



International Baccalaureate Diploma Program

Riverview IB Course Descriptions

Pre-registration for grade 11: entering Year 1 of the IB

- Remember, the IB is a 2 year course of study, involving 6 academic Subject Areas and 3 Central Elements (CAS-EE-TOK). The goal is the IB Diploma!
- Students should pick a Subject Area in each of the six Groups. It is recommended that decisions be based on a combination of skills, interests and goals. (*Environmental Systems & Societies can count for two Groups.)
- Some Subject Areas are offered at the Higher Level (more advanced study), some at the Standard Level, and some at both Levels. Students do not 'declare' the actual level until fall of senior year, but should be mindful of the requirement when choosing Subject Areas.
- In order to qualify for the IB Diploma, students must complete 3 Subject Areas at the Higher Level and 3 Subject Areas at the Standard Level. (It is recommended, however, that rising 11th graders have 4 possible Higher Level subjects.)
- Orientation and introduction to CAS, Extended Essay, and, Theory of Knowledge will be conducted later this spring.

Subject Area Descriptions:

Group I

Subject Area: Studies in Language and Literature - English

All Riverview IB students study this Subject Area at the Higher Level

Group II

Subject Area: Language Acquisition – German, Spanish, Chinese

Students progress onto the next level of this 2nd language and/or opt for 2 year Ab Initio

Ultimately, German or Spanish can be studied at the Higher Level or Standard; Chinese at just the Standard Level. If a student wishes to change languages or add an additional one of those offered (Group VI), this can be done. This should be noted on the registration form.

Subject Area: Ab Initio – German, Spanish, Chinese

This is an opportunity for Grade 11 IB students to study a language for the first time. NO PRIOR EXPOSURE PERMITTED. At the end of the two years, students submit work and take exam for SL completion.

Group III Individuals and Societies

Students must choose Business & Management, Economics, History of the Americas, World Religions, or Environmental Systems & Societies or can choose two of them (Group VI). Business & Management and Economics can be studied at the Higher Level or the Standard Level (In some cases, it can be studied at the Standard Level for one year.....this is not determined until late fall of junior year). History of the Americas is studied at the Higher Level only. Environmental Systems & Societies is a one year Standard Level. World Religions is a two-year Standard Level course.

Descriptors

Subject Area: Business & Management

1 Year SL 2 Year SL/HL

Skills Needed/Pre-requisites:

No particular background in terms of specific subjects studied. No prior knowledge of business and management is necessary for students to undertake a course of study based on this specification. However, a familiarity with business concepts would be an advantage as would humanities.

General Content:

- Promote the importance of exploring business issues from different cultural perspectives

- Encourage a holistic view of the world of business
- Enable the student to develop the capacity to think critically about individual and organizational behavior
- Enhance the student's ability to make informed business decisions
- Enable the student to appreciate the nature and significance of change in a local, regional and global context
- Promote awareness of social, cultural and ethical factors in the actions of organizations and individuals in those organizations
- Appreciate the social and ethical responsibilities associated with businesses operating in international markets

Aims:

- Demonstrate knowledge and understanding of business terminology, concepts, principles and theories
- Make business decisions by identifying the issue(s), selecting and interpreting data, applying appropriate tools and techniques, and recommending suitable solutions
- Analyze and evaluate business decisions using a variety of sources
- Apply skills and knowledge learned in the subject to hypothetical and real business situations
- Communicate business ideas and information effectively and accurately using appropriate formats and tools

In addition to the above, students at HL will be expected to synthesize knowledge in order to develop a framework for business decision-making.

Subject Area: Economics

1 yr. SL, 2 yr SL or, 2 yr HL

(Students embarking on the two-year course of study will sit for the AP Macroeconomics Exam in junior year.)

Skills Needed/Pre-requisites:

Ability to think quantitatively; solid math skills

General Content:

Microeconomics; Macroeconomics; International Economics; Development Economics

Career Interests:

Finance; Management; Marketing; Banking; Financial Services; International Relations

Economics – offered at both the higher and standard levels, Economics is designed to develop: disciplined economic reasoning skills; an ability to apply tools of economic analysis to situations and data and to explain the findings clearly; an understanding of how individuals and societies organize themselves in the pursuit of economic objectives; an ability to evaluate economic theories, concepts, situations and data in a way which is considered rational and unprejudiced; international perspectives which feature a tolerance and understanding of the diversity of economic realities in which individuals and societies function.

Subject Area: History of the Americas

2 yr HL

Skills Needed/Pre-requisites:

Enjoys history; active reader; reading for historical content; analytical content based writing; academic discipline; curiosity; study skills

General Content:

20th Century World History—Prescribed Subjects

1. Peacemaking, Peacekeeping—International relations 1918-1936

20th Century World History

2. Origins and development of authoritarian and single-party states
3. The Cold War

Regional Options (The Americas)

4. Independence Movements
5. United States Civil War: causes, course and effects 1840-77
6. The Cold War in the Americas 1945-1981

Career Interests:

International Affairs; State Department; Law; International Business; Social Services

History of the Americas is offered at higher level only. History of the Americas is designed to promote:

- The acquisition and understanding of historical knowledge in breadth and in depth, and across the different cultures of the Americas
- An appreciation and understanding of history as a discipline, including the nature and diversity of its sources, methods and interpretations
- International awareness and understanding by promoting the achievement of empathy with, and understanding of, people living in diverse places and at different times throughout the Americas
- A better understanding of the present through an understanding of the past; an appreciation of the historical dimension of the human condition
- An ability to use and communicate historical knowledge and understanding
- A lasting interest in history

Subject Area: World Religions

1 yr. SL or 2 yr SL

Students are introduced to a range of world religions reflecting different traditions, beliefs and practices.

Aims:

The World Religions course enables students to:

- promote an inquiring, analytical and empathetic approach to the study of religion
- develop an informed understanding of the diversity of world religions

- foster a respectful awareness of the significance of the beliefs and practices for the faith member
- develop an understanding of how religion affects people's lives
- encourage a global appreciation of the issues surrounding religious and spiritual beliefs, controversies and movements in the world today
- promote responsible and informed international citizenship.

The following questions are considered as an introduction to the subject.

- What is religion?
- How do we study religion? Insider/outsider approaches.
- Which sources do we use and how do we interpret them?
- What makes an experience religious?

Students are introduced to a range of world religions reflecting different traditions, beliefs and practices.

Subject Area: Environmental Systems & Societies

1 Year SL

Skills Needed/Pre-requisites:

No specific previous knowledge of science or geography is required. Awareness of local and global environmental concerns and an understanding of the scientific method.

Students should be able to: perform the basic arithmetic functions; use simple descriptive statistics: mean, median, mode, range, frequency, percentages, ratios, approximations and reciprocals; use standard notation (for example, 3.6×10^6); use direct and inverse proportion; interpret frequency data in the form of bar charts, column graphs and histograms, and interpret pie charts; understand the significance of the standard deviation of a set of data; plot and sketch graphs; interpret graphs, including the significance of gradients, changes in gradients, intercepts and areas; demonstrate sufficient knowledge of probability (for example, in assessing risks in environmental impact).

General Content:

Systems and Models; The Ecosystem; Human population, carrying capacity and resource use; Conservation and Biodiversity; Pollution Management; Global Warming; Environmental Value Systems

Career Interests:

Environmental Systems & Societies

Provide 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. Attention can be constantly drawn to their own relationship with their environment and the significance of choices

and decisions that they make in their own lives. It is intended that students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. Conducive to students evaluating the scientific, ethical and socio-political aspects of issues.

Group IV Sciences

Students must choose Biology, Chemistry or Environmental Systems & Societies, or can choose two (Group VI). Caution: choosing two is extremely challenging, and can impact the overall experience/achievement of the other Subject Areas.

Biology and Chemistry can be studied at the Higher Level or the Standard Level (2 Year program for either). Environmental Systems & Societies can only be studied 1 year SL.

Descriptors

Subject Area: Biology 2 yr SL or 2 yr HL

Skills Needed/Pre-requisites

Pre-IB Biology or equivalent; ability to conduct Data Analysis on several types of data; Algebra skills; the ability to apply and manipulate various formulas (Algebra II Honors); organizational skills; high-level reading ability; willingness to study

General Content:

Biology topics follow the following progression

1. Data Analysis
2. Biochemistry
3. Cell Biology
4. Genetics
5. Plant Biology
6. Human Anatomy & Physiology
7. Ecology
8. Evolution

Career Interests:

Life Science Research; Ecology/Environmental Sciences; Medical Sciences; Allied Health Fields (Nursing, Physical Therapy, etc.); Engineering

Biology is designed to give students a secure knowledge of a limited body of facts and at the same time a broad understanding of the field of biology. The syllabus is organized around four central themes: structure and function; universality versus diversity; equilibrium within systems; and evolution. Both standard and higher levels require a 2 year course of studies. Students in

Biology HL perform further extensive study in the above themes. Biochemistry; Cellular Energetics; Genetics; Evolution; Biological Diversity; Physiology; Ecology

Subject Area: Chemistry

2 yr SL or 2 yr HL

Skills Needed/Pre-requisites

Reasonable math skills (although all levels of math are welcome-those in math studies may struggle) and a commitment to practicing word problems frequently are necessary for success. Should have been competent in pre-IB Chemistry and had relative ease, with interest, in the topics covered.

General Content:

Quantitative Chemistry, Measurement and Data Processing, Energetics, Atomic Theory, Periodicity, Phases, Kinetics, Equilibrium, Oxidation and Reduction, Acids and Bases, and Organic Chemistry. Various options include Analytical Chemistry, Human Biochemistry, Chemistry in Industry and Technology, Medicines and Drugs, Environmental Chemistry, Foods and Further Organic Chemistry.

Career Interests:

Pre-Med; Pharmacology; Science Research; Engineering

Chemistry is designed to meet the needs of those who want to study science at university and those who will complete their formal study of science at the end of the course. Both standard and high levels are a 2 year course of studies. Course topics include stoichiometry, bonding, kinetics, oxidation and reduction, atomic theory, states of matter, equilibrium, organic chemistry, periodicity, energetics, acids and basis. Students in Chemistry HL perform further extensive study in all of these areas.

Subject Area: Environmental Systems & Societies

1 Year SL

Skills Needed/Pre-requisites:

No specific previous knowledge of science or geography is required. Awareness of local and global environmental concerns and an understanding of the scientific method.

Students should be able to: perform the basic arithmetic functions; use simple descriptive statistics: mean, median, mode, range, frequency, percentages, ratios, approximations and reciprocals; use standard notation (for example, 3.6×10^6); use direct and inverse proportion; interpret frequency data in the form of bar charts, column graphs and histograms, and interpret pie charts; understand the significance of the standard deviation of a set of data; plot and sketch graphs; interpret graphs, including the significance of gradients, changes in gradients, intercepts and areas; demonstrate sufficient knowledge of probability (for example, in assessing risks in environmental impact).

General Content:

Systems and Models; The Ecosystem; Human population, carrying capacity and resource use; Conservation and Biodiversity; Pollution Management; Global Warming; Environmental Value Systems

Career Interests:

Environmental Systems & Societies

Provide 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. Attention can be constantly drawn to their own relationship with their environment and the significance of choices and decisions that they make in their own lives. It is intended that students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. Conducive to students evaluating the scientific, ethical and socio-political aspects of issues.

Group V Mathematics

This mathematics Subject Area is Math Studies, Math SL, or Higher Level Math. All three are two-year courses of study and are college prep Math courses.

Math Studies and Math SL are studied at the Standard Level only.

Math Studies is for the liberal arts student or the student whose preparation in Math is not very strong. Or, many times it is for the student whose, for whatever reasons, math course progression did not put them on a calculus track. Often it is for the student who in college will be taking the minimum number of Math courses required. (In some cases, course progression reasons mostly, a student may study Math Studies for one year, and test out.)

Math SL is by far the Math strand with the broadest spectrum of content, involving the Calculus Honors student all the way up to the AP Calculus AB student. Students should have had success in pre-Calculus & Trig. It can serve as preparation for the Engineering-major student, as well as the Business student.

HL Math involves very challenging Math concepts, is for the student who has demonstrated a high degree of Math talent and interest. It is for the Engineering student, as well as for the Science research student. Grade 11 students study AP Calculus BC.

Students are placed in the Group V courses based on prior Math preparation, grades 9 & 10 math achievement, and, standardized test scores.

Group VI

Subject Area: The Arts & Electives

Students must choose between Music, Visual Arts, Dance, ITGS (Information Technology in a Global Society), or, Film Studies. As an alternative, students may choose a second subject from Group II, III, IV or V, above.

Music – Must be in a Music performance class here, and agree to meet on an adjunct basis to develop skills & knowledge in music analysis, composition, history, and theory. This two-year course of study can be studied at the Higher Level or the Standard Level, though Higher Level is very challenging.

Visual Arts – This two-year course of study is for the serious visual artist – skill & commitment are mandatory for success. It can be studied at the Higher Level or the Standard Level.

Dance – This two year course of study was approved by the IBO for our Highland Dance students. It also requires a commitment to adjunct study in dance analysis, composition, and performance, as well as experience with other dance cultures, primarily through community dance theatre as supervised by our IB Dance instructor. This is offered Higher Level only.

Film Studies – This two-year HL course of study demands a working interest in the art, analysis, and production of film.

Information Technology in A Global Study (ITGS) – See description below.

Descriptors

Subject Area: Information Technology in A Global Society SL or 2 yr HL (In some cases, it can be studied at the Standard Level for one year.....this is not determined until late fall of junior year).

Group VI

Skills Needed/Pre-requisites:

Comfortable with technology

General Content:

ITGS is concerned with the development of IT systems, with particular emphasis on the effects on clients and end-users. Looks to implement a new IT system based on the use of currently available software. Concerned with activities such as choosing and using a spreadsheet, finding ways of using it more effectively, and educating other people about its use. It is concerned with the effects of using the software and obtaining reliable results that are beneficial to all who are affected by it.

- individuals and machines/comparisons and interactions
- information systems in today's society
- the system life cycle/problem solving
- responsible use of information tools
- the social impacts of information technology
- evolution from the past, insight into the future
- case studies

Career Interests:

Medical Technology; Computer Security; Artificial Intelligence/Robotics; Automation; (CAD/CAM Manufacturing); Telecommunications

ITGS

Social and ethical considerations linked to specified IT developments

Students must study the following 12 issues.

- Reliability and integrity
- Security
- Privacy and anonymity
- Intellectual property
- Authenticity
- The digital divide and equality of access
- Surveillance
- Globalization and cultural diversity
- Policies
- Standards and protocols
- People and machines
- Digital citizenship

The terminology, concepts and tools relating to specified IT developments. Students must study the following 9 topics.

- Hardware
- Software
- Networks
- Internet
- Personal and public communications
- Multimedia/digital media
- Databases
- Spreadsheets, modeling and simulations
- Introduction to project management

Subject Area: Film Studies

2 yr HL

Skills Needed/Pre-requisites

There are no pre-requisites for this course. However, a working interest in the art, analysis and production of film would be beneficial for a student about to embark on a two year journey discovering film.

Films are a popular art form, an international industry, an influential ideological force, and a source of considerable pleasure. Studying films gives an insight into psychology, culture, society, politics and economics, as well as being very enjoyable.

IB Film Studies uses a combination of analysis, research, theory and creative work to study examples from British, American and World Cinema, examining their production, form and reception, and relating these to cultural, social and political contexts.

The course would be of interest to anyone who enjoys watching and discussing films and is keen to learn more. IB students wanting to choose a creative subject but not confident about their ability in Music and Art will find that the basic technical knowledge and skills required for practical film-making can be learnt quite quickly & easily.

General Content:

The film course at HL aims to develop in students the skills necessary to achieve creative and critical independence in their knowledge, experience and enjoyment of film. The aims are to promote:

- an appreciation and understanding of film as a complex art form
- an ability to formulate stories and ideas in film terms
- the practical and technical skills of production
- critical evaluation of film productions by the student and by others
- a knowledge of film-making traditions in more than one country.

Career Interests:

Film/Media related careers; Marketing/Public Relations related careers; Journalism;
Humanities/Liberal Arts/Education