chinese-speaking world and beyond. Students develop proficiency in increasingly complex functions such as narrating past events, describing future plans, expressing opinions, hypothesizing, synthesizing information and giving advice. The course emphasizes acquisition and application of more sophisticated vocabulary. **Prerequisite:** successful completion of Chinese II

Chinese IB HL

Building on the skills practiced in previous levels, this upper intermediate course aims to develop fluency in written and spoken communication. Students express themselves in writing via a variety of text types such as formal persuasive essays, emails, blogs and articles. Students describe and analyze images and read for comprehension and literary analysis. Course content is comprised of authentic texts and media with a global emphasis, and organized around themes such as science, health, identity, customs, current events and community. This course is conducted entirely in Chinese, and students fine-tune their use of register, diction and intonation. **Prerequisite:** successful completion of Honors Chinese III and departmental recommendation

Group 3: Individuals and Societies

History IB SL: Topics in Modern World History

Topics in Modern World History is a two-year world history course based on a comparative and multi-perspective approach to history. It involves the study of a variety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility. The course emphasizes the importance of thinking historically and developing historical skills as well as gaining factual knowledge. Students will begin by studying the causes and effects of various 20th century wars. The topic explores the causes of wars, as well as the way in which warfare was conducted,



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including types of war, the use of technology, and the impact these factors had upon the outcome. Students will then explore how the Cold War dominated global affairs from the end of the second World War to the early 1990s. This topic aims to promote an international perspective on the Cold War by requiring the study of Cold War leaders, countries and crises from more than one region of the world. In their second year, students will compare and contrast two case studies – the first explores Japanese expansion in East Asia, beginning in 1931 and ending with the attack on Pearl Harbor. The second case study explores German and Italian expansion in the years leading up to World War II. Students will also write a research paper on a topic of their choice, while preparing for the IB exams in May. **Prerequisite:** none

History IB HL: Topics in Modern World History with a focus on Asia in the 20th Century

Topics in Modern World History with a focus on Asia in the 20th Century emphasizes and develops historical thinking and historical skills as well as the factual knowledge to support this thinking. With a premium on the skills of critical thinking and an understanding of multiple interpretations of history, this course is a challenging, demanding and critical exploration of the past. The course begins with an exploration of early 20th century Chinese and Korean history, followed by a unit on the People's Republic of China and a unit on Cold War conflicts in Asia. Students will then compare and contrast two case studies – the first explores Japanese expansion in East Asia, beginning in 1931 and ending with the attack on Pearl Harbor. The second case study explores German and Italian expansion in the years leading up to World War II. Finally, students will select two modern world history topics to study in their senior year, while writing a research paper and preparing for the IB exams in May. **Prerequisite:** none

Global Politics IB SL/HL

This course explores fundamental political concepts such as power, equality, sustainability and peace in a range of contexts and through a variety of approaches. It allows students to develop an understanding of the local, national, international and global dimensions of political activity, as well as allowing them the opportunity to explore political issues affecting their own lives. Students in the HL course pursue an additional research topic examining two contemporary global political challenges. **Prerequisite:** none

World Religions IB SL

The World Religions IB SL course is a systematic, analytical study of the variety of beliefs and practices encountered in nine main religions of the world. The course seeks to promote an awareness of religious issues in the contemporary world by requiring the study of a diverse range of religions. The religions are studied in such a way that students acquire a sense of what it is like to belong to a particular religion and how followers of a religion understand the world, and relate and respond to others. **Prerequisite:** none



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Group 4: Sciences

Physics IB SL/HL

Physics seeks to explain the universe itself, from the very smallest particles to the vast distances between galaxies. Students engage in the scientific method of observation and experimentation, developing models to test observations and derive theories, and use manipulative skills to design investigations, collect data, analyze and evaluate results, and communicate their findings. Core topics include measurements and uncertainties, mechanics, thermal physics, waves, electricity and magnetism, circular motion and gravitation, atomic, nuclear and particle physics, and energy production. While the skills and activities are common to students in both SL and HL, students taking the HL course are required to study some topics in greater breadth and depth and must take additional assessments. **HL Prerequisites:** successful completion of Physics or Honors Physics and departmental recommendation

Chemistry IB SL

The Chemistry IB SL course combines academic study with the acquisition of practical and investigational skills through the experimental approach. 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 covers the essential principles of the subject. Throughout this challenging course, students become aware of how scientists work and communicate with each other. Further, students enjoy multiple opportunities for scientific study and creative inquiry within a global context. Core topics include quantitative chemistry, atomic structure, periodicity, bonding, energetics (thermodynamics), kinetics, equilibrium, acids and bases, oxidation and reduction, organic chemistry, and measurement and data processing. Additional topics include further organic chemistry and quantitative, analytical, and environmental applications in medicinal chemistry or biochemistry. **Prerequisite:** successful completion of Chemistry or Honors Chemistry and departmental recommendation

Chemistry IB HL

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. This course allows students to develop a wide range of practical skills and to increase facility in the use of mathematics. It also allows students to develop interpersonal and information technology skills, which are essential to life in the twenty-first century. By studying chemistry, students 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 characterizes the subject. Teachers provide students with



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opportunities to develop manipulative skills, design investigations, collect data, analyze results and evaluate and communicate their findings. Core topics include stoichiometric relationships, atomic structure, periodicity, chemical bonding and structure, energetics and thermochemistry, chemical kinetics, equilibrium, acids and bases, redox processes, organic chemistry, and measurement and data processing. **Prerequisite:** successful completion of Honors Chemistry and departmental recommendation

Biology IB SL

In this course, students master both the practice of the scientific method and topics in cell biology, molecular biology, genetics, ecology, evolution and biodiversity, and human physiology. They will become aware of how scientists work and communicate with each other. Students design investigations, collect data, develop manipulative skills, analyze results, collaborate with peers and evaluate and communicate their findings. **Prerequisite:** none

Biology IB HL

In this course, students master both the practice of the scientific method and topics in cell biology, molecular biology, genetics, ecology, evolution and biodiversity, human physiology, nucleic acids, metabolism, cell respiration and photosynthesis, plant biology, animal physiology and an additional faculty-selected topic. They will become aware of how scientists work and communicate with each other. Students design investigations, collect data, develop manipulative skills, analyze results, collaborate with peers and evaluate and communicate their findings. **Prerequisite:** successful completion of Chemistry or Honors Chemistry and departmental recommendation

Environmental Systems & Societies IB SL

The IB Environmental Systems & Societies (ESS) SL course provides students with a coherent perspective of the interrelationships between environmental systems and societies, one that enables them to adopt an informed personal response to the wide range of pressing environmental issues that they will inevitably come to face. Students' attention is drawn to their own relationship with their environment and the significance of choices and decisions they make in their own lives. Students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. Students evaluate the scientific, ethical and socio-political aspects of the field of environmental science. ESS is an interdisciplinary course in the IBDP and qualifies as a laboratory science in the school's graduation requirement. **Prerequisite:** none

Group 5: Mathematics

Mathematics: Analysis & Approaches IB SL/HL

The IB Mathematics: Analysis & Approaches course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. The focus



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is on understanding important mathematical concepts in a comprehensible, coherent and rigorous way. Students are encouraged to apply their mathematical knowledge to solve abstract problems as well as those set in a variety of meaningful contexts. This course has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students 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. Topics of study include Algebra, functions and equations, circular functions and trigonometry, vectors, statistics and probability, and an emphasis on advanced calculus topics. Content of the SL course is a complete subset of the HL course. HL coursework includes extended topics and requires additional papers and exams. **SL Prerequisites:** successful completion of Algebra II and departmental assessment; **HL Prerequisites:** successful completion of Honors Precalculus and departmental assessment

Mathematics: Applications & Interpretations IB SL/HL

The IB Mathematics: Applications & Interpretations course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modeling. 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. Students should expect to develop strong technology skills and will be intellectually equipped to appreciate the links between the theoretical and practical concepts in mathematics. Topics of study include Algebra, functions and equations, circular functions and trigonometry, vectors, calculus, probability, and an emphasis on advanced statistical analysis of data sets. Content of the SL course is a complete subset of the HL course. HL coursework includes extended topics and requires additional papers and exams. **SL Prerequisites:** successful completion of Geometry and departmental assessment; **HL Prerequisites:** successful completion of Honors Algebra II and departmental assessment

Group 6: The Arts

**Students may opt to study an additional sciences, individuals and societies, or languages course, instead of a course in the arts. IB Computer Science, listed below, falls within this category.*

Visual Arts SL/HL

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 artmakers. In addition to exploring and comparing visual arts from different perspectives and in



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different contexts, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media.

Prerequisite: none

Music IB SL/HL

Through the IB Music course, students develop their knowledge and potential as musicians, both personally and collaboratively. Involving aspects of the composition, performance and critical analysis of music, this course exposes students to forms, styles and functions of music from a wide range of historical and socio-cultural contexts. Students create, participate in and reflect upon music from their own background and those of others. They develop practical and communicative skills which provide them with the opportunity to engage in music for further study, as well as for lifetime enjoyment. Both SL and HL music students are required to study musical perception. SL students in music are then required to choose one of three options: creating, solo performing or group performing. HL students are required to present both creating and solo performing. **Prerequisite:** departmental recommendation or assessment

Computer Science IB SL/HL

The IB Computer Science course requires an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. The course, underpinned by conceptual thinking, draws on a wide spectrum of knowledge and enables and empowers innovation, exploration and the acquisition of further knowledge. Students study how computer science interacts with and influences culture, society and individuals and the ethical issues involved. During the course, the student will develop computational solutions. This will involve the ability to: identify a problem or unanswered question; design, prototype and test a proposed solution; and liaise with clients to evaluate the success of the proposed solution and make recommendations for future developments. **Prerequisite:** none

IB Diploma Programme Core

Extended Essay

The Extended Essay is a 4,000 word research paper in a specific subject area. Students must design a research question in conjunction with a faculty mentor (identified with IB Coordinator and Extended Essay Library Research Consultants). A rough draft of the essay is submitted at the start of senior year and developed throughout the fall with the assistance of a faculty mentor who assesses the final draft. Successful completion of the EE is essential for fulfillment of the Diploma Programme.

Theory of Knowledge (ToK) (junior spring/senior fall)

Theory of Knowledge (ToK) is an interdisciplinary course about critical thinking and invites students to reflect on the nature of knowledge and to make connections across areas of knowledge. The study



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of ToK asks students to formulate answers to the question: “How do you know?” Students develop critical thinking skills, evaluate sources and analyze theories within a real-world context. During Year 1 of ToK students will demonstrate, through an exhibition work, how ToK thinking manifests in real-world artifacts with a focus on knowledge questions. The exhibition enables students to demonstrate the application of their skills and knowledge and to pursue their personal interests. At the completion of the course, students will identify and explore the knowledge issues raised by a substantive real-life situation that is of interest to them through a 1,600 word essay on a prescribed title exploring the fundamental components of the ToK curriculum.

Creativity Activity Service (CAS)

Successful completion of CAS – Creativity Activity Service - is a requirement for the award of the International Baccalaureate diploma. CAS is assessed by one-on-one meetings between a student and CAS Coordinator throughout their junior and senior years. Students must document their activities and provide evidence that they have:

- Increased their awareness of their own strengths and areas for growth
- Undertaken new challenges
- Planned and initiated activities
- Worked collaboratively with others
- Shown perseverance and commitment in their activities
- Engaged with issues of global importance
- Considered the ethical implications of their actions
- Developed new skills