

**Handbook
of the
International Baccalaureate
Programme
of Studies**

at

**Verdala International School
Malta**

2009 – 2011

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An Introduction to the International Baccalaureate (IB) Programme at Verdala International School

Verdala International School in Malta is a college-preparatory school which offers students the necessary experiences, and knowledge which will give them confidence and success in their post-secondary education. This handbook provides information on IB programme descriptions, requirements and standards. An IB student has high academic goals and a sufficient level of motivation and rigour to expand his/her knowledge and grow intellectually. The programme is broad in its scope and deep in its provisions. A careful reading of these details will provide students and their parents with an understanding of what the IB involves.

The International Baccalaureate (IB) programme at VIS is a two-year programme of studies which meets the externally monitored criteria of the IB Organization. For students who are qualified and advised to do so, entrance into the full IB Diploma programme begins in September of the 11th-grade year and continues through graduation. Students earning this diploma are enrolled in IB courses and must sit an examination for each of the courses at the end of the two-year period. Three of the six IB courses must be taken at higher level (HL) and three of the courses must be taken at standard level (SL). Additionally, the Theory of Knowledge (TOK) course must be completed satisfactorily, an extended essay based upon an independent research topic must be written and submitted, and the CAS programme must be completed to the requirements of the IB organization.

Given the outcome of the examinations at the end of the programme, the IB Organization may confer the IB Diploma on individual students. This diploma is received IN ADDITION TO and INDEPENDENTLY OF the VIS High School Diploma. With the IB diploma, it is possible to gain acceptance into university systems in all parts of the world. Since 1969, IB students have been accepted at over 700 universities in more than 100 countries.

Here is an example of a typical programme which IB-diploma candidates can complete at VIS:

Higher Level

English A1
Physics
Computers

Standard Level

French B
History
Mathematics Standard Level

The working language for all courses (except foreign languages) is English. Therefore, students are advised that a good level of written and oral English is expected of them in order to follow the programme successfully. **(Students may be administered a English 2nd Language test to assess whether or not their level of English is appropriate.)**

Please note that the full IB Diploma programme is very demanding academically and in terms of dedication. It is not for the “faint-of-heart”. If you are not prepared to spend 15-20+ hours a week on school work and make other sacrifices as necessary, you should consider a less rigorous programme – perhaps doing some certificates and / or the High School Diploma instead.

L. G. Simpson

Lawrence Simpson
IB coordinator

WHO TAKES THE IB?

There are two groups of students who should take the Diploma:-

- those who need it for entrance to the Universities of their choice, and,
- those who, being academically able and well motivated, want to undertake a challenging programme.

Students do not need to have done outstanding work to consider beginning the Diploma. They must, however, be willing to work hard, and be able to organize their time effectively. Students are advised to talk to their teachers and the IB Coordinator if they have any questions about the programme and its appropriateness for them.

Students who do not choose to take the full IB Diploma are encouraged to take individual Certificates in IB subjects for which they are qualified.

Students who have completed the two-year IB Diploma programme, whether as IB Diploma candidates or as Certificate candidates, will fulfil the graduation requirements from Verdala International School. Provided they have met the school's minimum grade requirements they will earn the High School Diploma. The High School Diploma is not awarded on the basis of IB examination results published in July of the graduation year, but on the school grades earned throughout the two years of the programme.

The “Academic License”

One of the significant features of Verdala International School's IB programme is that, in contrast to the majority of other schools that offer the IB Diploma, entry to our course has been non-selective. A candidate who has successfully completed the equivalent of 10th Grade may be admitted to the programme. However, experience has shown that this means there are wide-ranging levels of ability, background, and motivation within the classes, and it eventually becomes apparent that for some candidates, the full diploma is not the appropriate choice.

To help resolve this issue, the school administration implemented since September 2007, an “Academic License” for IB Diploma candidates. In short, an IB Diploma candidate must maintain certain levels of effort and achievement to be able to stay in the programme as a full Diploma Candidate. Here are the procedures established for the Academic License.

IB Candidates – Issue and Conditions of the “Academic License”

On entering the IB programme, diploma candidates will be given a “Student Academic License”. Parents and guardians will be notified of procedures at the introductory meeting, and also details will be included in the IB Handbook.

Candidates will start with academic points and will lose points for unsatisfactory academic progress or effort, but can gain points for improvement in academics or effort.

If and when their point total reaches zero they withdraw from the IB programme but may continue as High School diploma candidates. If grades and effort are satisfactory in certain subjects they may continue as IB certificate candidates.

Points will be deducted or added as follows:

-2 points for a U or F (maximum of 3 per subject per quarter)

-1 point for a D- or S-

-1 point for any missed deadline

-1 point for not reaching CAS targets

+2 points for any E

+1 point for an S+

+ 1 point for an effort grade increase from U to S

+1 point per grade increase in weak subjects (e.g. a D to a C... +1, D to a B... +2)

Note:

- The IB Coordinator will have responsibility for maintaining records
- Missed deadlines are significant deadlines such as Extended Essay, Internal Assessments, etc. (Candidates are provided with a list and due dates)
- CAS expectations are detailed in the IB handbook
- Assessments will be made every quarter from reports.
- Candidates will their license updated every time the points total changes (they will have their own copy)
- Parents/guardians will be advised by mail or email whenever their child points' total changes

UNIVERSITY RECOGNITION

Most students who choose to take the full IB Diploma do so in order to gain entrance to European Universities. Over the years, however, a substantial number of students who have gone on to Universities in the United States have found that the IB Diploma grants them either credit or advanced standing. In addition, students have found that the IB Diploma has provided them with an excellent background for their further studies as well as excellent study habits that will make them shine out from their future peers.

Some students pursue the Diploma because, in Grade 10, they have yet to decide where they wish to study in the future. The breadth of their individual programme will give them a wider choice of where to go in the future. At the same time their choice of Higher Level subjects will give them the depth of study in chosen academic areas that will be of immense help when finally making a decision.

1. United Kingdom and Ireland

For many years the IB Diploma has been accepted for admission purposes. Except for Foundation Courses in some Universities, a full Diploma is usually required. Offers of admission to a certain Department within a given university will be made conditional upon the student's IB examination results, choice of subjects and choice of levels.

2. Continental Europe

Most European countries accept the IB Diploma for entrance into their national universities. Some countries require that all exams are taken at one time, and others may require particular marks and subjects. Information concerning individual countries can be obtained from the IB Coordinator, but students are strongly advised to obtain this from the relevant Ministry of Education or University.

3. Italy

In 1999 Verdala International School received acceptance of its IB Diploma Programme by the Ministry of Education in Rome. Students wishing to study at an Italian University must meet certain subject requirements. This information is available from the IB Coordinator.

4. Austria

The IB is recognised as equivalent to the Austrian Matriculation Certificate. The diploma is recognised as a foreign university entrance certificate provided it contains certain subjects with at least a grade 3 in all of them. Certificates are not recognised as being sufficient. Information on the subjects required are available from the coordinator.

5. Germany

The IB diploma is recognised with certain conditions relating to subject choices and grades achieved. Details are available from the IB coordinator.

6. Sweden

The IB is recognised by Swedish Universities and Colleges as meeting the general requirements for entry provided that Swedish is in the diploma or the student passes a Swedish "TISUS" test. IB certificates do not meet the general admission requirements. For most study programmes there are also special requirements.

7. The United States

The IB Diploma is not required for University entrance in the United States. Most prominent Universities, however, have developed IB policies that vary between advanced placement, course credit, and special consideration at the time of admission. In some cases a full year of University standing may be awarded to students with the IB Diploma. In addition admission officers look favourably on students enrolled in the IB programme when considering applications.

8. Canada

The IB Diploma is recognized throughout Canada as an admission credential. Some of the more selective universities may require the Diploma for the admission of students who have been studying outside Canada. Many universities grant credit and/or advanced placement for students with higher level certificates. Entrance at the second year for Diploma holders is a possibility at some universities.

9. Malta

Foreign students will be considered eligible for entry if their qualifications give access to universities in their own country and if the Admissions Board is satisfied that the qualifications are of a comparable level to the entry requirements of the University of Malta. In this regard the IB Diploma is generally recognized but subjects and level (higher or standard) need to be checked carefully with the University as these will vary for entry from Faculty to Faculty. General admittance requirement as of 2008 has been stipulated as 28 points on the full IB Diploma.

Students who are Maltese nationals must also satisfy the University requirements for proficiency in the Maltese Language. Verdala does not offer Maltese language in the high school, and neither is it an option for the IB Diploma. Maltese nationals are therefore strongly advised to check with the University of Malta well in advance of applying to ensure that they will satisfy the Maltese Language requirements.

Information from the IB coordinator and College Counsellor

The IB Diploma is recognized by universities in more than 100 countries around the world. A complete list is available for reference from either the IB Coordinator or the College Counsellor.

All students and parents are encouraged to make an early appointment with the College Counsellor to discuss the various options available for post Verdala education.

<p>Entry qualifications may vary from year to year and from course to course. Students are advised to check these with the universities they are interested in in order to provide a suitable programme of studies.</p>
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SUBJECT SUMMARIES

On the next few pages are details of the individual IB subjects available for study at Verdala. It must be emphasized that the material presented is only an outline of the courses on offer. All students should consult subject teachers, the IB Coordinator and the College Counsellor before making final choices of which courses to take. Course choices, and even whether to take subjects at higher level or standard level, may determine where, and in what disciplines, a student will be able to pursue further education.

Students should make a choice that not only meets their expectations, but is also a challenging but realistic choice based on future needs and current preferences, strengths and weaknesses. It is important for parents to be involved in this decision making process, and the IB Coordinator and College Counsellor are always available for parent conferences if required.

GROUP 1

ENGLISH A1

HIGHER LEVEL – total 15 books (There maybe minor changes to this programme for 2009-2011)

The Higher Level Programme is divided into four parts as follows:

Part 1 World Literature Total number of works: 3

<u>Tartuffe</u>	Moliere
<u>A Doll House</u>	Ibsen H.
<u>The Cherry Orchard</u>	Chekhov, Anton

Assessment 2 WL assignments 20%

Each 1000 – 1500 words

Asst. 1 – Comparative Study of at least TWO Part 1 works (10%)

Asst. 2 – Based on works NOT used in Asst. 1 (10%)

Part 2 Detailed Study Total number of works: 4

<u>Macbeth</u>	Shakespeare
<u>A Midsummer's Night's Dream</u>	Shakespeare
<u>Poetry</u> (15 – 20 poems)	Owen/Heaney/Keats/Eliot
<u>I know Why the Caged Bird Sings</u>	Maya Angelou

Assessment (15%)

Individual Oral commentary of 15 minutes.

Commentary on an extract, chosen by the teacher, from one of the Part 2 works studied.
Extract accompanied by guiding questions.

Part 3 Groups of Work Total Number of works: 4

The Novel and Short Story

<u>Wide Sargasso Sea</u>	Rhys, Jean
<u>The Reader</u>	Schlink, Bernhard
<u>The Awakening</u>	Chopin, Kate
<u>Of Mice and Men</u>	Steinbeck, John

Assessment (25%)

Paper 2	2 hours
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Part 4 Free Choice Total number of Works: 4

<u>Things Fall Apart</u>	Achebe, Chinua
<u>The Handmaid's Tale</u>	Atwood, Margaret
<u>The Picture of D. Gray</u>	Wilde, Oscar
<u>Nectar in a Sieve</u>	Markhandeya

Assessment (15%)

Individual Oral Presentation (10 – 15 minutes)

Presentation of a topic chosen by the candidate, based on Part 4 works.

STANDARD LEVEL

The Standard Level Programme involves three fewer works and one less World Literature written assignment than the Higher Level. Essentially it follows the higher level structure, but there are fewer assessment criteria used to evaluate the written and oral assignments.

Part 1 World Literature	Total Number of works: 3
Part 2 Detailed Study	Total Number of works: 2
Part 3 Groups of Works	Total Number of works: 3
Part 4 School's Free Choice	Total Number of works: 3

LANGUAGE A1 : Self-taught (SL only)

Candidates will follow a guided programme during which they will study a total of 11 books in their first language. Six of these books should be written originally in their Language A1. The other five, from the World Literature part of the programme, being written in a language other than their A1 but read in translation.

These 11 books need to be purchased by the candidates. Five come from the Language A1 Prescribed World Literature List (PWL)*, and six are chosen from the Language A1 Prescribed Book List (PBL)*. We recommend that these books be purchased over the summer of their 10th Grade year, so that they are in the students' possession by September of the 11th Grade year. Verdala A1 self-taught teachers are available for consultation and to offer assistance in the choice of books.

(* Printouts of the book lists are available from the school on request.)

Candidates are advised to choose the same books for World Literature. That will allow the teacher to supervise and advise on the externally assessed written assignment based on this part. Assessment on this component consists of a comparative essay, 1000-1500 words long, assessed externally.

Candidates must submit two compulsory oral activities which are recorded and assessed externally.

A final written examination consists of a commentary on an unseen text accompanied by guiding questions, and a book-based essay.

During the course, self-taught candidates will receive formal literacy training, and general advice on the techniques required for oral and written components.

Students choosing this option for their A1 language are strongly advised to choose English A2 as their second language choice in Group 2.

GROUP 2

GROUP 2 – IMPORTANT NOTE

IB Diploma candidates are not permitted to study the same language in both Group 1 and Group 2. The requirement quite clearly states that the Group 1 and Group 2 languages must be different. Candidates who offer a Language A1 and a Language A2 qualify for a *bilingual* IB diploma.

ENGLISH A2

The language A2 programme is divided into two literary text options and two topic options. One literary text option and one topic option will be covered in the 11th grade, and the remaining options will be covered in the 12th grade.

Higher Level: Must study 4 options

Standard Level: Must study 3 options

The course is structured as follows: (There may be minor changes to the texts listed)

11TH GRADE

Literary Text Option I:

The Adventures of Huckleberry Finn by Mark Twain

The Grapes of Wrath by John Steinbeck

To Kill A Mockingbird by Harper Lee

Topic Option I:

Society

12TH GRADE

Literary Text Option II:

1984 by George Orwell

The Crucible by Arthur Miller

The Catcher in the Rye by J. D. Salinger

Topic Option II:

Media

COURSE AIMS

By the end of the course students should be able to deal confidently with a range of different types of writing. Also, candidates should know how to plan and structure an essay, argue and present their ideas in a mature and logical way. Moreover, they should be able to read a passage and comment on the content, style, structure and language (text analysis). Finally, since English is the target language, students should be capable of using a wide range of vocabulary, and be fluent enough to vary and use grammatical and sentence structures correctly.

ASSESSMENT

Internal Oral Assessment (30%):

This consists of two compulsory activities:

- The individual oral – a critical examination of a particular text
- An interactive oral activity – group discussions, role play, dramatic presentations chosen by the teacher

Written Assessment (20%):

Candidates will write two text productions based on different options that should not exceed 1,500 words. The written assignment will be worked on throughout the year.

ENGLISH B

This is a foreign language programme for students with previous experience of learning the language. The aim of the course is to improve English language skills, written and oral. It also involves some literature. It is a two-year programme offered at Higher level only.

Prerequisites:

Normally, three years of prior study of English are required, with a minimum standard of IGCSE grade C. Other students who have a strong background for other reasons may be admitted at the discretion of the department for a probationary period of three months following a placement test.

The main focus of the course is on language acquisition and development in four primary language skills:

- listening
- speaking
- reading
- writing

Competence in each skill involves an understanding of three inter-related areas:

1. Language (grammar, syntax, etc)
2. Cultural interaction (use of appropriate language in particular cultural and social context)
3. Message (understanding and communicating ideas appropriately)

Assessment:

External – Written components (Paper 1 = 40%; Paper 2 = 30%)

Internal - Oral components (Individual Oral = 15%; Interactive Oral Activity = 15%)

LANGUAGE B

(French and Spanish)

This is a foreign language programme for students with previous experience of learning the language. Students entering at the standard level should know the basic grammar and be able to write and speak simply but effectively on topics of everyday life.

The aim of the Language B courses is to improve language skills, written and oral. The course also involves some literature (especially at higher level) and a cultural component, but the main emphasis is on linguistic development.

This is a 2-year programme for both higher and standard level.

PRE-REQUISITES

Normally two years of prior study of the languages with passing grades are required for Standard level and three or four years for HL. A minimum standard of IGCSE grade C in the target language is required. Other students, who have a strong background for other reasons, may be admitted at the discretion of the department for a probationary period of three months following a placement test.

Themes

These cover most aspects of everyday life (as indicated in the Ab Initio themes), personal needs and experiences with a strong emphasis on cultural awareness.

The skills to be developed equally through the exploitation of the themes are:

Text handling (reading)

Written production (essays)

Listening

Oral (speaking)

Texts

A wide range of texts will be used as a basis for writing and speaking as well as periodicals, magazines, videos, of literary and non-literary nature that are adapted to the students' needs and interests.

AB INITIO

(French, Italian, Spanish)

Ab initio is a foreign language programme for beginners.

It is a 2-year programme at standard level. There are no pre-requisites.

The topics to be studied for all the Ab Initio language programmes are as follows:

The Individual	Education and Work
Food and Drink	Leisure and Travel
Towns and Services	Environment
Health and Emergency Services	

Students will be expected to use appropriate register (formal, informal, etc) in a variety of settings. Through the study of the topics, the students should gain an insight into the culture of the country/countries where the languages are spoken. The cultural elements will be integrated into the study of the topics themselves.

Texts and the development of skills will be as above for Language B.

INTERNAL ASSESSMENT

The internal assessment components for both Language B and Ab initio are conducted through oral work that contributes 30% towards the final IB examination grade.

GROUP 3

INDIVIDUALS AND SOCIETIES

HISTORY

COURSE AIMS

In understanding human activity in the past, candidates at higher level and standard level will be prepared to understand and critically analyze the nature and use of historical evidence. Apart from understanding the nature of basic historical concepts, the course also encourages the development of linguistic and communication skills.

The two year History programme prepares students for both higher or standard level History. The choice of level is a matter for the student in consultation with the History staff. The students make a study of twentieth century world history topics.

Twentieth Century World History Topics

The causes, practices and effects of war. The major themes are:

- The First and Second World Wars, and the Korean War: their causes, consequences, results, treaties, and technical developments.
- The phenomenon of civil war and localised war generated by political, ideological, and economic problems of a regional nature, with specific reference to the Chinese Civil War.

The rise and rule of single party states in Germany, Russia and China. The major themes are:

- The conditions that produce single party states.
- The nature and variety of single party states.
- The role played by ideology, organization and leadership in gaining and maintaining power.
- The efficiency of single party states in solving the principal political, economic and social problems of the twentieth century.
- The problems caused by the rule of single party.

Interwar years: conflict and cooperation 1919-39

- Germany 1919-39: political, constitutional, economic, financial and social problems.
- Italy 1919-39: Mussolini's domestic and foreign policies
- Hitler's domestic and foreign policy (1933-39)
- Search for collective security.

The Soviet Union and Eastern Europe 1924-2000

- Stalin (1924-53): power struggle, collectivization and industrialization, cult of personality, purges, foreign relations to 1941
- The Great Patriotic War: breakdown of wartime alliance, Cold War, policies towards Germany: Berlin, Eastern European satellite states, Warsaw Pact.
- Krushchev (1955-64): Domestic and Foreign Policies
- Brezhnev: Domestic and Foreign Policies
- Transformation of Soviet Union: political developments and change (1982-2000)

The Second World War and post-war Western Europe 1939-2000

- Second World War in Europe, Cold War: impact on Germany, NATO and military cooperation
- Post-war problems and political and economic recovery in Western Europe
- Establishment and consolidation of the Federal republic of Germany to German reunification.
- Moves towards political and economic integration, cooperation and enlargement post 1945.

Nationalist and Independence Movements in Africa and Asia and post-1945 Central and European States

- Origins and rise of Nationalist / Independence Movements
- Methods of Achieving Independence
- Challenges to Soviet or Centralised Control in Central, Eastern and Balkan Europe
- Formation of, and challenges to, post-colonial governments / new states

INTERNAL ASSESSMENT

Both SL and HL programmes will include internal assessment contributing 25% and 20% to the final IB examination grade in this subject.

COURSE REQUIREMENTS

When choosing between the higher level and standard level courses, students in grade 10 are advised to consider the following points regarding their Social Studies class:-

- Have you been consistent in class and when handing in a variety of assignments?
- Have your oral and written skills shown a consistent improvement over the year?
- Do you know what your strengths and/or limitations are in this subject are and do you know how to and are prepared to, overcome these limitations
- Have you expressed an interest in studying History at the higher level?

PSYCHOLOGY – SL only

In Psychology you will study the behaviour of human beings in terms of the 5 current approaches, and the psychologists who follow each or some of these approaches:

Behaviouristic,
Psychodynamic,
Humanistic/Phenomenological,
Cognitivist,
Neurobiological.

In addition the following special subjects are studied:

Abnormal Psychology
Principles of Research Design
Statistics
Ethical Issues in Psychological Research.

INTERNAL ASSESSMENT

You will learn the various methods of psychological enquiry, and undertake one research study - an experiment
Practical work contributes 20% towards the final IB grade awarded in this subject.

BUSINESS AND MANAGEMENT

This programme is designed to give students an understanding of business principles, practices, and skills. Emphasis is also placed on understanding technical innovation and day-to-day business functions of marketing, human resource management, and finance. A fundamental feature of the programme is the concept of *synergy* - integrating and linking the various modules to give students a holistic overview.

Having followed the Business and Management programme candidates will be expected to:

- demonstrate knowledge and understanding of business terminology, concepts and principles
- identify social and cultural factors, and ethical considerations, in the actions of organizations
- assess the impact of the actions of organizations on the internal and external environment
- demonstrate competence in problem-solving and recommending solutions
- assess data from a variety of sources
- evaluate information in order to distinguish between fact and opinion
- collect, organize, interpret, and present information in different forms
- demonstrate their ability to apply theory to real-life situations.

Higher level consists of six compulsory modules and a research project. Standard level consists of four compulsory modules* and a written assignment

The modules are:

- 1) Introduction to Organizations*
- 2) The External Environment
- 3) Marketing*
- 4) Human Resource Management*
- 5) Operations Management
- 6) Accounting and Finance*

INTERNAL ASSESSMENT

Higher Level candidates produce a Research Project. They select a real organization and investigate a real issue or decision. The Research Proposal will be from 200 – 300 words and the Written Report will be between 1800 and 200 words making a total of about 2000-2300 words. This contributes 25% towards the final grade in this subject.

Standard Level candidates produce a Written Assignment of 1000 – 1500 words, which demonstrates the application of tools, techniques, and theory to a real business situation or problem. This contributes 20% towards the final grade in this subject.

GROUP 4

EXPERIMENTAL SCIENCES

INTERNAL ASSESSMENT

Practical work is an integral part of all Experimental Sciences, and all of the Experimental Sciences share the same internal assessment structure, whereby 24% of a candidate's final grade awarded in the IB examination comes from investigative work carried out during the course of the two year programme. Students will engage in individual and small group hands-on activities allowing them to develop competence in practical skills identified for assessment purposes. To achieve this requirement students will participate in investigations for approximately 20-25% of their scheduled class time. As part of this requirement, all students must participate in a large multidisciplinary research project lasting about 10 hours.

Written reports of their investigative activities will form the basis of a student's **Portfolio of Investigations**. Students may also be required to maintain a practical **Logbook** for use in the laboratory. The Portfolio will be used in the assessment of their practical at the end of the two-year course.

Investigations may also be used to assess the students for their school grade. Other assessments used for the school grade will include end of topic tests and quizzes, group project work, guided questions and essays.

BIOLOGY

Through studying any of the group 4 subjects, including Biology students should become aware of how scientists work and communicate with each other. While the "scientific method" may take on a wide variety of forms, it is the emphasis on a practical approach through experimental work that distinguishes the group 4 subjects from other disciplines and characterizes each of the subjects within group 4.

It is in this context that all the Diploma Programme experimental science courses should aim to:

1. provide opportunities for scientific study and creativity within a global context that will stimulate and challenge students
2. provide a body of knowledge, methods and techniques that characterize science and technology
3. enable students to apply and use a body of knowledge, methods and techniques that characterize science and technology
4. develop an ability to analyse, evaluate and synthesize scientific information
5. engender an awareness of the need for, and the value of, effective collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills
7. develop and apply the students' information and communication technology skills in the study of science
8. raise awareness of the moral, ethical, social, economic and environmental implications of using science and technology
9. develop an appreciation of the possibilities and limitations associated with science and scientists
10. encourage an understanding of the relationships between scientific disciplines and the overarching nature of the scientific method.

Objectives

The objectives for all group 4 subjects reflect those parts of the aims that will be assessed. Wherever appropriate, the assessment will draw upon environmental and technological contexts and identify the social, moral and economic effects of science.

It is the intention of all the Diploma Programme experimental science courses that students achieve the following objectives.

1. Demonstrate an understanding of:
 - a) scientific facts and concepts
 - b) scientific methods and techniques
 - c) scientific terminology
 - d) methods of presenting scientific information.

2. Apply and use:
 - e) scientific facts and concepts
 - f) scientific methods and techniques
 - g) scientific terminology to communicate effectively
 - h) appropriate methods to present scientific information.

3. Construct, analyse and evaluate:
 - i) hypotheses, research questions and predictions
 - j) scientific methods and techniques
 - k) scientific explanations.

4. Demonstrate the personal skills of cooperation, perseverance and responsibility appropriate for effective scientific investigation and problem solving.

5. Demonstrate the manipulative skills necessary to carry out scientific investigations with precision and safety.

Students who opt to study IB Biology should have a general interest in human systems and the ecology of the environment. It is preferable that students should also have a grade C or higher in IGCSE combined science (or Biology and Chemistry) before embarking on this course.

The following basic concepts run through the whole course

Syllabus outline

Syllabus details—Core

- Topic 1: Statistical analysis
- Topic 2: Cells
- Topic 3: The chemistry of life
- Topic 4: Genetics
- Topic 5: Ecology and evolution
- Topic 6: Human health and physiology

Syllabus details—AHL

- Topic 7: Nucleic acids and proteins
- Topic 8: Cell respiration and photosynthesis
- Topic 9: Plant science

- Topic 10: Genetics
- Topic 11: Human health and physiology

Syllabus details—Options SL

- Option A: Human nutrition and health
- Option B: Physiology of exercise
- Option C: Cells and energy

Syllabus details—Options SL and HL

- Option D: Evolution
- Option E: Neurobiology and behaviour
- Option F: Microbes and biotechnology
- Option G: Ecology and conservation

Syllabus details—Options HL

- Option H: Further human physiology
- Mathematical requirements

The options covered by SL students are:

- Option C – Cells & Energy
- Option E – Neurobiology & Behaviour

The options covered by HL students are:

- Option E – Neurobiology & Behaviour
- Option H – Further Human Physiology

Textbooks: Biological Science 1&2 – D.J.TAYLOR, N.P.O.GREEN, G.W. STOUT
 LIFE – The Science of Biology by Purves, Orland and Heller as a reference book

PHYSICS

The Diploma Programme Physics course allows students to develop traditional practical skills and techniques and to increase facility in the use of mathematics, which is the language of Physics. It also allows students to develop interpersonal skills and IT skills, which are essential in modern scientific endeavour. Physics familiarizes students with the laws and theories that govern the physical concepts of motion, energy and waves. These laws are usually expressed in the form of mathematical equations that can be applied to real life situations.

CORE topics

1. Physical measurement
2. Mechanics
3. Thermal Physics
4. Oscillations and waves
5. Electric currents
6. Fields and forces
7. Atomic and Nuclear Physics
8. Energy, power and climate change

ADDITIONAL HIGHER LEVEL topics

1. Motion in fields
2. Thermal Physics
3. Wave phenomena
4. Electromagnetic induction
5. Quantum and nuclear physics
6. Digital technology

OPTIONS (SL)

1. Sight and Wave phenomena
2. Digital Technology or Electromagnetic Waves

OPTIONS (HL)

1. Electromagnetic Waves
2. Medical Physics

TEXTBOOK:

Physics - A Text for the International Baccalaureate Programme by K.A.Tsokos

Requirements (Prior learning)

Students will be able to study Physics with no background knowledge in the above topics. The student's approach to study will be significant in such cases. For most students, some previous exposure to Physics would be necessary. Students who have undertaken an IGCSE science examination would be well prepared. Other national study qualifications or a school-based science course would also be suitable preparation for study at IB level.

All students of Physics need to be familiar with a range of mathematical techniques, including graphing, algebra, trigonometry and geometry. A good grade (C or higher) in IGCSE Mathematics or an equivalent grade indicates a good preparation. Students wishing to take Physics must be taking Mathematics SL or HL (not Mathematical Studies).

CHEMISTRY

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 sciences, environmental sciences and many engineering courses.

Topics to be studied:

- Quantitative Chemistry
- Atomic Structure
- Periodicity
- Bonding
- Energetics
- Kinetics
- Equilibrium
- Acids and Bases
- Oxidation and Reduction
- Organic Chemistry
- Measurement and Data Processing

Options:

- Medicine and Drugs
- Environmental Chemistry

Students are expected to spend 40 hours (SL) and 60 hours (HL) during this course engaged in practical work that is assessed internally. This essential time in the lab comprises 24% of the final IB grade. This course is intended to make studying chemistry much more challenging and rewarding.

The exam does not particularly test recall, more how to apply your knowledge in different situations. Although there are facts that must be learned, much of chemistry is logical, and knowledge about the subject tends to come more from 'understanding' than from 'rote learning'. This is a subject suited to the student who is prepared to study thoroughly after each lesson. Some of the course involves basic calculations. Most students find that as the course progresses and more examples are met, their confidence to handle numbers increases considerably. Perseverance pays!

Students choosing chemistry should have a good grade(C minimum) in IGCSE Maths and Combined Science or equivalent. Students taking HL chemistry would find the subject easier if they have a pre-IB course such as IGCSE Chemistry.

GROUP 5

MATHEMATICS AND COMPUTERS

Three Mathematics courses are provided for students of a wide range of ability and interest: Mathematical Studies (SL), Mathematics (SL), and Mathematics (HL). The final choice between these three will depend upon the students' mathematical background and future direction of studies.

AIMS

The aims of all courses in group 5 are to enable students to:

- appreciate the multicultural and historical perspectives of all group 5 courses
- enjoy the courses and develop an appreciation of the elegance, power and usefulness of the subjects
- develop logical, critical and creative thinking
- develop an understanding of the principles and nature of the subject
- employ and refine their powers of abstraction and generalization
- develop patience and persistence in problem solving
- appreciate the consequences arising from technological developments
- transfer skills to alternative situations and to future developments
- communicate clearly and confidently in a variety of contexts.

OBJECTIVES OF THE MATHEMATICS' SYLLABUSES

Having followed any one of the mathematics courses in group 5, students are expected to know and use mathematical concepts and principles.

In particular, students must be able to:

- read, interpret and solve a given problem using appropriate mathematical terms
- organize and present information and data in tabular, graphical and/or diagrammatic forms
- know and use appropriate notation and terminology
- formulate a mathematical argument and communicate it clearly
- select and use appropriate mathematical strategies and techniques
- demonstrate an understanding of both the significance and the reasonableness of results
- recognize patterns and structures in a variety of situations, and make generalizations
- recognize and demonstrate an understanding of the practical applications of mathematics
- use appropriate technological devices as mathematical tools
- demonstrate an understanding of and the appropriate use of mathematical modelling.

MATHEMATICS HL

Mathematics HL is an in-depth, rigorous study of pure mathematics. This course is designed for students with a strong interest and background in mathematics. Students who choose to take Higher Level Mathematics often go on to university to study mathematics, physics, engineering, or technology.

It is expected that a Higher Level Candidate would earn a "B" or better on the IGCSE Extended Math exam. If the student has not taken the IGCSE exam, an equivalent test will be administered.

MATHEMATICS SL

Mathematics SL is also a rigorous study of pure mathematics. The course is a subset of the Mathematics HL course. It is also designed for students with a strong interest and background in mathematics, but who don't need it as a "Higher Level" class. Students who take Mathematics SL often go on to university to study sciences, business and finance, or technology.

It is expected that a Standard Level Candidate would earn a "C" or better on the IGCSE Extended or Core Math exam. If the student has not taken the IGCSE exam, an equivalent test will be administered.

MATHEMATICAL STUDIES (SL)

Mathematical Studies SL is designed to provide the skills needed to cope with the mathematical demands of a technological society with an emphasis on the application of mathematics to real-life, everyday situations. Mathematics SL is a realistic mathematics course for students with varied backgrounds and abilities who may study arts, languages, social sciences, or human sciences at university.

CALCULATORS

All IB Mathematics courses require access to a graphing calculator. All students taking these courses will be expected to have a graphing calculator. In HL and SL the Paper 1 is "calculator-free," but the graphing calculator is expected and required for the other papers.

A code of practice describing the use of calculators in the IB Diploma programme, including a list of acceptable models, is available as a supplement to this booklet from the IB Coordinator or the Mathematics teacher.

COMPUTER SCIENCE

Subject Common Core (HL and SL students)

1. Software Development
2. Computing Systems Fundamentals
3. Computing Systems and Society

Additional HL Material (HL students only)

4. Computer Mathematics and Logic
5. Advanced Data Structures and Algorithms
6. System Life Cycle
7. File Organization

INTERNAL ASSESSMENT

Both Standard level (SL) and Higher level (HL) students study a common core of material and have to demonstrate problem-solving skills and mastery of various aspects of computer science by completing a Program Dossier.

The Program Dossier assessment contributes 35% to the final IB examination grade.

Computer science deals with the solving of problems using computers. Therefore, understanding of logical problem solving as well as knowledge of how computers work is covered in the syllabus. The programming language JAVA is studied and used in the dossier as well as in both papers of the external examinations.

Some experience of computers from previous grades would help, but is not necessary.

RECOMMENDED LITERATURE: 1) Understanding Computer Science For Advanced Level by Ray Bradley.
2) Computer Science JAVA Enabled by Andrew Meyenn and Richard Jones
3) JAVA An Introduction to Computer Science and Programming by Walter Savitch

GROUP 6

ARTS & ELECTIVES

Diploma candidates may fulfil the group 6 requirement by taking a second course from any of the Groups 1-4, providing the teaching schedule allows for this. Alternatively, they may choose to take one of the other courses described in this section.

VISUAL ARTS

The Art and Design programme offers the opportunity to develop artistic skills in a variety of media following a personal course unique to the interests of each student. This programme of work is formulated and developed in conjunction with the teacher, with reference to art history and cultural influences.

Both Higher Level and Standard Level consists of work in the studio with workbook research. The difference in expectations at Higher and Standard Levels is indicated by the difference in recommended teaching times.

HIGHER LEVEL AND STANDARD LEVEL (Option A)

A Studio Work (practical)	70%
B Research Workbook	30%

(This will have a natural relationship to the studio work.)

STANDARD LEVEL (Option B)

A Studio Work (practical)	30%
B Research Workbooks	70%

This is designed for the students whose interest in art is mainly critical, cultural, historical.

THEATRE ARTS

Compulsory requirements for this course are:

1. full participation in both plays put on each year to provide acting (minimum 1 play) and technical (minimum 1 play) expertise required by IB
2. attendance at three plays per year from those offered as an evening field trip (usually 4 to 5 per year)

Teaching is done through:

- Acting
- Two technical skills (lighting, make-up, set design, costuming, scenery painting, or sound)
- Speaking
- History of theatre
- Directing

Assessment is in four parts:

External assessment	50%
Research investigation	25%
Students are required to produce a research investigation of 2,000–2,500 words with supporting visual materials.	
Practical performance proposal	25%
Students are required to produce a proposal of 250 words with supporting visual materials and a report of 1,000–1,250 words.	
Internal assessment	50%
Theatre performance and production presentation	25%
Students are required to do an oral presentation lasting 30 minutes with 7–10 images.	
Independent project portfolio	25%
Students are required to produce a portfolio of 3,000 words on their independent project (either option A or option B) and its connection to their experiences in the core syllabus.	
Assessment	

There is no timed, written examination in May for Theatre arts.

Pre-requisites:

1. Experience of theatre OR good English
2. Reference from the drama teacher

THEORY OF KNOWLEDGE

Theory of Knowledge is a two-year course, an integral part of the core IB Diploma requirements, and is an examination of the systems of knowledge;

Scientific,

Historical,

Mathematical,

Aesthetic,

Philosophical,

And the roles that perception, emotion, culture, language, reason, and personal experience play in acquiring knowledge.

The purpose of the program is to stimulate critical reflection on the knowledge and experience of students both in and outside the classroom. Primarily discussion based, the class is largely philosophical in its approach as students learn to analyze and assess what it is to “know” something. In the process, students will demonstrate critical thinking skills through written essays as well as their ability, clearly and succinctly, to communicate their ideas.

Students are evaluated on the following criteria:

Use language clearly, consistently, and appropriately.

Give evidence of the strengths and limitations of certain types of knowledge as well as their similarities and differences.

Show relationships between various systems of knowledge and how general knowledge and personal experience are interrelated.

Show awareness of perception and its role in shaping our belief systems.

Show the role of bias in knowledge.

Recognize the roles and limitations of reason, emotion and judgement in a given situation.

THE EXTENDED ESSAY

The extended essay is an in-depth study of a limited topic within one of the six subjects being studied. All IB Diploma students must submit an extended essay.

The following points need to be noted:

1. An examiner appointed by the IB organization externally assesses the essay, and points awarded according to the Bonus Points matrix (see Grading Procedures).
2. The purpose of the essay is to provide students with an opportunity to engage in independent research with emphasis being placed on the logical and coherent communication of ideas and information.
3. Students should aim to choose a topic which is both interesting and original to them, and which can be supported by the resources available in Malta.
4. The length of the essay must not exceed 4000 words.
5. Students will be afforded the service of a teacher to act as supervisor, whose job will be to guide the student in the right direction in the organization and writing of the essay. Students will be expected to liaise on a continuous basis with their supervisor to ensure that the essay is completed according to the deadline set by the school.

CREATIVITY, ACTION, SERVICE

All Grade 11 and 12 students at VIS are required to establish and participate in a balanced programme of CAS activities. CAS is an essential and integral part of the IB Diploma.

AIM OF THE CAS PROGRAMME

To provide each student with the opportunity to participate in a balanced programme of creative, action, and service activities.

To complement the academic discipline of the curriculum and to counterbalance the academic demands on the students with extra-curricular activities and service projects.

To challenge and extend the individual student by developing a spirit of discovery, self-reliance and responsibility.

To encourage the development of individual skills and interests.

DESCRIPTION OF THE CAS PROGRAMME

The CAS programme is administered by the CAS co-ordinator with the active participation and assistance of other teachers.

Students should be involved in a variety of continuous CAS activities throughout Grades 11 and 12. This usually requires about 3 to 4 hours per week of quality CAS experience. For IB Diploma students this should amount to a minimum of 150 hours of CAS activities over the two years of the programme. It is advised, in the interests of all students that they should complete between 75-100 hours of CAS in Grade 11.

The activities chosen by the students should ensure a balance between the three major areas of the programme. Students are encouraged to become involved with, and to contribute to, school-based activities, but they should also look outside the immediate school community for other suitable activities.

Each student should maintain a CAS diary in which they record their CAS activities with times, dates etc. At the completion of an activity, students use their diaries to help them evaluate their own performance in that activity. This written evaluation is recorded and filed by the CAS Co-ordinator, together with the activity sponsors evaluation. Activity sponsors are required to evaluate a student's participation in an activity based on the following criteria:

The student's attendance and punctuality.

The student's commitment and effort.

Evidence of initiative and creativity by the student.

The student's development during the course of the activity, especially concerning skills and confidence.

In addition, towards the end of Grade 11 and Grade 12, students carry out a self-evaluation process, describing how they have personally developed from engaging in the CAS programme. This is extremely important, and IB Diploma candidates will only be considered as having completed their CAS obligations when this self-evaluation process is completed

Failure to complete the CAS requirements of the programme would result in a student not being awarded an IB Diploma by the IBO, irrespective of the total number of points they have earned in their academic subjects through internal assessment and the May exams.

All students are responsible for their CAS diaries and records. These will constitute important reference material for the school when writing university and college recommendations. Further, IBO will request to inspect a random sample of IB student's CAS records at the end of Grade 12, before the award of the IB Diploma.

CAS ACTIVITIES

A few examples of CAS activities undertaken in the past by Grade 11 and 12 students at VIS are given here to indicate the wide variety of possibilities open to students. Most of these are school-based, but not all can readily be identified as belonging to any one of the three areas of the CAS programme.

Music	Orphanage Visits	Drama
School Sports Teams	Intramural Prog.	Young Enterprise
Art displays	Community service	Peer helping
Leadership programmes	Youth aide	Expeditions
Clubs	Conferences	Kinder helper
Photography	Office help	Classroom help
Gardening	Reading to old people	Presidents Award
Messengers	Painting/decorating	
Moat & Fort projects	Dog & Cat shelters	

IB GRADING PROCEDURES

Nearly all IB subjects are graded on the basis of a combination of internally assessed work marked by the teacher and examinations marked by external examiners.

IB subjects are graded on a scale of 1 to 7. A grade 7 is the highest grade and a 4 is recognized as a pass. To be awarded the Diploma a student must achieve an overall score of 24 points i.e. obtain at least a 4 in each of the 6 subjects. It is possible to compensate a grade of below 4 with one higher than 4 in another subject. A low grade in a HL subject cannot, however, be compensated by a high grade in an SL subject. With a low grade at HL it may be necessary to achieve an overall score of 28 points to be awarded a Diploma instead of the standard 24. The IB Co-ordinator can explain the other regulations regarding passing grades.

Bonus points are available from the Theory of Knowledge course and the Extended Essay according to the following Bonus Points matrix:-

Extended Essay	Theory of Knowledge					
	Excellent	Good	Satisfactory	Mediocre	Elementary	Not submitted
Excellent	+3	+3	+2	+2	+1	N
Good	+3	+2	+1	+1	0	N
Satisfactory	+2	+1	+1	0	0	N
Mediocre	+2	+1	0	0	0	N
Elementary	+1	0	0	0	Failing Condition	N
Not submitted	N	N	N	N	N	N

INTERNAL ASSESSMENT DEADLINES

Internal assessment in the IB programme is a continuous process throughout the two-year programme. However, the IBO requires that the school establish a schedule of deadlines for the completion of internally assessed components for the examinations. This is designed to help students maintain a balanced workload throughout the two years for their studies. Students will be issued with deadlines for all internal assessment work which they must adhere to. Failure to meet the required deadlines could seriously jeopardize a student's ability to complete the requirements of the programme effectively.

It is important to note therefore that students are required to have provided a first draft of the Extended essay by the end of Grade 11. Failure to meet this requirement may result in a student not being entered as an IB Diploma candidate for the May examinations at the end of Grade 12.

Students will complete all other internally assessed work in Grades 11 and 12.

EXAM REGISTRATION & FEES

The following illustrations are based on the IB examination fees for May 2009 For May 2011 there may be some increase in charges levied by the IB and the school administrative charge. Applications for the exam session in May will be out in October of the same scholastic year i.e. Apply in October 2010 for exams in May 2011

The school must receive payment for registration in the IB May session examinations by the end of October of the same scholastic year to meet the first IB registration deadline. The IB will add penalty charges to the final cost of registration for students who do not meet this initial deadline, charges which will be passed on to the student. A student wishing to complete the IB Diploma must enter six examination subjects, three at HL and three at SL, as well as completing the Theory of Knowledge, CAS and Extended Essay requirements of the Diploma programme.

As an illustration only, the fees for a Diploma candidate in May 2008 were as follows:

Registration fee – Diploma / Certificates		€102.00
Subject fees (x 6 for full diploma candidate)	€73.00 x 6 =	€438.00
Administrative fee		€105.00
Total cost for full Diploma Candidate.	€645.00	

Please note that any Diploma candidate who has not met the deadlines specified in the previous section will only be registered as a Certificate candidate in October. This may be changed to a registration as a Diploma candidate at the discretion of the IB Coordinator, but any additional charges that result from such a change will be passed on to the student.

A student who does not wish to complete the IB Diploma may enter for examinations as a Certificate candidate. For each subject entered a certificate will be awarded and may provide the student with college or university credit (students should check individual college or university requirements for specific details). The fee per examination then would be €73.00. For example, a candidate sitting 5 subjects as certificates would pay the same registration and administrative fees, but only €365.00 (5 x €73.00) subject fees.

IB ON THE INTERNET

The IBO Web site offers a variety of services and features.

- Want to know about other IB schools?
- The IB [school directory](#) contains up-to-date information on some 2000 IB institutions in over 100 countries.
- Stay in touch after you graduate.

An electronic conference is one feature of the [Alumni Association](#) for IB diploma graduates.

- A selection of recent articles from IB World magazine features interesting people and activities.
A copy of the magazine can also be found in the IB Coordinator's office and the school library.

For more information just point your browser at <http://www.ibo.org/>

- You can also link to a number of useful, interesting and relevant student sites:
 - ❖ IB Students website(find fellow shoulders to cry on...), www.ibscrewed.net
 - ❖ Up-to-date science news on a weekly basis at, <http://www.sciencenews.org/>
 - ❖ Daily world news from all over the world at, <http://news.google.co.uk/news?>
 - ❖ Discussion, resources for TOK at, <http://www.tokhelp.com/>
 - ❖ IB Chemistry revision notes and syllabus, <http://ibchem.com/>
 - ❖ Info about Summer Schools, Revision Courses and IB Revision Guides <http://www.osc-ib.com/>
 - ❖ Maths Resources <http://www.ibmaths.com/>

Names of Resource People to contact for specific questions:

Headmaster	Mr Pleasance
CAS coordinator	Ms Julia Duneva
IB coordinator	Mr Lawrence Simpson
High School coordinator	Ms Simone Brincat
TOK teachers	Ms Kirkstadt, Mr Simpson, Mr Buttigieg

Subject teachers:

English	Ms Brincat Ms Dunaeva Ms DePasquale
Self-taught	Ms Brincat Ms Dunaeva
French	Ms Xuereb
Spanish	Ms Simpson
Italian	Ms Agius
History	Mr Buttigieg Mr Pleasance
Psychology	Ms Pleasance
Business & Management	Ms Busuttill Gili
Biology	Ms Pandya
Chemistry	Ms Ruth Bradley
Physics	Ms Cassar Torregiani
Mathematics	Ms Kirkstadt Ms Zammit Mr Simpson Mr Hurtado
Visual Arts	Ms Proudler
Computer Science	To be appointed
Theatre Studies	Ms Pleasance