

2010-2011 IB Course Descriptions

Group 1: English

English HL

Prerequisite: Pre-AP English 2

English HL is a demanding two-year pre-university course of study designed to encourage students' life-long passion and appreciation for the art of the written word, develop students' capacity for critical thinking through close reading and analysis of literary texts, and foster students' international awareness through exposure to literature that is representative of a variety of cultures around the world. Successful completion of this course, which includes essays, oral presentations and an IB examination at the end of the senior year, is necessary for acquiring the IB Diploma. English HL is designed to encourage students' life-long passion and appreciation of literature. Students will develop skills for critical thinking through close reading and analysis of literary texts. Additionally, English HL exposes students to literature that is from a variety of cultures around the world in efforts to foster intercultural understanding. Both students and their parents should be aware that an extensive amount of outside reading and writing is required for this course.

Group 2: World Languages

Spanish SL, French SL, German SL, Latin SL

Prerequisite: Level 1 and Pre-AP Level 2

The focus of these courses is that students will be able to communicate with other World Language speakers in a comprehensible way so that they understand the cultures and contexts with which they are interacting. The courses are designed so that students will develop integrated language skills, increase cultural and social knowledge of the World Language and the associated cultures, and exchange ideas and gain confidence in their abilities to communicate. Students demonstrate their knowledge and skills through oral exams, essays, and an IB examination.

Group 3: Individuals and Societies

20th Century World Topics: Americas HL

Prerequisite: Pre-AP World Geography AND AP World History

History of the Americas HL and 20th Century Topics is a two year course with the first year dedicated primarily to Early American Government principles and early 20th Century US History. The second year of the course approaches mid-late 20th Century World Topics with an emphasis in Peacekeeping. The focus of this course is that students understand trends and developments along with continuity and change through time and individual events. These courses are concerned with individuals and societies in the widest context: political, social, economic, religious, technological, and cultural. Students develop analytical and research skills used to study primary sources and scholarly works to discover the overall framework of history from an international perspective. Students will be assessed on their ability to mold and polish these skills via: daily writing routines both short and extensive, participation in subject-centered discussions, and finally, research focused papers including, but not limited to, an IB required Historical Investigation.

Group 3 or 4: Individuals and Societies or Experimental Sciences

Environmental Systems and Societies SL

Prerequisite: Biology, Chemistry, World Geography, and World History

The purpose of Environmental Systems and Societies SL course is that it provides students with a logical, comprehensible and personal perspective of man and his impact on the environment. Studying Environmental Systems and Societies presents both an interdisciplinary understanding and an international perspective on the global issues that affect us as an entire planetary population, and emphasizing how people and different society choices affect the whole. This course embraces a wide variety of topics from different content areas of study, and merges them all together in a rather delectable “Understand and Save the Planet” stew to be consumed and digested in an intentional mindedness and multicultural classroom. The course culminates with a series of data based questions, an essay based on topics studied during the year, and a case study.

Group 4: Experimental Sciences

IB Biology HL and SL

Prerequisite: Pre-AP biology and Pre-AP chemistry.

The purposes of the IB Biology HL and SL courses are to provide students with the tools necessary to understand and adapt to the selective trends of our modern, technological society at the global level. Students will become well practiced in the areas of problem solving, the development of scientific skills, thinking tools, and the use of technology. In addition, students will learn effective ways of communicating and presenting scientific data and phenomena. Students will achieve these skills through the completion of either of the two IB Biology courses: Biology Higher Level (HL) or Biology Standard Level (SL). The HL course will explore all the SL topics with more depth and detail, and it will include additional topics as selected by the students and teacher. Successful completion of the course requires three essays and a scientific investigation.

Group 5: Mathematics

Math Studies SL

Prerequisite: Algebra 1, Geometry, and Algebra 2 are required (completion of these courses at the Pre-AP level is strongly suggested)

The Math Studies SL course gives a sampling of several math topics that are offered in college. These include, but are not limited to, the history of mathematics, trigonometry, statistics, number theory, and calculus. The course is offered to students with varied backgrounds and abilities. It is designed to build confidence and encourage an appreciation of mathematics in students, some of whom do not anticipate a need for mathematics in their future studies. The key objective of this course is to introduce students to mathematical concepts and principles through the development of various techniques, allowing for the possibilities of the practical and real-world application of the subject. Assessments will include the following items: class work exercises, homework assignments, quizzes, exams, class projects, midterm and final exams. A key component of the mathematics studies course will be the IB project, in which the student will produce a piece of written work based on personal research that is guided and supervised by the teacher and cumulative written exam.

Mathematics SL

Prerequisite: Algebra 1 & 2, Geometry, and Pre-AP Pre-Cal are required, AP Statistics is strongly suggested.

Mathematics SL is an upper level course ideal for students who wish to explore mathematics at an advanced level. The course is focused on the development of students' understanding of advanced mathematics, providing experience with its methods and applications, and supplying a rigorous foundation for future advanced mathematics courses. The course emphasizes a multi-representational approach to mathematics with concepts, problems, results and solutions being expressed graphically, numerically, analytically, and verbally. The connections among these representations are explored and reinforced. Written communications in a rigorous, precise, and concise manner of concepts, problem solutions, and investigative results are also emphasized. Technology is used extensively, and on a daily basis, to reinforce the relationships among multiple representations, confirm written work, implement experimentation, and assist in interpreting results. The course as taught provides a vehicle for students to employ and further develop their powers of abstraction and generalization along with their logical, critical and creative thinking skills. Students should develop an appreciation for persistence and patience as critical problems solving skills as well as an appreciation for the historical evolution of skills brought on by technological development. A further aim of the course is that students develop the ability to apply learned skills to alternative situations and future developments. Assessments include two tests at the end of the course year and a series of portfolio assignments.

Group 6: Arts and Electives

IB Dance HL

Prerequisite: Dance 1 and Dance 2 are strongly recommended

IB Dance HL will provide the opportunity to emphasize a healthy lifestyle and to experience the joy of creating and exploring movement. Our focus is to develop the physical, emotional, social, and intellectual aspects in one's life. Our aim and objectives are to encounter the art of dance through movement, knowledge, and a level of performance as well as to increase self-confidence of a student. The course will offer intercultural awareness that will encourage students to consider multiple perspectives, develop knowledge and skills as they learn about their own and others' social, national, and international cultures. Skills are showcased in a final composition and analysis dance, a filmed performance piece, and an accompanying dance investigation essay.

IB Music SL

Prerequisite: Membership in Band, Choir or Orchestra

The IB Music Class is designed to provide opportunities for students to compare and contrast a variety of music in the classroom while giving all students a music vocabulary to use in describing the characteristics of music from different cultures. Mechanics of music will be covered as the students study theory, composition and analysis. All of this combined prepares the student for the IB Listening Paper. IB music students are expected to: be a member in band, choir or orchestra, complete the musical links investigation, complete the listening paper exam given in May of senior year, and put together a group performance recording.

IB Visual Art HL & SL

Prerequisite: Art 1 and a second level art class

The IB Visual Art HL & SL courses will allow students the opportunity to take an advanced level art course in their junior and/or senior year. It is understood that the student will have successfully completed Art 1, and an additional second level visual arts class. Although second through fourth level art classes are medial specific classes (drawing, painting, ceramics, sculpture), both Standard Level (one year) and Higher Level (requiring two years) IB Visual Art classes allow students to investigate as well as find and document artistic solutions to visual challenges in various media. The aims of Visual Arts SL and HL are to enable the students to develop technical abilities and demonstrate proficiency in a variety of media while pursuing their area of artistic interest. Each student will participate in an art exhibition as a portion of the assessment in order to successfully complete IB Visual Art.

IB Computer Science SL

Prerequisite: Pre-AP Computer Science

In the second year of study, students continue the development of computer programming techniques using the Java language with emphasis on learning and applying good object-oriented programming techniques. Each student will develop a Program Dossier to demonstrate mastery of the basic computer science techniques including software design, coding, debugging, testing and documentation.

IB Computer Science HL

Prerequisite: IB Computer Science SL

The third year course emphasizes the object-oriented programming methodology introduced in SL course year with a concentration on problem solving, algorithm development, program design, and advanced data structures. Each student will develop a Program Dossier to demonstrate mastery of the basic computer science techniques including software design, coding, debugging, testing, documentation, and advanced data structures.

IB Film SL & HL

Prerequisite: None

IB film students will watch cinematic masterpieces from around the world and develop the ability to understand film as a complex art form, craft, and institution. They will be challenged to experience a broader and more diverse range of movies than they have previously encountered, and most importantly will be expected to watch and experience films actively and analytically. Students will learn to recognize and interpret the most important elements of film language and analyze the way filmmakers convey story and meaning. Film styles and movements are explored, and the central critical approaches to the study and appreciation of film as a genre. Final assessments will include textual analysis of films, essays pertaining to film theory and history of film, and an individual, creative film production.

IB Core Requirements

Theory of Knowledge

Prerequisite: Full IB Diploma Candidates

The Theory of Knowledge course is an interdisciplinary course designed to help students to develop the ability to think about what they know and how they know it while bringing to students an awareness of different perspectives on knowledge issues because of geography, culture, language, and philosophical/religious beliefs. Students will be encouraged to reflect on their own experiences as learners, foster a sense of curiosity with a desire to explore the diversity of ideas and cultures beyond their current experiences, and understand that other peoples' beliefs and ideas may be different, yet are still right.

Extended Essay and Creativity, Action, and Service

Prerequisite: Full IB Diploma Candidates

These two requirements are combined into a semester course designed to give students a solid foundation in these core components that will be continued outside the school day during the duration of their DP program.

CAS is a framework for experiential learning designed to involve students in new roles. The emphasis is on learning by doing real tasks that have real consequences and then reflecting on these experiences over time. Reflections are communicated with the CAS advisor through journals, email, discussions, meetings, activities, scrapbooks, videos, pictures, programs, or a variety of other creative forms.

Extended Essay

The extended essay is a 4,000 word essay, and is usually the outcome of sixty hours of work every IB diploma candidate must submit. This course will help students develop and refine research skills necessary to be successful for this endeavor. Students will develop quantifiable research questions in a chosen subject area. Each student will develop high level research and writing skills, intellectual discovery, and self-sufficient, academic investigations under the guidance of a supervisor.