White Oaks Secondary School

PROPOSED IB PROGRAMME SUBJECT OFFERINGS*

WOSS plans to offer the following subjects in their respective groups. Student enrolment will determine if the subject will be offered.

Group	Subjects
Group 1 – Language A1	English HL
Group 2 – Second Language	French Language B SL or HL
Group 3 – Individuals and Societies	History SL or HL Geography SL or HL
Group 4 – Experimental Sciences	Biology SL or HL Chemistry HL Physics SL
Group 5 – Mathematics and Computer Science	Mathematical Studies SL Mathematics SL Mathematics HL
Group 6 – Arts	Film HL Music SL Theatre Arts SL

*Subject offering may change, depending on student enrolment. Unless explicitly stated, whether a subject is offered at the SL or HL depends on advice by teacher following IB teacher training, as well as on student enrolment.

IB PROGRAMME SUBJECT DESCRIPTIONS

Group 1: Language A1

Language A1 is the study of literature in a student's first language, including the study of selections of world literature.

In studying their first language, students are able to develop:

- a personal appreciation of the literature
- skills in literary criticism
- strong written and oral skills
- respect for the literary heritage of their first language
- an international perspective.

The range of texts studied in language A1 courses is broad, and students grow to appreciate a language's complexity, wealth and subtleties in a variety of contexts. A specific aim is to engender a lifelong interest in literature and a love for the elegance and richness of human expression.

The Language A1 programme is primarily a pre-university course in literature. It is aimed at students who intend to pursue literature, or related studies, at university, as well as at students whose formal study of literature will not continue beyond this level. The former would normally follow the Higher Level (HL) programme and the latter the Standard Level (SL).

The Language A1 programme encourages students to see literary works as products of art and their authors as craftsmen whose methods of production can be analysed in a variety of ways and on a number of levels. This is achieved through the emphasis placed on exploring the means used by different authors to convey their subjects in the works studied. It is further reinforced by the comparative framework emphasized for the study of these works in all parts of the programme.

English Language A1 HL

A detailed description of English Language A1 HL will follow. Please check again at a later date.

Group 2: Language B

Mostly available at both higher and standard levels, the language B courses occupy the middle ground of the group 2 modern languages spectrum and are language learning courses for students with **some previous experience** of learning the target language. The main focus of these courses is on language acquisition and the development of skills considerably beyond those expected of an *ab initio* candidate, up to a fairly sophisticated degree at higher level.

Language B courses give students the opportunity to reach a high degree of competence in a language and explore the culture(s) using the language. The range of purposes and situations for which and in which the language is used extends well beyond those at *ab initio*, to the domains of work, social relationships, and the discussion of abstract ideas, for example. The types of language needed for these purposes and situations are more refined.

In the context of language B the successful use of a language consists of demonstrating competence in three distinct but interrelated areas:

- **language** handling the language system accurately (grammar, syntax, etc)
- **cultural interaction** selecting language appropriate to a particular cultural and social context
- **message** understanding ideas and how they are organized in order to communicate them appropriately.

These three areas form the thread that runs through the entire course and that leads students from the “nature of language B”, through the description of the language skills to be acquired, to the assessment criteria.

During the course of study, and through the development of all language skills, students should be encouraged to develop confidence in the use of the language, sensitivity to the audience and an ability to communicate their ideas clearly.

French Language B

A detailed description of French Language B SL/HL will follow. Please check again at a later date.

Group 3: Individuals and Societies

Studying any one of the subjects in Group 3 provides for the development of a critical appreciation of:

- human experience and behaviour
- the varieties of physical, economic and social environments that people inhabit
- the history of social and cultural institutions.

In addition, each subject is designed to foster in students the capacity to identify, to analyse critically and to evaluate theories, concepts and arguments relating to the nature and activities of individuals and societies.

History SL/HL

The study of history from an international perspective is increasingly important today. In the contemporary context, one of globalization and technological development, different cultures and societies are increasingly in contact and interdependent. Now, more than ever, there is a need for an understanding of the present as well as the past.

The aim of history in the Diploma Programme is to explain trends and developments, continuity and change through time and through individual events. The course is concerned with individuals and societies in the widest context: political, social, economic, religious, technological and cultural.

The process of historical inquiry, explanation and interpretation is a never-ending activity, for which historians develop values and conventions which themselves change over time. Students of history investigate a variety of sources, some of which may be of a contentious nature. As new generations seek to explain and analyse the past, they will face problems of determining the accuracy of what is claimed to be reliable historical knowledge and assessing conflicting interpretations of past events. The opportunities for opinions and interpretations which are culturally driven are many and they require sensitive but critical analysis.

Each generation rewrites its own history in the light of new evidence and of subsequent events and processes, and under the influence of its particular attitudes and prejudices. Students should become aware that historical accounts involve judgments based on qualitative evidence and that these judgments might be revised. By studying history they are taught to understand why the work of historians differs over time and in different parts of the world, and how it is impossible for historians not to be affected, to some extent, by political and economic conditions in their own country.

During the course, the student of history in the Diploma Programme is encouraged to reflect on the role of the historian. Does the historian record history, or create it? Can the historian be free of bias in the selection and interpretation of material? Could it be reasonably argued that the individual perception of a historian, despite possible bias, is necessary or even desirable in the interpretation and recording of history? Is the power of persuasion a characteristic of a good historian?

Geography SL/HL

Geography is concerned with place. Understanding the nature and causes of areal differentiation on the global surface has been the geographer's task since people first noticed differences between places.

Through geography we seek to understand these differences in patterns of human distribution, interrelationships between human society and the physical environment, people's use of the Earth in time and space, and how these differences are related to people's cultures and economies. These, and other related themes, express major concerns of our time and reflect the consequences of spatial decisions.

In geography's pursuit of this understanding the questions "where?", "why?" and "how?" are central. The first of these introduces the issues of location and spatial choice; the latter two signify that modern geography is not content merely to describe but seeks to explain. Beyond these questions, geographers also ask "what if?" as a means of seeking alternatives and giving the subject an applied dimension that can assist decision makers in planning and developing at a variety of geographical scales.

The concept of site—the physical characteristics of a place—is integral to understanding areal differentiation on the global surface. Like other social scientists, geographers focus on the patterns and interactions to be found on that surface, and not primarily on the natural processes that act on it from above or below. They recognize that interaction between humans and their environment has always been mutual, and that the growth of technology has increased the human capacity to modify the environment.

The view of geography presented in this syllabus is thematic in organization, human in focus and comprehensive in coverage. At its core are the interrelated themes of population, resources and development; the latter encompassing concepts derived from both economic and quality-of-life principles. Accompanying the core is a series of options in physical geography, each stressing issues of human management and response. A second series of options in human geography addresses the concept of the region and a sense of place, forms of settlement, and human production activities in agriculture, manufacturing and globalization. A third section provides an option demonstrating the importance of site in providing constraints on and opportunities for human activity and therefore affecting the landscape. Strongly skill-orientated, and highlighting the distinctive use of mapping and similar techniques by geographers, the option seeks to integrate the human and physical aspects of the subject through topographic maps, other maps and images.

Group 4: Experimental Sciences

Each subject in Group 4 contains a body of knowledge together with scientific methods and techniques which students are required to learn and apply. In their application of scientific methods, students develop an ability to:

- analyse
- evaluate, and
- synthesize scientific information.

A compulsory project encourages students to appreciate the environmental, social and ethical implications of science. This exercise is collaborative and interdisciplinary: students analyse a topic or problem which can be investigated in each of the science disciplines offered by the school. It is also an opportunity for students to explore scientific solutions to global questions.

Biology SL/HL

In Diploma Programme biology, it is hoped that students will acquire a limited body of facts and at the same time develop a broad, general understanding of the principles of the subject.

Although the Diploma Programme biology courses at standard level (SL) and higher level (HL) have been written as a series of discrete statements (for assessment purposes), there are four basic biological concepts that run throughout:

i) Structure and Function

This relationship is probably one of the most important in a study of biology and operates at all levels of complexity. Students should appreciate that structures permit some functions while, at the same time, limiting others.

ii) Universality Versus Diversity

At the factual level it soon becomes obvious to students that some molecules (eg enzymes, amino acids, nucleic acids and ATP) are ubiquitous, and so are processes and structures. However, these universal features exist in a biological world of enormous diversity. Species exist in a range of habitats and show adaptations that relate structure to function. At another level students can grasp the idea of a living world in which universality means that a diverse range of organisms (including ourselves) are connected and interdependent.

iii) Equilibrium Within Systems

Checks and balances exist both within living organisms and within ecosystems. The state of dynamic equilibrium is essential for the continuity of life.

iv) Evolution

The concept of evolution draws together the other themes. It can be regarded as change leading to diversity within constraints, and this leads to adaptations of structure and function.

Chemistry HL

Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is called the central science as chemical principles underpin both the physical environment in which we live and all biological systems. Apart from being a subject worthy of study in its own right, chemistry is a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science, and serves as useful preparation for employment.

The Diploma Programme chemistry course includes the essential principles of the subject but also, through selection of options, allows teachers some flexibility to tailor the course to meet the needs of their students. The course is available at both higher level and standard level, and therefore accommodates students who wish to study science in higher education and those who do not.

Physics SL

Physics is the most fundamental of the experimental sciences as it seeks to explain the universe itself, from the very smallest particles—quarks (perhaps 10-17 m in size) which may be truly fundamental—to the vast distances between galaxies (1024 m).

The scientific processes carried out by the most eminent scientists in the past are the same ones followed by working physicists today and, crucially, are also accessible to students in schools. Early in the development of science physicists were both theoreticians and experimenters (natural philosophers). The body of scientific knowledge has grown in size and complexity and the tools and skills of theoretical and experimental physicists have become so specialized that it is difficult (if not impossible) to be highly proficient in both areas. While students should be aware of this, they should also know that the free and rapid interplay of theoretical ideas and experimental results in the public scientific literature maintains the crucial links between these fields.

At the school level both theory and experiments should be undertaken by all students. They should complement one another naturally, as they do in the wider scientific community. The Diploma Programme physics course allows students to develop traditional practical skills and

techniques and increase facility in the use of mathematics, which is the language of physics. It also allows students to develop interpersonal skills, and information and communication technology skills which are essential in modern scientific endeavours and are important life-enhancing, transferable skills in their own right.

Alongside the growth in our understanding of the natural world, perhaps the more obvious and relevant result of physics to most of our students is our ability to change the world. This is the technological side of physics in which physical principles have been applied to construct and alter the material world to suit our needs, and have had a profound influence on the daily lives of all human beings; for good or bad. This raises the issue of the impact of physics on society, the moral and ethical dilemmas and the social, economic and environmental implications of the work of physicists. These concerns have become more prominent as our power over the environment has grown, particularly amongst young people for whom the importance of the responsibility of physicists for their own actions is self-evident.

Physics is therefore, above all, a human activity and students need to be aware of the context in which physicists work. Illuminating its historical development places the knowledge and the process of physics in a context of dynamic change in contrast to the static context in which physics has sometimes been presented. This can give students insights into the human side of physics: the individuals; their personalities, times and social milieux; and their challenges, disappointments and triumphs.

Group 5: Mathematics and Computer Science

Because individual students have different needs, interests and abilities, there are four different courses in mathematics. These courses are designed for different types of students: those who wish to study mathematics in depth, either as a subject in its own right or to pursue their interests in areas related to mathematics; those who wish to gain a degree of understanding and competence better to understand their approach to other subjects; and those who may not as yet be aware how mathematics may be relevant to their studies and in their daily lives. Each course is designed to meet the needs of a particular group of students. Therefore, great care should be taken to select the course that is most appropriate for an individual student.

In making this selection, individual students should be advised to take account of the following types of factors:

- Their own abilities in mathematics and the type of mathematics in which they can be successful
- Their own interest in mathematics, and those particular areas of the subject that may hold the most interest for them
- Their other choices of subjects within the framework of the DP
- Their academic plans, in particular the subjects they wish to study in future
- Their choice of career

Mathematical studies SL

This course is available at SL only. It caters for students with varied backgrounds and abilities. More specifically, it is designed to build confidence and encourage an appreciation of mathematics in students who do not anticipate a need for mathematics in their future studies. Students taking this course need to be already equipped with fundamental skills and a rudimentary knowledge of basic processes.

The course concentrates on mathematics that can be applied to contexts related as far as possible to other subjects being studied, to common real-world occurrences and to topics that relate to home, work and leisure situations. The course includes project work, a feature unique within this group of courses: students must produce a project, a piece of written work based on personal research, guided and supervised by the teacher. The project provides an opportunity for students to carry out a mathematical investigation in the context of another course being studied, a hobby or interest of their choice using skills learned before and during the course. This process allows students to ask their own questions about mathematics and to take responsibility for a part of their own course of studies in mathematics.
The students most likely to select this course are those whose main interests lie outside the field of mathematics, and for many students this course will be their final experience of being taught formal mathematics. All parts of the syllabus have therefore been carefully selected to ensure that an approach starting with first principles can be used. As a consequence, students can use their own inherent, logical thinking skills and do not need to rely on standard algorithms and remembered formulae. Students likely to need mathematics for the achievement of further qualifications should be advised to consider an alternative mathematics course.

Mathematics SL

This course caters for students who already possess knowledge of basic mathematical concepts, and who are equipped with the skills needed to apply simple mathematical techniques correctly. The majority of these students will expect to need a sound mathematical background as they prepare for future studies in subjects such as chemistry, economics, psychology and business administration.

The course focuses on introducing important mathematical concepts through the development of mathematical techniques. The intention is to introduce students to these concepts in a comprehensible and coherent way, rather than insisting on mathematical rigour. Students should wherever possible apply the mathematical knowledge they have acquired to solve realistic problems set in an appropriate context.

The internally assessed component, the portfolio, offers students a framework for developing independence in their mathematical learning by engaging in mathematical investigation and mathematical modelling. Students are provided with opportunities to take a considered approach to these activities and to explore different ways of approaching a problem. The portfolio also allows students to work without the time constraints of a written examination and to develop the skills they need for communicating mathematical ideas.

This course does not have the depth found in the mathematics HL course. Students wishing to study subjects with a high degree of mathematical content should therefore opt for the mathematics HL course rather than a mathematics SL course.

Mathematics HL

This course caters for students with a good background in mathematics who are competent in a range of analytical and technical skills. The majority of these students will be expecting to include mathematics as a major component of their university studies, either as a subject in its own right or within courses such as physics, engineering and technology. Others may take this subject because they have a strong interest in mathematics and enjoy meeting its challenges and engaging with its problems.

The nature of the subject is such that it focuses on developing important mathematical concepts in a comprehensible, coherent and rigorous way. This is achieved by means of a carefully balanced approach. Students are encouraged to apply their mathematical knowledge to solving problems set in a variety of meaningful contexts. Development of each topic should feature justification and proof of results. Students embarking on this course 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. They should also be encouraged to develop the skills needed to continue their mathematical growth in other learning environments.
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This course is a demanding one, requiring students to study a broad range of mathematical topics through a number of different approaches and to varying degrees of depth. Students wishing to study mathematics in a less rigorous environment should therefore opt for one of the standard level courses, mathematics SL or mathematical studies SL.

Group 6: The Arts

The subjects in group 6 allow a high degree of adaptability to different cultural contexts. The emphasis is on creativity in the context of disciplined, practical research into the relevant genres.

The assessment of these subjects reflects an eclectic attempt to combine contrasting aesthetics and forms of assessment from around the world. In particular, there is no indication of a western-oriented bias.

Film SL/HL

Film is both a powerful communication medium and an art form. The DP film course aims to develop students' skills so they become adept in both interpreting and making film texts.

Through the study of film texts and exercises in filmmaking and analysis, the DP film course explores film history, theory and socio-economic background. The course will develop students' critical abilities, enabling them to appreciate the multiplicity of cultural and historical perspectives in film. To achieve an understanding of internationalism within the world of film, students should be taught to consider film texts, theories and ideas from the points of view of different individuals, nations and cultures. Although complete knowledge is impossible, students should be guided in their search for understanding through experiencing a wide range of different film texts.

The IB Film course emphasizes the importance of working individually and as a member of a group. Students are encouraged to develop the organizational and technical skills needed to express themselves creatively in film. A challenge for students following this programme is to become aware of their own perspectives and biases and learn to respect those of others. This requires willingness to attempt to understand alternative views, to respect and appreciate cultural diversity, and to have an open and critical mind. Thus the IB Film course can become a way for the student to celebrate the international and intercultural dynamic that inspires and sustains a type of contemporary film, while appreciating specifically local origins that have given rise to cinematic production in many parts of the world.

For any student to create, to present and to study film requires courage, passion and curiosity: courage to create individually and as part of a team, courage to explore ideas through action and harness the imagination, courage to experiment; passion to communicate and to act communally, passion to research and formulate ideas eloquently; curiosity about self and others and the world around one, curiosity about different traditions, techniques and knowledge, curiosity for the past and the future and for the limitless possibilities of human expression through film.

At the core of IB Film lies a concern with clarity of understanding, critical thinking, reflective analysis, effective involvement and imaginative synthesis achieved through practical engagement in the art and craft of film.

Distinction between HL and SL

Although the HL and SL syllabus outlines share elements, which serve to facilitate course planning when SL and HL students are taught together, the difference in recommended teaching times, 240 hrs at HL and150 hrs at SL, signals a clear distinction between both the explicit and implicit demands on students studying at these levels. This differentiation between HL and SL is reflected in both the breadth of study and the depth to which this study is pursued. Through a variety of teaching approaches, including the construction and deconstruction of film texts, all students, whether SL or HL will be encouraged to develop their creative and critical abilities and to enhance their appreciation and enjoyment of film.

Production work is an important component of this programme and should be seen as a means for students to put theory into practice by demonstrating knowledge and understanding of technical skills in their own film production, as well as engaging them in creative, imaginative and aesthetic understanding. Production work should not be seen in isolation but integrated into the programme as a whole.

The differentials between HL and SL are, however, both quantitative and qualitative. The nature of the programme enables Higher Level candidates to develop creative skills, theoretical understanding and textual analysis more fully. For instance, in the Production Portfolio Standard Level candidates do not have to construct a trailer for their completed film. The additional range of practical skills required for Higher Level candidates' trailers establishes the need for individual creativity as well as the ability to work as a member of a team.

For the Independent Study HL candidates are required to study more films for comparison. This requires a greater degree of analytical skill and a wider range of comparative study. For the Presentation SL candidates are required to speak for a shorter period of time, this means that SL candidates need to develop an equal degree of planning and analytical skills but in the presentation itself they cover a narrower range of topics. HL candidates are required to offer greater detail in theoretical terms and address the additional concepts of audience reception both at the time of release of the chosen film and/or subsequent critical and scholarly references.

Nevertheless, it is expected that a 'Higher' level student will display a continuous resolve of personal challenge and a sustained engagement with the ideas, practices and concepts encountered within the course over the extended learning time available. An HL student has extra time to encounter, reflect and record growth. It is understood that ensuing developments may be only partially evident within the framework of the assessment process. However, the process distinguishes clearly in both breadth and depth of work between HL and SL expectations and comparison between levels or individuals should be avoided.

Music SL/HL

The aims of the IBO Music programme are to:

- give students the opportunity to explore and enjoy the diversity of music throughout the world
- encourage students to develop perceptual skills through a breadth of musical experiences, where they will learn to recognize, speculate, analyse, identify, discriminate and hypothesize in relation to music
- enable students to develop creatively their knowledge, abilities and understanding through performance and composition
- assist students to develop their potential as musicians both personally and collaboratively, in whatever capacity, to the full.

Candidates who have completed the Higher Level (HL) programme will be expected to demonstrate:

- development of their performance skills through solo music making
- development of their compositional skills through exploration and investigation of musical elements
- use of appropriate musical language and terminology to describe and reflect their critical understanding of music
- development of perceptual skills in response to music
- knowledge and understanding of music in relation to time and place.

Candidates who have completed the Standard Level (SL) programme will be expected to demonstrate:

- use of appropriate musical language and terminology to describe and reflect their critical understanding of music
- development of perceptual skills in response to music
- knowledge and understanding of music in relation to time and place.

In addition, Standard Level candidates following the option indicated, Solo Performance (SLS), Group Performance (SLG) or Composition (SLC), will be expected to demonstrate:

- development of their performance skills through solo (SLS) or ensemble (SLG) music making or
- development of their compositional skills through exploration and investigation of musical elements (SLC).

Theatre Arts SL/HL

The aims of the programme in Theatre Arts are to help students understand the nature of the theatre; to understand it by making it as well as by studying it; to understand it not only with their minds but with their senses, their bodies and their emotions; to understand the forms it takes in cultures other than their own; and through this understanding better to understand themselves, their society and their world.

Although the Theatre Arts programme is divided into parts, there are strong links between these which should be emphasized by the teacher. Students need to acquire the reflective skills and understanding of how the links and parts work together as a whole. The skills students are expected to have acquired at the end of the course should be gained from all areas of the programme.

Having completed the course at Higher Level (HL) or Standard Level (SL) a student will be expected to have demonstrated:

- a knowledge of the major developments and techniques in the theatrical history of more than one culture
- an ability to interpret and illuminate playscripts and other theatrical texts analytically and imaginatively
- an understanding of the art of the stage and of criticism in relation to it
- an ability to perform before an audience, and to demonstrate an understanding of, and some skill in, acting techniques
- the acquisition of sufficient technical skill to produce satisfactory work in at least one of the theatrical arts or crafts
- an understanding of the processes of theatrical production
- an ability to research imaginatively, selectively and with persistence.