

International Baccalaureate Diploma Program



Planning Guide 2009-2010

INTRODUCTION

Welcome to the course selection process for the International Baccalaureate Program! This Planning Guide is designed to assist juniors in planning their two-year IB experience and to assist seniors in completing the program. This information is intended to supplement the more detailed program description that is available from the IB Coordinator. Please do not hesitate to speak with the IB Coordinator or your guidance counselor if you have any questions.

Theory and Philosophy

THE MISSION STATEMENT OF THE INTERNATIONAL BACCALAUREATE ORGANIZATION

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

To this end the IBO works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

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

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THE IB LEARNER PROFILE

Developed in 2006, the IB Learner Profile is the mission statement of the IB Organization translated into a set of learning outcomes:

IB learners strive to be:

<u>Inquirers</u>	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
<u>Knowledgeable</u>	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
<u>Thinkers</u>	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
<u>Communicators</u>	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
<u>Principled</u>	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
<u>Open-minded</u>	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.

<u>Caring</u>	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
<u>Risk-takers</u>	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
<u>Balanced</u>	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
<u>Reflective</u>	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

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The mission statement and the learner profile form the common philosophical thread that unites all IB courses.

Program Details

DIPLOMA REQUIREMENTS

The IB Diploma is earned when a student successfully completes the 6 required IB courses and the 3 required “central elements: of Theory of Knowledge, CAS, and the Extended Essay.

Required Courses

Students must select one course from each of the following six IB subject groups:

Language A1	An in-depth study of the student’s native language. Most students will take <u>English A1</u> to satisfy this requirement. Native speakers of other languages may fulfill this requirement through a self-taught option.
Language A2, B, <i>ab initio</i> or Classical Languages	The study of a foreign language. The following classes will satisfy this diploma requirement: <u>Spanish B</u> (taken after Spanish 4H), <u>French B</u> (taken after French 4H), <u>Latin</u> (taken after Latin 4H), <u>Spanish <i>ab initio</i></u> (a 2-year introductory course for beginning Spanish students), <u>French <i>ab initio</i></u> (a 2 year introductory course for beginning French students), <u>Spanish A2</u> (for near-native speakers of Spanish), <u>French A2</u> (for near-native speakers of French).
Individuals and Societies	There are three courses offered within this group: <u>History of the Americas</u> , <u>Psychology</u> , and <u>Economics</u> . Because all students must take American History as a graduation requirement, History of the Americas will be required. Students may select Psychology or Economics as their elective course (see below).
Experimental Sciences	Students may select <u>Biology</u> , <u>Chemistry</u> , or <u>Physics</u> .
Mathematics	Students may select either <u>Mathematical Studies</u> or <u>Mathematics</u> .

Electives

Students may select either Music, Visual Arts, or an additional course in one of the above groups (Psychology, Economics, or a second Language B; a second science class is unlikely to fit in the schedule, and scheduling a second language may be problematic).

All IB Diploma candidates are required to complete one subject from each group. At least three but not more than four of the six subjects are taken at the Higher Level, the others at the Standard Level. Higher and Standard Levels are IB classifications that describe the level of depth and breadth of the course. The level of rigor is the same but the Higher Level courses are two-year courses while most Standard Level courses are one-year courses. See page 5 for further discussion. Students are assessed primarily by external examinations which are taken at the same time (November or May) throughout the world. Worldwide, there are approximately 4,000 examiners who participate in the assessment of student work. Each student is graded on a scale of 1 to 7 in each subject. A minimum total of 24 points in the six academic subjects plus the satisfactory completion of the central elements are required to earn the diploma. In general, a higher grade in one course may be used to compensate for a lower grade in another course, though there are some exceptions to this rule.

The Mission Statement and the Learner Profile form the common philosophical thread that runs through each course and connects the academic experience with the central elements of Theory of Knowledge, CAS, and the Extended Essay.

JUNIOR AND SENIOR YEAR COURSES

Eleventh Grade Courses (SL=standard level course; HL=higher level course)

Group 1: Language A1—English A1, HL (Part 1)

Group 2: Language A2, B, *ab initio*, Classical Languages (World Language)

Students who have completed Spanish 3 Honors, French 3 Honors, or Latin 3 Honors successfully should enroll in level 4 Honors of the respective language. Students who have not completed through the 3 Honors level should consult their teacher to discuss options for acceleration and/or enrichment. Students who are not currently studying Spanish, French, or Latin should enroll in Spanish *ab initio* (part 1) or French *ab initio* (part 1). The *ab initio* courses are also available for students who are considerably off-sequence in their current language.

Group 3: Individuals and Societies—History of the Americas HL (Part 1)

Group 4: Experimental Sciences

Chemistry SL, Chemistry HL (Part 1), Biology SL, Biology HL (Part 1), Physics SL (Part 1), or Physics HL (Part 1)

Group 5: Mathematics

Mathematical Studies SL (Part 1), Mathematics SL (Part 1), or Mathematics HL (Part 1)

Though standard level courses, Mathematical Studies and Mathematics SL will be offered over a two-year period.

Group 6: Arts or Elective (IB elective courses will be available for non-IB students as well.)

Music SL, Music HL (Part 1), Visual Arts SL, Visual Arts HL (Part 1), Psychology SL, Psychology HL (Part 1), Economics SL, or Economics HL (Part 1). A second Language B will also satisfy the elective requirement (though scheduling will be challenging). Courses will be offered according to enrollment.

In addition to the above requirements, most students will have an additional opportunity to schedule a non-IB elective class; students may choose to take any other course offered at Harriton., subject to the design of the master schedule. Consistent with state mandate, all students will be required to take a physical education class as well.

All courses are subject to minimum enrollment requirements. Courses for which enough students do not register to warrant the teaching of the class will be cancelled.

Twelfth Grade Courses

Group 1: Language A1—English A1, HL (Part 2) or Language A1 self-taught SL

Language A1 self-taught is available for students whose native language is not English and whose proficiency in English would impede success in English A1. Such students will normally fulfill the

Language B requirement with English.

Group 2: Language A2, B, *ab initio*, Classical Languages (World Language)

Students completing level 4 Honors of Spanish, French, or Latin should enroll in Spanish B SL, French B SL, or Latin SL. Students who took French or Spanish *ab initio* (part 1) in their junior year should enroll in French or Spanish *ab initio* (part 2). Students who have had substantial non-academic exposure to Spanish or French are precluded from the Language B class and should take either Spanish A2 or French A2.

Group 3: Individuals and Societies—History of the Americas HL (Part 2)

Group 4: Experimental Sciences (only for students studying Science at the higher level or Physics SL)

Chemistry HL (Part 2), Biology HL (Part 2), Physics HL (Part 2), or Physics SL (Part 2)

Group 5: Mathematics

Mathematical Studies SL (Part 2), Mathematics SL (Part 2), or Mathematics HL (Part 2)

Group 6: Arts or Elective (only for students taking their elective at the higher level)

Music HL (Part 2), Visual Arts HL (Part 2), Economics HL (Part 2), Psychology HL (Part 2)

Central Element: Theory of Knowledge

In addition to the above requirements, most students will have an additional opportunity to schedule a non-IB elective class during their senior year; students may choose to take any other course offered at Harriton, subject to the design of the master schedule. Because Physics SL is a two-year obligation, unlike the other standard-level science classes, students enrolled in Physics SL are unlikely to have an unscheduled period.

Consistent with state mandate, all students will be required to take a physical education class as well.

Higher Level and Standard Level Courses

All students must study 3-4 courses at the higher level and 2-3 courses at the standard level. English A1 and History of the Americas are required higher level classes; the third higher level class may be selected from the student's science, math, or elective courses. Students may take 4 higher level courses if one of them is Mathematics HL.

Language A1 self-taught is a standard level course. Note that self-taught Language A1 courses are not Lower Merion School District courses, are not graded, do not appear on official transcripts, and do not yield credit for graduation.

In general, standard level courses are taught over one year and higher level courses are taught over two years. Higher level courses are not more difficult than standard level courses; they simply last longer. The following standard level courses are taught over two years and are therefore exceptions to this pattern: Mathematical Studies SL, Mathematics SL, Spanish *ab initio* SL, French *ab initio* SL, Physics SL.

The IB Senior Project

State law mandates the completion of a Senior Project as a requirement for graduation. The Senior Project for IB students will consist of the CAS and Extended Essay requirements for the IB Diploma as well as a final reflection paper on the IB experience and participation in an exit interview with the IB Coordinator.

CAS is an on-going experience during both years of the program. Students will be scheduled into a meeting period with the CAS Supervisor once per cycle. The Extended Essay is assigned in the junior year and due in the senior year. Seniors will enroll in a class entitled "IB Senior Project," and their work on the various components of the Senior Project will be assessed on a pass/fail basis and will earn .5 credit.

The International Baccalaureate Diploma Program

Grades 11 and 12

The following graphic organizer outlines the possible course sequences leading to the IB Diploma. Courses designated as HHS (Harriton High School) are internal Harriton classes rather than IB classes. Students will follow one of the two-year sequences for each of the six groups to be studied.

SUBJECT GROUP	Grade 11	Grade 12	Comments
GROUP 1: Language A1	English A1 HL		Native speakers of other languages may study that language independently as a standard level course to satisfy this requirement.
GROUP 2: Language B, A2, <i>ab initio</i>, Classical Languages	Spanish 4 Honors (HHS)	Spanish B (or A2) SL	Though taught over a two-year period, Spanish <i>ab initio</i> and French <i>ab initio</i> are standard level courses.
	French 4 Honors (HHS)	French B (or A2) SL	
	Latin 4 Honors (HHS)	Latin SL	
	Spanish <i>ab initio</i> SL		
	French <i>ab initio</i> SL		
GROUP 3: Individuals and Societies	History of the Americas HL		The required credit in American Government may be earned (1) during the tenth grade, (2) as a non-IB elective in 11 th or 12 th grade, or (3) during the summer.
GROUP 4: Experimental Sciences	Physics HL		Students must study their science, math, or elective course at the higher level. Students who wish to take 4 higher level classes may do so if one of them is math. Note that Physics SL is a 2-year course.
	Chemistry HL		
	Biology HL		
	Physics SL		
	Chemistry SL		
	Biology SL		
GROUP 5: Mathematics	Mathematical Studies SL		Both SL math classes are standard level courses taught over a two-year period. Advanced students who complete Algebra 2H during their freshman year may take Mathematics SL during their sophomore and junior years.
	Mathematics SL		
	Mathematics HL		
	Mathematics SL (part 2)		
GROUP 6: Electives	Visual Arts HL		Students must study their science, math, or elective course at the higher level. Students who wish to take 4 higher level classes may do so if one of them is math.
	Music HL		
	Psychology HL		
	Economics HL		
	Visual Arts SL		
	Music SL		
	Psychology SL		
	Economics SL		
CORE REQUIREMENT: Theory of Knowledge		Theory of Knowledge	
CORE REQUIREMENT: Creativity, Action, Service	75-100 hours of CAS activities recommended	50-75 hours of CAS activities recommended	Students must complete 150 hours within the fields of Creativity, Action, and Service.
CORE REQUIREMENT: Extended Essay	Students should spend substantial time in the research, planning, and writing stages.	The completed Extended Essay is due in December.	
OTHER REQUIREMENTS	Physical Education	Physical Education	

Course Descriptions

English A1-HL (Part 1)—3 periods per cycle—all year—1 credit (01030505)

This is the first year of a two-year course designed to prepare students for the prescribed internal and external assessments required by the IB Organization. Successful students are those with a strong academic background who have previously exhibited exceptional performance in written and oral expression, critical thinking, and inference skills as determined by previously established criteria. Because of the rigorous level of reading and writing, students should have strong motivation, highly developed organizational and study skills, and the maturity to discuss literature on an abstract, figurative, and critical level.

The eleventh grade curriculum exposes students to diverse cultures (including the United States), genres, and time periods, with depth rather than breadth as the goal. The IB English program emphasizes close reading of texts; the students engage in detailed textual analysis, considering the purposes and effects of literary devices and other aspects of the authors' art. The works are also considered in relation to one another through analysis of common themes. A major goal of the program is to develop students' abilities in both oral and written analysis; thus, the students will be expected to write analytical essays, participate in class discussion, and give oral presentations.

English A1-HL (Part 2)—3 periods per cycle—all year—1 credit (01040505)

Prerequisite—English A1-HL (Part 1)

This is the second year of a two-year course designed to prepare students for the prescribed internal and external assessments required by the IB Organization. Successful students are those with a strong academic background who have previously exhibited exceptional performance in written and oral expression, critical thinking and inference skills as determined by previously established criteria. Because of the rigorous level of reading and writing, students should have strong motivation, highly developed organizational and study skills, and the maturity to discuss literature on an abstract, figurative, and critical level.

The twelfth grade curriculum exposes students to diverse cultures, genres, and time periods, with depth rather than breadth as the goal. The IB English program emphasizes close reading of texts; the students engage in detailed textual analysis, considering the purposes and effects of literary devices and other aspects of the authors' art. The works are also considered in relation to one another through analysis of common themes. A major goal of the program is to develop students' abilities in both oral and written analysis; thus, the students will be expected to write analytical essays, participate in class discussion, and give oral presentations.

English B-HL—3 periods per cycle—all year—1 credit (01040705)

The English B course is designed for students whose native language is not English and who have been studying English as a second language. It will focus on the development and refinement of skills within the four primary areas of foreign language study (reading, writing, listening, and speaking) by integrating activities that support these skills in the study of all content. The course will proceed entirely in English and conversation will be prompted by a detailed analysis of many media, including printed text, music, visual arts, WebPages, CD ROMs, videos, and any other media that become available and are consistent with the goals and content of the course. One of the major goals is to come to a sophisticated understanding of the English-speaking world and to make meaningful connections between this course and

other IB offerings. This course should only be taken by students who do not have native or near native background in English.

Spanish B-SL—3 periods per cycle—all year—1 credit (05021005)

The Spanish B course, offered to seniors in the IB Program, will focus on the development and refinement of skills within the four primary areas of foreign language study (reading, writing, listening, and speaking) by integrating activities that support these skills in the study of all content. The course will proceed entirely in Spanish and discussion will be prompted by a detailed analysis of many media, including printed text, music, visual arts, WebPages, CD ROMs, videos, and any other media that become available and are consistent with the goals and content of the course. One of the major goals is to come to a sophisticated understanding of the Latin American world and to make meaningful connections between this course and other IB offerings. This course should be taken by students who do not have native or near native background in Spanish. Students who are not enrolled in Spanish 4 Honors during their junior year should discuss enrichment and/or acceleration opportunities with either their Spanish teacher or the IB Coordinator.

Spanish A2-SL—3 periods per cycle—all year—1 credit (05020705)

The Spanish A2 course, offered to seniors in the IB Program, is designed for study by IB students with a high level of competency in Spanish. The course targets bilingual students who require a course of study to refine their oral communication in formal situations and their writing skills, those students who have lived in a country where Spanish is spoken and have gone beyond the foreign learner stage in acquiring the language, and those who have been educated throughout the secondary level at a school whose working language is Spanish. The program is based on the study of literature and language of the Spanish-speaking peoples and the art and the realia produced by those cultures. Possible topics to be addressed include the future, social change, global issues, languages, cultures, media, and society.

Spanish *ab initio* (Part 1)—3 periods per cycle—all year—1 credit (05020505)

Spanish *ab initio* (“from the beginning” in Latin) is a standard level course taught over a two-year period. This fast-paced class is designed for students who have had no academic preparation in Spanish and provides them with a foundation for further study while developing their ability to communicate in speech and in writing so that they may deal effectively with familiar and practical needs. It also introduces them to the cultures of the countries where Spanish is spoken. The course and its assessment stress the development of the candidate’s listening, speaking, reading, and writing skills equally.

Spanish *ab initio* (Part 2)—3 periods per cycle—all year—1 credit (05020605)

Prerequisite—Spanish *ab initio* (Part 1)

Spanish *ab initio* (Part 2) is a rigorous course that reviews and builds upon the basic skills learned in part 1. This course will focus on both grammatical structures of the Spanish language as well as offer insight into the various cultures of Spanish speakers. The course and its assessment stress the development of the candidate’s listening, speaking, reading, and writing skills equally.

French B-SL—3 periods per cycle—all year—1 credit (05011005)

The French B course, offered to seniors in the IB Program, will focus on the development and refinement of skills within the four primary areas of foreign language study (reading, writing, listening, and speaking) by integrating activities that support these skills in the study of all content. The course will proceed entirely in French and discussion will be prompted by a detailed analysis of many media, including printed text, music, visual arts, WebPages, CD ROMs, videos, and any other media that become available and are consistent with the goals and content of the course. One of the major goals is to come to a sophisticated understanding of the Francophone world and to make meaningful connections between this course and other IB offerings. This course should be taken by students who do not have native or near native background in French. Students who are not enrolled in French 4 Honors during their junior year should discuss enrichment and/or acceleration opportunities with either their French teacher or the IB Coordinator.

French A2-SL—3 periods per cycle—all year—1 credit (05010705)

The French A2 course, offered to seniors in the IB Program, is designed for study by IB students with a high level of competency in French. The course targets bilingual students who require a course of study to refine their oral communication in formal situations and their writing skills, those students who have lived in a country where French is spoken and have gone beyond the foreign learner stage in acquiring the language, and those who have been educated throughout the secondary level at a school whose working language is French. The program is based on the study of literature and language of the French-speaking peoples and the art and the realia produced by those cultures. Possible topics to be addressed include the future, social change, global issues, languages, cultures, media, and society.

French *ab initio* (Part 1) —3 periods per cycle—all year—1 credit (05010505)

French *ab initio* (“from the beginning” in Latin) is a standard level course taught over a two-year period. This fast-paced class is designed for students who have had no academic preparation in French and provides them with a foundation for further study while developing their ability to communicate in speech and in writing so that they may deal effectively with familiar and practical needs. It also introduces them to the cultures of the countries where French is spoken. The course and its assessment stress the development of the candidate’s listening, speaking, reading, and writing skills equally.

French *ab initio* (Part 2) —3 periods per cycle—all year—1 credit (05010605)

Prerequisite—French *ab initio* (Part 1)

French *ab initio* (Part 2) is a rigorous course that reviews and builds upon the basic skills learned in part 1. This course will focus on both grammatical structures of the French language as well as offer insight into the various cultures of French speakers. The course and its assessment stress the development of the candidate’s listening, speaking, reading, and writing skills equally.

Latin-SL—3 periods per cycle—all year—1 credit (05030505)

This course will prepare you for both papers which comprise the SL IB Latin Examination. In addition to the Vergil read in Latin 4, you will also read selections from Ovid, Latin Lyric Poetry, and Roman historians in Latin and selections from Roman epic, oratory, amatory poetry (Ovid’s Amores), and satires in English translation.

History of the Americas-HL (Part 1)—3 periods per cycle—all year—1 credit (02050105)

History of the Americas-HL is a higher level course to be taught over a two-year period. The aim of the course is to reach beyond ordinary knowledge acquisition by challenging its participants to investigate historical assumptions, analyze evidence, and explore themes that have shaped popular major movements and events. The objective will be to create in students a genuine interest in the human elements that have guided our past and steer our future. The first year of the IB History program will focus on the Regional Study: *The Americas*. This will be an examination of the major events, personalities and trends U.S. and Latin American history from 1865 to 1975. The second year of the program will concentrate on *Twentieth Century Global Topics* and include a review unit.

History of the Americas-HL (Part 2)—3 periods per cycle—all year—1 credit (02050205)

Prerequisite – History of the Americas-HL (Part 1)

History of the Americas-HL (Part 2) is the second year of a two-year course offered at the higher level (HL). Through an interdisciplinary approach that emphasizes research, interpretation, analysis, and discussion of historical evidence, Part 2 of the course will examine global topics of the 20th Century. Particular attention will be paid to the causes, practices, and effects of war, nationalist and independent movements, decolonization and the challenges facing new states, the rise and rule of single-party states, the work of international organizations, the state and its relationship with religion and with minorities, and the Cold War.

Psychology-SL —3 periods per cycle—all year—1 credit (02060305)

The Psychology-SL class will provide students with a solid foundation in the historical background of psychology as a social science. Students will be exposed to the study of the behavior of organisms, both animal and human. They will study various methodologies and philosophical positions as they have developed in modern psychology. Students will be exposed to the utilization of the scientific method in the social sciences and its importance in the growth of the psychological sciences. This course may be taken by non-IB students as well.

Psychology-HL (Part 1) —3 periods per cycle—all year—1 credit (02060405)

The Psychology-HL (part 1) class is the first year of the Higher Level Psychology class. The HL student will expand on the foundational information found in the SL class within a two year framework. In addition to the historical and theoretical background information, the HL student will produce an original research project following IB guidelines. This course will be offered depending on enrollment and may be taken by non-IB students as well.

Psychology-HL (Part 2) —3 periods per cycle—all year—1 credit (02060505)

Prerequisite—Psychology HL (Part 1)

The Psychology HL (Part 2) class is the second year of the Higher Level Psychology class. This class will continue to expand on foundational information begun in the first year of the class. In addition, the students will study their assigned optional area in depth. This is the year in which their experimental study will be completed, requiring 25 hours, 1500-2000 words, and includes the use of inferential statistics as part of the analysis of data. Psychology HL (Part 1) is a prerequisite to take this course.

Economics-SL—3 periods per cycle—all year—1 credit (02070305)

The Standard Level Economics class will provide students with a solid foundation in microeconomics and macroeconomics. Basic economic terminology will be emphasized, and students will become familiar with analyzing economic models, graphs, and data. While the course will focus on the central economic questions of “What?”, “How?”, and “For whom?”, students will apply economic theory to the “real world” issues of economic development, market structures, the environment, and the impact of technology. Students will be required to prepare commentaries linking the material in the classroom to contemporary situations described in published news media. This course will be offered depending on enrollment and may be taken by non-IB students as well.

Economics-HL (Part 1) —3 periods per cycle—all year—1 credit (02070405)

This course is the first year of the two-year Higher Level Economics class and will provide students with an in-depth study of microeconomics and macroeconomics. Basic economic terminology will be emphasized, and students will become familiar with analyzing economic models, graphs, and data. While the course will focus on the central economic questions of “What?”, “How?”, and “For whom?”, students will apply economic theory to the “real world” issues of economic development, market structures, the environment, and the impact of technology. Students will be required to prepare commentaries linking the material in the classroom to contemporary situations described in published news media. This course will be offered depending on enrollment and may be taken by non-IB students as well.

Economics-HL (Part 2)—3 periods per cycle—all year—1 credit (02070505)

Prerequisite—Economics HL (Part 1)

This course is the second year of the two-year Higher Level Economics class, and will expand on the economic foundations covered in Part 1. There will be a further analysis of such topics as cost theory, market structures, Veblen and Giffin goods, multipliers and accelerators, inflation measures, Philips curves, Laffer curves, Lorenz curves, comparative advantage, Marshall-Lerner conditions, and trade issues. This course will be offered depending on enrollment and may be taken by non-IB students as well.

Chemistry-SL—4 periods per cycle—all year—1 credit (04020605)

The Standard Level Chemistry course is a one-year course emphasizing subject matter which will prepare the student for college or university entrance. The focus will be laboratory based with the aim to develop the student’s ability to analyze, evaluate, and synthesize chemical information by testing and modifying hypotheses through observation and measurement. This objective is to enable the student to learn the way in which scientists work and communicate with each other throughout the world in order to stimulate scientific study and creativity within global contexts.

Chemistry-HL (Part 1) —4 periods per cycle—all year—1 credit (04020705)

This course is the first half of the two-year Higher Level Chemistry class and emphasizes subject matter which will prepare the student for college or university entrance. The focus will be laboratory based with the aim to develop the student's ability to analyze, evaluate, and synthesize chemical information by testing and modifying hypotheses through observation and measurement. This objective is to enable the student to learn the way in which scientists work and communicate with each other throughout the world in order to stimulate scientific study and creativity within global contexts.

Chemistry-HL (Part 2) —4 periods per cycle—all year—1 credit (04020805)

Prerequisite—Chemistry-HL (Part 1)

This course is an extension of the first year course with substantial hours of additional material dedicated to the topics of atomic theory, periodicity, chemical bonding, thermodynamics, kinetics, equilibrium, acids and bases, oxidation and reduction, and organic chemistry. The focus is still laboratory based with the aim to strengthen the student's ability to analyze, evaluate, and synthesize chemical information.

Biology-SL—4 periods per cycle—all year—1 credit (04010505)

This IB class is a one year course of study that will include concepts of Levels of Organization, Continuity of life, Cellular respiration, Photosynthesis, Microbiology, Genetics, and Biotechnology. There are 12-20 laboratory experiments that are mandatory and 5-10 optional experiments which include one collaborative multidisciplinary Group IV Project. The course will enhance student's critical thinking and problem solving skills as well as develop scientific expository writing. Students will be prepared for the SL IB Examination.

Biology-HL (Part 1)—4 periods per cycle—all year—1 credit (04010605)

This IB class is the first year course of study of a two year program that will include concepts of Levels of Organization, Continuity of life, Cellular respiration, Photosynthesis, Microbiology, Genetics, and Biotechnology. There are 12-20 laboratory experiments that are mandatory and 5-10 optional experiments which include one collaborative multidisciplinary Group IV Project. The course will enhance student's critical thinking and problem solving skills as well as develop scientific expository writing. Students will take the second year and sit for the HL exam after the second year.

Biology-HL (Part 2)—4 periods per cycle—all year—1 credit (04010705)

Prerequisite—Biology-HL (Part 1)

This IB class is the second year course of study of the two year program that will include concepts of Energetics; Transport and Exchange Mechanisms; Coordination, Response and Control; Health, Disease and Immunology. There are 12 laboratory experiments that are mandatory and 5 optional experiments. The course will further develop student's critical thinking and problem solving skills as well as develop appreciation for scientific expository writing. Students will be prepared to sit for the HL examination after the second year and the AP Biology Exam as well.

Physics-SL (Part 1)—4 periods per cycle—all year—1 credit (02060305)

This standard-level course is taught over the span of 2 years. It deals with both aspects of classical physics and modern physics. The topics covered start with an overview of physics and the nature of measurement, and then move on to mechanics (kinematics, dynamics, energy, momentum, and conservation principles), followed by thermal properties of matter, waves, electricity, magnetism, atomic and nuclear physics. Additional topics to be covered include projectile motion analysis, the nature of gravitation, and geometric optics. Experimentation is a critical aspect in the study of physics and laboratory activities are an important component of this course.

Physics-SL (Part 2)—4 periods per cycle—all year—1 credit (02060305)

Prerequisite—Physics SL (Part 1)

This is the second half of the Physics SL course. The course builds on the foundations established during the first year and covers special and general relativity and both geometric and wave optics as well. Experimentation is a critical aspect in the study of physics and laboratory activities are an important component of this course.

Physics-HL (Part 1)—4 periods per cycle—all year—1 credit (02060405)

This class is the first year of the two-year higher level course and deals with both aspects of classical physics and modern physics. The topics covered start with an overview of physics and the nature of measurement, and then move on to mechanics (kinematics, dynamics, energy, momentum, and conservation principles), followed by thermal properties of matter, waves, electricity, magnetism, atomic and nuclear physics. Topics covered during the second year of this course include special and general relativity and both geometric and wave optics. Experimentation is a critical aspect in the study of physics and laboratory activities are an important component of this course.

Physics-HL (Part 2)—4 periods per cycle—all year—1 credit (02060505)

Prerequisite—Physics-HL (Part 1)

This class is the second year of the two-year higher level course and deals with both aspects of classical physics and modern physics. The course builds on the foundations established during the first year and covers special and general relativity and both geometric and wave optics as well. Experimentation is a critical aspect in the study of physics and laboratory activities are an important component of this course.

Mathematics-SL (Part 1) —3 periods per cycle—all year—1 credit (03100305)

Prerequisite—Algebra 2 Honors

Mathematics, a standard level course taught over two years, caters to students who anticipate a need for a sound math background in preparation for future studies of topics such as chemistry, economics, geography, psychology, and business. The first year of the course focuses on introducing important math concepts through the development of mathematical techniques. Topics include Number and Algebra, Functions and Equations, Trigonometry, Vector Geometry, Statistics and Probability. A TI-83 Plus calculator is mandatory. A portfolio of students' individual investigations and models will be kept for IB assessment, the top two being chosen.

Mathematics-SL (Part 2) —3 periods per cycle—all year—1 credit (03100405)

Prerequisite—Mathematics-SL (Part 1)

This class is the second half of the Mathematics course and is devoted to calculus, including limits, derivatives and their application, integrals finite and infinite, and basic application of the integral. A portfolio of students' individual investigations and models will be kept for IB assessment, the top three being chosen.

Mathematics-HL (Part 1) —3 periods per cycle—all year—1 credit (03100505)

Prerequisite—A grade of “A” in Algebra 2 Honors

This is the first year of a rigorous two-year course designed to prepare students for the prescribed internal and external assessments required by the IB organization. This course is specifically designed for those students who have previously demonstrated a strong mathematical acumen and are expecting to include mathematics as a major component of their university studies. Students are expected to use their prior knowledge to develop and expand their ability to analyze, evaluate and synthesize new concepts. Topics include Algebra, Functions and Equations, Trigonometry, Matrices, Vectors, Statistics and Probability. A TI-83+ graphing calculator is mandatory. A portfolio of student's individual investigations and models will be kept for IB assessment, the top three being chosen.

Mathematics-HL (Part 2) —3 periods per cycle—all year—1 credit (03100605)

Prerequisite—Mathematics HL (Part 1)

This is the second year of a rigorous two-year course designed to prepare students for the prescribed internal and external assessments required by the IB organization. The course builds on the foundations established during the first year. Topics include theory and applications of differential and integral calculus, infinite series and differential equations. A TI-83+ graphing calculator is mandatory. A portfolio of student's individual investigations and models will be kept for IB assessment, the top three being chosen.

Mathematical Studies-SL (Part 1) —3 periods per cycle—all year—1 credit (03100105)

Prerequisite—Algebra 2

This course is the first year of the two-year standard level Mathematical Studies sequence. Mathematical Studies caters to students with varied backgrounds and abilities. It is designed to build confidence and encourage an appreciation of mathematics in students whose academic focus is on the humanities rather than the sciences. Fundamental skills and a rudimentary knowledge of basic processes are required. Topics include: Number and Algebra, Sets and Logic, Geometry and Trigonometry, Statistics and Probability, Functions, Financial Mathematics and Introductory Differential Calculus. A TI-83 or TI-83+ graphing calculator is mandatory.

Mathematical Studies-SL (Part 2) —3 periods per cycle—all year—1 credit (03100205)

Prerequisite—Mathematical Studies-SL (Part 1)

This course is the second year of the two-year Mathematical Studies sequence. The topics not discussed in year one will be addressed. Students will, in addition to teacher provided assessments, complete and

present a project on a topic of their choice to satisfy the internal assessment requirement of the International Baccalaureate. A TI-83 or TI-83+ graphing calculator is mandatory.

Visual Arts-SL—3 periods per cycle—all year—1 credit (06080105)

This single-year course consists of 70% studio work and 30% homework in a research workbook. This course is designed to meet the needs of students in the program who, as part of their studies, wish to further their understanding of the arts and how they impact on their lives and their futures. IB Visual Arts is also for more advanced students who wish to continue developing a portfolio with the intention of attending art school or another institution of higher learning with an art major. This course will provide all students with the opportunity to develop aesthetic, imaginative, and creative facilities; will enable students to discover and enjoy means of creative visual expression; will encourage the pursuit of quality; and will provide an atmosphere conducive to individual experimentation. The students will develop a portfolio of studio work as well as personal research workbooks and personal responses for assessment by an outside examiner. This course may also be taken by non-IB students.

Visual Arts-HL (Part 1) —3 periods per cycle—all year—1 credit (06080205)

This course is the first half of the two-year Higher Level Visual Arts course and consists of 70% studio work and 30% homework in a research workbook. This course is designed to meet the needs of students in the program who, as part of their studies, wish to further their understanding of the arts and how they impact on their lives and their futures. IB Visual Arts is also for more advanced students who wish to continue developing a portfolio with the intention of attending art school or another institution of higher learning with an art major. This course will provide all students with the opportunity to develop aesthetic, imaginative, and creative facilities; will enable students to discover and enjoy means of creative visual expression; will encourage the pursuit of quality; and will provide an atmosphere conducive to individual experimentation. The students will develop a portfolio of studio work as well as personal research workbooks and personal responses for assessment by an outside examiner. This course may also be taken by non-IB students.

Visual Arts-HL (Part 2) —3 periods per cycle—all year—1 credit (06080305)

Prerequisite—Visual Arts-HL (Part 1)

This course is the second half of the two-year Higher Level Visual Arts course and consists of 70% studio work and 30% homework in a research workbook. This course is designed to meet the needs of students in the program who, as part of their studies, wish to further their understanding of the arts and how they impact on their lives and their futures. IB Visual Arts is also for more advanced students who wish to continue developing a portfolio with the intention of attending art school or another institution of higher learning with an art major. This course will provide all students with the opportunity to develop aesthetic, imaginative, and creative facilities; will enable students to discover and enjoy means of creative visual expression; will encourage the pursuit of quality; and will provide an atmosphere conducive to individual experimentation. The students will develop a portfolio of studio work as well as personal research workbooks and personal responses for assessment by an outside examiner. This course may also be taken by non-IB students.

Music-SL—3 periods per cycle—all year—1 credit (07060105)

The Standard Level Music Course is a one-year course which will focus on the elements of western music, world music, music theory, solfeggio and performance. A background of literacy on one's personal instrument is necessary for this course and all students should be able to demonstrate basic musical proficiency. Instrumental students should be able to perform all major scales up to four sharps and four flats and the chromatic scale. In addition, instrumental students should be able to perform a complete work (i.e. baroque, classical, romantic, contemporary, etc.) Vocal students should be able to demonstrate proficiency with at least one piece of musical literature which may include German Lieder, Italian Art Songs, or any other major work from Oratorios as well as and some understanding of jazz and gospel style. All students should be proficient in sight reading.

The objective of the course is to give the student the tools to approach the study of music as a musician and to learn to communicate with others using the musical language as a universal language. Students will perform in a 15 minute recital, submit an original composition, write a critical essay, and sit for the IB SL exam at the conclusion of this class. This course is available to non-IB students as well. Students are encouraged to take Music Theory prior to or at the same time as they are enrolled in IB Music.

Music-HL (Part 1) —3 periods per cycle—all year—1 credit (07060205)

This course consists of the first year of the two-year Higher Level Music course and will focus on the elements of western music, world music, music theory, solfeggio and performance. A background of literacy on one's personal instrument is necessary for this course and all students should be able to demonstrate basic musical proficiency. Instrumental students should be able to perform all major scales up to four sharps and four flats and the chromatic scale. In addition, instrumental students should be able to perform a complete work (i.e. baroque, classical, romantic, contemporary, etc.) Vocal students should be able to demonstrate proficiency with at least one piece of musical literature which may include German Lieder, Italian Art Songs, or any other major work from Oratorios as well as and some understanding of jazz and gospel style. All students should be proficient in sight reading.

The objective of the course is to give the student the tools to approach the study of music as a musician and to learn to communicate with others using the musical language as a universal language. Students will perform in a 15 minute recital, submit an original composition, and write a critical essay. This course is available to non-IB students as well. Students are encouraged to take Music Theory prior to or at the same time as they are enrolled in IB Music.

Music-HL (Part 2) —3 periods per cycle—all year—1 credit (07060305)

Prerequisite—Music HL (Part 1)

This course is the continuation of Music-HL (Part 1) with an emphasis on solo performance through chamber music and a solo recital. Instrumental students should be able to perform all major and natural minor scales and the chromatic scale. Students should also be able to perform two works of contrasting style, (i.e. baroque, classical, romantic, contemporary, etc.) Vocal students should be able to present two pieces of contrasting style which may include German Lieder, Italian Art Songs, or any other major work from Oratorios and some understanding of jazz and gospel style. All students should be proficient in sight reading.

Students will acquire an understanding of 16th and 18th century harmony and counterpoint and experience working with the elements of composition at this level. The focus will continue to promote musical literacy through performance and academic studies to give the student the tools to be a life long learner in

the musical arts. Students will be prepared to present a 20 minute solo recital, submit an original composition, write a critical essay, take the IB HL exam and the AP Music exam at the conclusion of this class. This course is available to non-IB students as well.

Theory of Knowledge—3 periods per cycle—all year—1 credit (14020105)

The primary intent of the Theory of Knowledge class is to analyze the processes by which we acquire knowledge and the lenses through which we view it. Inherent within such study is the need to examine the biases associated with our sources of knowledge, the procedures utilized to gain knowledge within the specific disciplines, the assumptions that form the foundations of our knowledge and our methods of gaining it, and the ethical and philosophical ramifications of what we know and how we know it. As these metacognitive explorations require substantial probing and self-examination, students will be actively engaged in many reflective experiences. The course will involve class discussion in small and large groups, presentations, debates, field trips, role-playing activities, writing assignments, and research. Students should expect to take an active role in class activities and to stretch their conventional understanding of almost every issue raised in class as well as the conventions through which they are accustomed to addressing such issues.

The course is given in the senior year and will explore the four primary ways of knowing: perception, language, reason and emotion. Our exploration of each will integrate the material studied in other IB courses as well as supplementary readings as we address the following questions:

- How certain can we be of what we claim to know? What kinds of knowledge provide more certainty than others?
- What methods are there of verifying what we take to be true? Are they all equally convincing? Could there be a single, universal method of verification?
- What counts as a good reason?
- To what extent does personal or ideological bias influence our knowledge claims? To what extent do such pre-dispositions help us to clarify our understanding of the world?
- What are the limitations of knowledge? How can we attempt to overcome them?

Theory of Knowledge, the intellectual centerpiece of the IB Diploma Program, encourages students to make important curricular and global connections and to stretch their understanding of themselves and the thinking process.

IB Senior Project—1 period per cycle—all year—.5 credit (12040205)

The requirements for the IB Senior Project include the completion of CAS, the Extended Essay, a senior reflection paper, and participating in an exit interview at the conclusion of the year. Students' work toward these products will be assessed on a pass/fail basis. Details about CAS and the Extended Essay will be provided during 11th grade and details about the reflection paper and exit interview will be provided during 12th grade.