



ST. MARY'S
INTERNATIONAL
SCHOOL

2025-2027 IB GUIDE



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CONTENT

Introduction	01
Guiding Statements And Beliefs	02
Deciding On A Pathway (Grade 10)	04
Grade 11 And 12 At St. Mary's	05
IB Mission Statement	06
IB Learner Profile	07
Introduction To IB Diploma Programme(DP)	08
The Core	09
▪ Theory Of Knowledge (TOK)	10
▪ Extended Essay (EE)	10
▪ Creativity, Activity And Service (CAS)	11
Assessment In Diploma Programme	12
Diploma Programme Subject Choices At St. Marys	13
Group 1: Language And Literature	14
Group 2: Language Acquisition	16
▪ Language B, Language B (Continued)	
Group 3: Individuals And Societies	19
▪ Economics, History, Business Management, Language Ab Initio	
Group 4: Sciences	22
▪ Biology, Chemistry, Physics, Computer Science	
Group 5: Mathematics	29
▪ Analysis And Approaches (AA), Applications and Interpretation (AI)	
Group 6: Arts	31
▪ Music, Visual Arts	

INTRODUCTION

The purpose of this guide is to help students and parents understand the two pathways available for the Grade 11 and Grade 12 years of study. The central programme of study in Grade 11 and Grade 12 comprises the International Baccalaureate (IB) Diploma Programme (DP) and the St. Mary's Diploma. Students may pursue the full IB Diploma, or take a selection of individual IB, DP and St. Mary's courses.

GUIDING STATEMENTS AND BELIEFS

GUIDING STATEMENTS

Our Mission

Guided by Catholic beliefs, St. Mary's International School nurtures community and wellbeing, inspires passion for learning and excellence, and builds harmony in the ever-changing world.

Our Vision

To build a leading global community that ignites hope and courageously embraces future challenges.

Our Values

We strive to grow as a community of hope and love founded on Catholic values through:

Respect
Responsibility
Integrity
Courage
Compassion
Harmony



OUR BELIEFS

Personal Development

We believe that personal development, characterized by empathy and trust, will engender beliefs and actions conducive to global citizenship for the betterment of humanity through the promotion of peace, justice, freedom and truth.

Academic Excellence

We believe that rigorous and challenging academic programs, which meet the diverse needs of students within a safe, caring, and respectful environment, best prepare them for higher education.

Co-curricular Enrichment

We believe that a comprehensive and enriching co-curricular program nurtures individual expression and fosters growth, enabling students to reach their full all-round potential and enhance their self-worth.

All-Boy Environment

We believe that an all-boy environment creates a place wherein positive self-esteem and expression can be fully achieved and where learning meets the developmental needs of boys.

Love and Respect

We believe that education is based on love and respect for the person, in full recognition of the dignity of humankind created in God's image and destined to live in union with Him.

Knowledge Integration

We believe that education integrates the acquisition of knowledge with the development of free and responsible young men and the deepening of personal faith.

Diverse Learning Environment

We believe that learning best takes place in a school community that enables its members to establish an identity respectful of both cultural and religious differences in an atmosphere that values diversity.

DECIDING ON A PATHWAY (GRADE 10)

Current Students

During Grade 10, the High School Counselling team and IB Coordinator, outline the details of the academic options for Grades 11 and 12. Students, in discussion with their parents, counselors, advisors and current teachers, determine which options and which courses in each subject group might be appropriate for them and their post-secondary study plans.

When there are concerns about a student's present level of achievement, the school reserves the right to not accept the student into the IB Diploma Programme. Such students will be guided to the IB and St. Mary's courses pathway to best meet their academic needs.

Entering Grade 11 At St. Mary's From Another School

Students applying from outside St. Mary's must complete the standard admissions procedures and entrance tests. The counselling team will review the results of these tests and transcripts forwarded from previous schools to help new students select the best option for Grades 11 and 12.

Factors To Consider When Choosing Courses

- Interests and passions
- Abilities
- University plans (consult counselors and web sites)
- Advice of teachers



GRADE 11 AND 12 AT ST. MARY'S

There are two academic options available to students in Grades 11 and 12.

Option 1: THE IB DIPLOMA

The Diploma Programme is a comprehensive and rigorous two-year curriculum leading to a set of external examinations taken by students in May of their final year at St. Mary's. Students pursuing the IB Diploma complete the IB Core (TOK, CAS, and the Extended Essay) and study six subjects including studies in language and literature, language acquisition, individuals and societies, sciences, mathematics, and the arts (although they can, instead of an arts subject, choose two subjects from another area). Typically, three subjects are higher level, and the remaining three are at standard level.

Option 2: IB AND ST. MARY'S COURSES

If a student chooses or is recommended to not embark on the full diploma, they will enroll in a selection of IB and non-IB St. Mary's Courses. More information on St. Mary's courses can be found in the High School Program of Studies Individual IB and St. Mary's courses may be preferable for some students based on the following:

- Individual courses are still academically rigorous.
- The same courses and assessment as the full diploma are employed.
- HL subjects are not required, but can be taken in any subject.
- The IB Core is not completed, allowing the student more time to focus on other courses or activities.
- IB exams are taken and provide a university recognized qualification.

IB MISSION STATEMENT

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

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

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



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.

INTRODUCTION TO THE DIPLOMA PROGRAM

The IB Diploma Programme (DP) is an academically challenging and balanced programme of education, with final examinations, that prepares students aged 16 to 19 for success at university and in life beyond. It has been designed to address the intellectual, social, emotional and physical well-being of students. The programme has gained recognition and respect from the world's leading universities.

IB students graduating with the IB diploma are able to study at universities all around the world, often with advanced credit. Students report that their involvement with the IB has given them the tools needed to succeed at college. In particular, students comment on their sense of preparedness, self-confidence, research skills and their ability to manage their time. Even more important, they have developed a sense of the world around them and their responsibility to it.

THE CORE

The DP core lies at the heart of the programme and reflects the IB's strong commitment to the principle of developing the whole person. The three elements of the core individually and collectively illuminate what it means to experience a DP education, and are driven by the IB's mission "to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IB mission statement).

The core strives to make a difference to the lives of students. It should provide opportunities for students to think about their own values and actions, to deepen their understanding of their place in the world and to sensitively consider the contexts and views of others. Every DP student must complete the three core elements:

- Theory of knowledge (TOK)
- Creativity, activity, service (CAS)
- The extended essay (EE)



THEORY OF KNOWLEDGE (TOK)

Course description and aims

The theory of knowledge (TOK) course plays a special role in the DP by providing an opportunity for students to reflect on the nature, scope and limitations of knowledge and the process of knowing. In this way, the main focus of TOK is not on students acquiring new knowledge but on helping students to reflect on, and put into perspective, what they already know.

TOK underpins and helps to unite the subjects that students encounter in the rest of their DP studies. It engages students in explicit reflection on how knowledge is arrived at in different disciplines and areas of knowledge, on what these areas have in common and the differences between them.

The aims of the TOK course are:

- To encourage students to reflect on the central question, “How do we know that?”, and to recognize the value of asking that question.
- To expose students to ambiguity, uncertainty and questions with multiple plausible answers.
- To equip students to effectively navigate and make sense of the world, and help prepare them to encounter novel and complex situations.
- To encourage students to be more aware of their own perspectives and to reflect critically on their own beliefs and assumptions.
- To engage students with multiple perspectives, foster open-mindedness and develop inter-cultural understanding.
- To encourage students to make connections between academic disciplines by exploring underlying concepts and by identifying similarities and differences in the methods of inquiry used in different areas of knowledge.
- To prompt students to consider the importance of values, responsibilities and ethical concerns relating to the production, acquisition, application and communication of knowledge.

EXTENDED ESSAY (EE)

Course description and aims

The extended essay is a compulsory, externally assessed piece of independent research into a topic chosen by the student and presented as a formal piece of academic writing. The extended essay is intended to promote high-level research and writing skills, intellectual discovery and creativity while engaging students in personal research. This leads to a major piece of formally presented, structured writing of up to 4,000 words in which ideas and findings are communicated in a reasoned, coherent and appropriate manner.

Students are guided through the process of research and writing by an assigned supervisor (a teacher in the school). All students undertake three mandatory reflection sessions with their supervisor, including a short interview, or viva voce, following the completion of the extended essay.

Extended essay topics may be chosen from a list of approved DP subjects—normally one of the student's six chosen subjects for the IB diploma or the world studies option. World studies provides students with the opportunity to carry out an in-depth interdisciplinary study of an issue of contemporary global significance, using two IB disciplines.

The aims of the extended essay are to provide students with the opportunity to:

- Engage in independent research with intellectual initiative and rigour.
- Develop research, thinking, self-management and communication skills.
- Reflect on what has been learned throughout the research and writing process.

CREATIVITY, ACTIVITY AND SERVICE (CAS)

Course description and aims

Creativity, activity, service (CAS) is at the heart of the DP. With its holistic approach, CAS is designed to strengthen and extend students' personal and interpersonal learning from the Primary Years Programme (PYP) and Middle Years Programme (MYP).

CAS is organized around the three strands of creativity, activity and service defined as follows.

- Creativity—exploring and extending ideas leading to an original or interpretive product or performance.
- Activity—physical exertion contributing to a healthy lifestyle.
- Service—collaborative and reciprocal engagement with the community in response to an authentic need.

CAS aims to develop students who:

- Enjoy and find significance in a range of CAS experiences.
- Purposefully reflect upon their experiences.
- Identify goals, develop strategies and determine further actions for personal growth.
- Explore new possibilities, embrace new challenges and adapt to new roles.
- Actively participate in planned, sustained and collaborative CAS projects.
- Understand they are members of local and global communities with responsibilities towards each other and the environment.

A CAS experience is a specific event in which the student engages with one or more of the three CAS strands. It can be a single event or an extended series of events. A CAS project is a collaborative series of sequential CAS experiences lasting at least one month. Typically, a student's CAS programme combines planned/unplanned singular and ongoing experiences. All are valuable and may lead to personal development. However, a meaningful CAS programme must be more than just a series of unplanned/singular experiences. Students must be involved in at least one CAS project during the programme.

ASSESSMENT IN DIPLOMA PROGRAMME

Students take written examinations at the end of the programme, which are marked by external IB examiners. Students also complete assessment tasks in the school, which are either initially marked by teachers and then moderated by external moderators or sent directly to external examiners.

The grades awarded for each course range from 1 (lowest) to 7 (highest). Students can also be awarded up to three additional points for their combined results on TOK and the EE. The diploma is awarded to students who gain at least 24 points, subject to certain minimum levels of performance across the whole programme and to satisfactory participation in the CAS requirement. The highest total that a DP student can be awarded is 45 points.

Assessment is criterion-related, which means student performance is measured against specified assessment criteria based on the aims and objectives of each subject's curriculum, rather than the performance of other students taking the same examinations.

DIPLOMA PROGRAMME

SUBJECT CHOICES AT ST. MARYS

*SL (Standard Level), *HL (Higher Level)

GROUP 1 Language And Literature	
English A: Language And Literature	SL, HL
Japanese A: Language And Literature	SL, HL

GROUP 2 Language Acquisition	
Japanese B	SL, HL
French B	SL, HL
Japanese AB Initio	SL
French AB Initio	SL

GROUP 3 Individuals And Societies	
Economics	SL, HL
History	SL, HL
Business Management	SL, HL

GROUP 4 Science	
Biology	SL, HL
Chemistry	SL, HL
Physics	SL, HL
Computer Science	SL, HL
Design Technology	SL, HL

GROUP 5 Mathematics	
Mathematics: Applications And Approaches	SL, HL
Mathematics: Applications And Interpretation	SL, HL

GROUP 5 Mathematics	
Mathematics: Applications And Approaches	SL, HL
Mathematics: Applications And Interpretation	SL, HL

GROUP 6 Art	
Music	SL, HL
Visual Arts	SL, HL

GROUP 1

LANGUAGE AND LITERATURE

LANGUAGE AND LITERATURE

Course Description

The language A: language and literature course aims at studying the complex and dynamic nature of language and exploring both its practical and aesthetic dimensions. The course will explore the crucial role language plays in communication, reflecting experience and shaping the world, and the roles of individuals themselves as producers of language. Throughout the course, students will explore the various ways in which language choices, text types, literary forms and contextual elements all effect meaning.

Through close analysis of various text types and literary forms, students will consider their own interpretations, as well as the critical perspectives of others, to explore how such positions are shaped by cultural belief systems and to negotiate meanings for texts.

Aims

The aims of studies in language and literature courses are to enable students to:

- Engage with a range of texts, in a variety of media and forms, from different periods, styles and cultures.
- Develop skills in listening, speaking, reading, writing, viewing, presenting and performing
- Develop skills in interpretation, analysis and evaluation.
- Develop sensitivity to the formal and aesthetic qualities of texts and an appreciation of how they contribute to diverse responses and open up multiple meanings.
- Develop an understanding of relationships between texts and a variety of perspectives, cultural contexts, and local and global issues, and an appreciation of how they contribute to diverse responses and open up multiple meanings.
- Develop an understanding of the relationships between studies in language and literature and other disciplines.
- Communicate and collaborate in a confident and creative way.
- Foster a lifelong interest in and enjoyment of language and literature.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	PAPER 1: GUIDED TEXTUAL ANALYSIS	35%	35%
	PAPER 2: COMPARATIVE ESSAY	35%	25%
	HL ESSAY		20%
INTERNAL	INDIVIDUAL ORAL	30%	20%

Courses offered at St. Mary's

COURSE	LEVEL
English A: Language And Literature	SL, HL
Japanese A: Language And Literature	SL, HL



GROUP 2 LANGUAGE ACQUISITION

LANGUAGE B

Course Description

Language acquisition consists of two modern language courses - language ab initio and language B - designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the language studied is spoken. Language B is a language acquisition course designed for students with some previous experience of the target language. Students further develop their ability to communicate through the study of language, themes and texts. There are five prescribed themes: identities, experiences, human ingenuity, social organization and sharing the planet.

Both language B SL and HL students learn to communicate in the target language in familiar and unfamiliar contexts. The distinction between language B SL and HL can be seen in the level of competency the student is expected to develop in receptive, productive and interactive skills. At HL the study of two literary works originally written in the target language is required and students are expected to extend the range and complexity of the language they use and understand in order to communicate. Students continue to develop their knowledge of vocabulary and grammar, as well as their conceptual understanding of how language works, in order to construct, analyse and evaluate arguments on a variety of topics relating to course content and the target language culture(s).

Aims

The following language acquisition aims are common to both language ab initio and language B.

- Develop international-mindedness through the study of languages, cultures, and ideas and issues of global significance.
- Enable students to communicate in the language they have studied in a range of contexts and for a variety of purposes.
- Encourage, through the study of texts and through social interaction, an awareness and appreciation of a variety of perspectives of people from diverse cultures.
- Develop students' understanding of the relationship between the languages and cultures with which they are familiar.
- Develop students' awareness of the importance of language in relation to other areas of knowledge.
- Provide students, through language learning and the process of inquiry, with opportunities for intellectual engagement and the development of critical- and creative-thinking skills.

LANGUAGE B (CONTINUED)

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	PAPER 1 (PRODUCTIVE SKILLS)	25%	25%
	PAPER 2 (RECEPTIVE SKILLS) LISTENING READING	25%	25%
INTERNAL	INDIVIDUAL ORAL ASSESSMENT	25%	25%

Courses offered at St. Mary's

COURSE	LEVEL
Japanese B	SL, HL
French B	SL, HL

LANGUAGE AB INITIO

Courses offered at St. Mary's

Language acquisition consists of two modern language courses - language ab initio and language B - designed to provide students with the necessary skills and intercultural understanding to enable them to communicate successfully in an environment where the language studied is spoken.

Offered at SL only, language ab initio is a language acquisition course designed for students with no previous experience in - or very little exposure to—the target language. Language ab initio students develop their receptive, productive and interactive skills while learning to communicate in the target language in familiar and unfamiliar contexts. Students develop the ability to communicate through the study of language, themes and texts. There are five prescribed themes: identities, experiences, human ingenuity, social organization and sharing the planet. While the themes are common to both language ab initio and language B, the language ab initio syllabus additionally prescribes four topics for each of the five themes, for a total of 20 topics that must be addressed over the two years of the course.

Aims

The following language acquisition aims are common to both language ab initio and language B.

- Develop international-mindedness through the study of languages, cultures, and ideas and issues of global significance.
- Enable students to communicate in the language they have studied in a range of contexts and for a variety of purposes.

- Encourage, through the study of texts and through social interaction, an awareness and appreciation of a variety of perspectives of people from diverse cultures.
- Develop students' understanding of the relationship between the languages and cultures with which they are familiar.
- Develop students' awareness of the importance of language in relation to other areas of knowledge.
- Provide students, through language learning and the process of inquiry, with opportunities for intellectual engagement and the development of critical- and creative-thinking skills.
- Provide students with a basis for further study, work and leisure through the use of an additional language.
- Foster curiosity, creativity and a lifelong enjoyment of language learning.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE SL
EXTERNAL	PAPER 1 (PRODUCTIVE SKILLS)	25%
	PAPER 2 (RECEPTIVE SKILLS)	
	LISTENING READING	25% 25%
INTERNAL	INDIVIDUAL ORAL ASSESSMENT	25%

Courses offered at St. Mary's

COURSE	LEVEL
Japanese AB Initio	SL
French AB Initio	SL



GROUP 3

INDIVIDUALS AND SOCIETIES

ECONOMICS

Course Description

Economics is an exciting, dynamic subject that allows students to develop an understanding of the complexities and interdependence of economic activities in a rapidly changing world. At the heart of economic theory is the problem of scarcity. Owing to scarcity, choices have to be made. The economics course, at both SL and HL, uses economic theories, models and key concepts to examine the ways in which these choices are made: at the level of producers and consumers in individual markets (microeconomics); at the level of the government and the national economy (macroeconomics); and at an international level, where countries are becoming increasingly interdependent (the global economy). The DP economics course allows students to explore these models, theories and key concepts, and apply them, using empirical data, through the examination of six real-world issues. Through their own inquiry, students will be able to appreciate both the values and limitations of economic models in explaining real-world economic behaviour and outcomes. By focusing on the six real-world issues through the nine key concepts (scarcity, choice, efficiency, equity, economic well-being, sustainability, change, interdependence and intervention), students of the economics course will develop the knowledge, skills, values and attitudes that will encourage them to act responsibly as global citizens.

Aims

The aims of the DP economics course are to enable students to:

- Develop a critical understanding of a range of economic theories, models, ideas and tools in the areas of microeconomics, macroeconomics and the global economy.
- Apply economic theories, models, ideas and tools, and analyse economic data to understand and engage with real-world economic issues and problems facing individuals and societies.
- Develop a conceptual understanding of individuals' and societies' economic choices, interactions, challenges and consequences of economic decision-making.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	30%	20%
	Paper 2	40%	30%
	Paper 3	-	30%
INTERNAL	Portfolio	30%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Economics	SL, HL

HISTORY

Course description

The DP history course is a world history course based on a comparative and multi-perspective approach to history. It involves the study of a variety of types of history, including political, economic, social and cultural, and provides a balance of structure and flexibility.

The course emphasizes the importance of encouraging students to think historically and to develop historical skills as well as gaining factual knowledge. It puts a premium on developing the skills of critical thinking, and on developing an understanding of multiple interpretations of history. In this way, the course involves a challenging and demanding critical exploration of the past. Teachers explicitly teach thinking and research skills such as comprehension, text analysis, transfer, and use of primary sources.

There are six key concepts that have particular prominence throughout the DP history course: change, continuity, causation, consequence, significance and perspectives.

Aims

The aims of the DP history course are to enable students to:

- Develop an understanding of, and continuing interest in, the past
- Encourage students to engage with multiple perspectives and to appreciate the complex nature of historical concepts, issues, events and developments.
- Promote international-mindedness through the study of history from more than one region of the world.
- Develop an understanding of history as a discipline and to develop historical consciousness including a sense of chronology and context, and an understanding of different historical perspectives.
- Develop key historical skills, including engaging effectively with sources.
- Increase students' understanding of themselves and of contemporary society by encouraging reflection on the past.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	30%	20%
	Paper 2	45%	25%
	Paper 3	-	35%
INTERNAL	Portfolio	25%	20%

Courses offered at St. Mary's

COURSE	LEVEL
History	SL, HL

BUSINESS MANAGEMENT

Course description

The business management course is designed to meet the current and future needs of students who want to develop their knowledge of business content, concepts and tools to assist with business decision making. Future employees, business leaders, entrepreneurs or social entrepreneurs need to be confident, creative and compassionate as change agents for business in an increasingly interconnected global marketplace. The business management course is designed to encourage the development of these attributes.

Through the exploration of four interdisciplinary concepts: creativity, change, ethics and sustainability, this course empowers students to explore these concepts from a business perspective. Business management focuses on business functions, management processes and decision-making in contemporary contexts of strategic uncertainty.

Students examine how business decisions are influenced by factors that are internal and external to an organization and how these decisions impact upon a range of internal and external stakeholders. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing, and operations management.

Business management is a challenging and dynamic discipline that more than meets the needs of our students growing and developing in a complex business environment. This course prepares students to be global citizens ready to face up to the challenges and opportunities awaiting them in our ever-changing world.

Aims

The aims of the business management course at HL and SL are to:

- Develop as confident, creative and compassionate business leaders, entrepreneurs, social entrepreneurs and as change agents.
- Foster an informed understanding of ethical and sustainable business practices.
- Explore the connections between individuals, businesses and society.
- Engage with decision-making as a process and a skill.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	30%	25%
	Paper 2	35%	30%
	Paper 3	-	25%
INTERNAL	Business Research Project	30%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Business Management	SL, HL

GROUP 4 SCIENCES

BIOLOGY

Course Description

As one of the three natural sciences in the IB Diploma Programme, biology is primarily concerned with the study of life and living systems. Biologists attempt to make sense of the world through a variety of approaches and techniques, controlled experimentation and collaboration between scientists. At a time of global introspection on human activities and their impact on the world around us, developing and communicating a clear understanding of the living world has never been of greater importance than it is today.

Through the study of DP biology, students are empowered to make sense of living systems through unifying themes. By providing opportunities for students to explore conceptual frameworks, they are better able to develop understanding and awareness of the living world around them. This is carried further through a study of interactions at different levels of biological organization, from molecules and cells to ecosystems and the biosphere. Integral to the student experience of the DP biology course is the learning that takes place through scientific inquiry. With an emphasis on experimental work, teachers provide students with opportunities to ask questions, design experiments, collect and analyse data, collaborate with peers, and reflect, evaluate and communicate their findings.

DP biology enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

Aims

Through the overarching theme of the nature of science, the course aims to enable students to:

- Develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects.
- Acquire and apply a body of knowledge, methods, tools and techniques that characterize science.
- Develop the ability to analyse, evaluate and synthesize scientific information and claims.
- Develop the ability to approach unfamiliar situations with creativity and resilience.
- Design and model solutions to local and global problems in a scientific context.
- Develop an appreciation of the possibilities and limitations of science.
- Develop technology skills in a scientific context.
- Develop the ability to communicate and collaborate effectively.

- Develop awareness of the ethical, environmental, economic, cultural and social impact of science.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	36%	36%
	Paper 2	44%	44%
INTERNAL	Scientific Investigation	20%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Biology	SL, HL

CHEMISTRY

Course Description

As one of the three natural sciences in the IB Diploma Programme, chemistry is primarily concerned with identifying patterns that help to explain matter at the microscopic level. This then allows matter's behaviour to be predicted and controlled at a macroscopic level. The subject therefore emphasizes the development of representative models and explanatory theories, both of which rely heavily on creative but rational thinking.

DP chemistry enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond. Integral to the student experience of the DP chemistry course is the learning that takes place through scientific inquiry both in the classroom and the laboratory.

Aims

Through the overarching theme of the nature of science, the course aims to enable students to:

- Develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects.
- Acquire and apply a body of knowledge, methods, tools and techniques that characterize science.
- Develop the ability to analyse, evaluate and synthesize scientific information and claims.
- Develop the ability to approach unfamiliar situations with creativity and resilience.
- Design and model solutions to local and global problems in a scientific context.
- Develop an appreciation of the possibilities and limitations of science.
- Develop technology skills in a scientific context.
- Develop the ability to communicate and collaborate effectively.
- Develop awareness of the ethical, environmental, economic, cultural and social impact of science.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	36%	36%
	Paper 2	44%	44%
INTERNAL	Scientific Investigation	20%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Chemistry	SL, HL

PHYSICS

Course description

As one of the three natural sciences in the IB Diploma Programme, physics is concerned with an attempt to understand the natural world; from determining the nature of the atom to finding patterns in the structure of the universe. It is the search for answers from how the universe exploded into life to the nature of time itself. Observations are essential to the very core of the subject. Models are developed to try to understand observations, and these themselves can become theories that attempt to explain the observations. Besides leading to a better understanding of the natural world, physics gives us the ability to alter our environments. DP physics enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

Integral to the student experience of the DP physics course is the learning that takes place through scientific inquiry both in the classroom and the laboratory.

Aims

Through the overarching theme of the nature of science, the course aims to enable students to:

- Develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects.
- Acquire and apply a body of knowledge, methods, tools and techniques that characterize science.
- Develop the ability to analyse, evaluate and synthesize scientific information and claims.
- Develop the ability to approach unfamiliar situations with creativity and resilience.
- Design and model solutions to local and global problems in a scientific context.
- Develop an appreciation of the possibilities and limitations of science.
- Develop technology skills in a scientific context.
- Develop the ability to communicate and collaborate effectively.
- Develop awareness of the ethical, environmental, economic, cultural and social impact of science.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	36%	36%
	Paper 2	44%	44%
INTERNAL	Scientific Investigation	20%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Physics	SL, HL

COMPUTER SCIENCE

Course description

Computer science requires an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. The DP computer science course is engaging, accessible, inspiring and rigorous. It has the following characteristics.

The course:

- Draws on a wide spectrum of knowledge
- Enables and empowers innovation, exploration and the acquisition of further knowledge
- Raises ethical issues
- And is underpinned by computational thinking.

Computational thinking involves the ability to:

- Draws on a wide spectrum of knowledge
- Enables and empowers innovation, exploration and the acquisition of further knowledge
- Raises ethical issues
- And is underpinned by computational thinking.

During the course students will develop a computational solution.

This will involve the ability to:

- Identify a problem or unanswered question
- Design, prototype, program and test a proposed solution
- Liaise with clients and end users to evaluate the success of the proposed solution and make recommendations for future developments.

Aims

The aims of the computer science standard/higher level courses are to:

- Develop conceptual understanding that allows connections to be made between different areas of the subject, and to other DP sciences subjects.

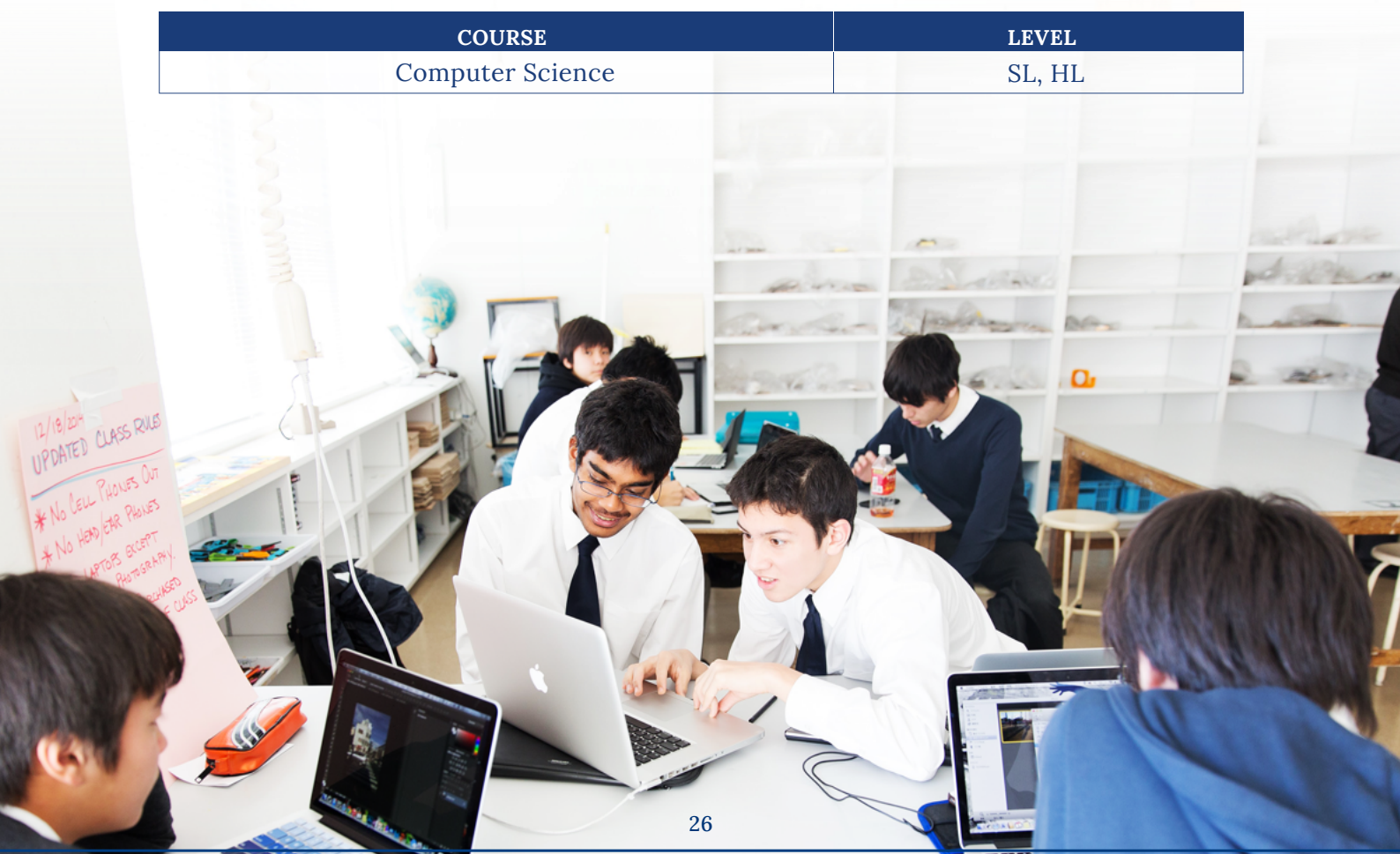
- Acquire and apply a body of knowledge, methods, tools and techniques that characterize computer science.
- Develop the ability to analyse, evaluate and synthesize information and claims relating to technological systems.
- Develop the ability to approach unfamiliar situations with creativity and resilience.
- Design, model and implement solutions to local and global problems to meet the requirements of clients, users and systems.
- Develop an appreciation of the possibilities and limitations of computer science.
- Develop the ability to evaluate the impact of emerging technologies on a range of stakeholders.
- Develop the ability to communicate and collaborate effectively
- Develop awareness of the ethical, environmental, economic, cultural, and social impact of computer science.
- Develop a critical awareness and understanding of threats to computer systems and their countermeasures.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	35%	40%
	Paper 2	35%	40%
INTERNAL	Computational Solution Report	30%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Computer Science	SL, HL



DESIGN TECHNOLOGY

Course description

The Diploma Programme design technology course aims to develop internationally minded people whose enhanced understanding of design and the technological world can facilitate our shared guardianship of the planet and create a better world. Inquiry and problem-solving are at the heart of the subject. DP design technology requires the use of the design cycle as a tool, which provides the methodology used to structure the inquiry and analysis of problems, the development of feasible solutions, and the testing and evaluation of the solution. A solution can be defined as a model, prototype, product or system that students have developed independently. DP design technology achieves a high level of design literacy by enabling students to develop critical-thinking and design skills, which they can apply in a practical context. While designing may take various forms, it will involve the selective application of knowledge within an ethical framework.

Aims

Through the overarching theme of the nature of design, the aim of the DP design technology course is to enable students to develop:

- A sense of curiosity as they acquire the skills necessary for independent and lifelong learning and action through inquiry into the technological world around them.
- An ability to explore concepts, ideas and issues with personal, local and global significance to acquire in-depth knowledge and understanding of design and technology.
- Initiative in applying thinking skills critically and creatively to identify and resolve complex social and technological problems through reasoned ethical decision-making.
- An ability to understand and express ideas confidently and creatively using a variety of communication techniques through collaboration with others.
- A propensity to act with integrity and honesty, and take responsibility for their own actions in designing technological solutions to problems.
- An understanding and appreciation of cultures in terms of global technological development, seeking and evaluating a range of perspectives.
- A willingness to approach unfamiliar situations in an informed manner and explore new roles, ideas and strategies to confidently articulate and defend proposals.
- An understanding of the contribution of design and technology to the promotion of intellectual, physical and emotional balance and the achievement of personal and social well-being.
- Empathy, compassion and respect for the needs and feelings of others in order to make a positive difference to the lives of others and to the environment.
- Skills that enable them to reflect on the impacts of design and technology on society and the environment in order to develop their own learning and enhance solutions to technological problems.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	30%	20%
	Paper 2	30%	20%
	Paper 3	-	20%
INTERNAL	Design Project	40%	40%

Courses offered at St. Mary's

COURSE	LEVEL
Design Technology	SL, HL



GROUP 5 MATHEMATICS

Individual students have different needs, aspirations, interests and abilities. For this reason there are two different DP subjects in mathematics, Mathematics: analysis and approaches and Mathematics: applications and interpretation. Each course is designed to meet the needs of a particular group of students. Both courses are offered at SL and HL.

MATHEMATICS: ANALYSIS AND APPROACHES (AA)

Course Description

The IB DP Mathematics: analysis and approaches course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. The focus is on developing important mathematical concepts in a comprehensible, coherent and rigorous way, achieved by a carefully balanced approach. Students are encouraged to apply their mathematical knowledge to solve abstract problems as well as those set in a variety of meaningful contexts. Mathematics: analysis and approaches has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students 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. Students are also encouraged to develop the skills needed to continue their mathematical growth in other learning environments. The internally assessed exploration allows students to develop independence in mathematical learning. Throughout the course students are encouraged to take a considered approach to various mathematical activities and to explore different mathematical ideas.

MATHEMATICS: APPLICATIONS AND INTERPRETATION (AI)

Course Description

The IB DP Mathematics: applications and interpretation course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. Students are encouraged to solve real-world problems, construct and communicate this mathematically and interpret the conclusions or generalizations. Students should expect to develop strong technology skills, and will be intellectually equipped to appreciate the links between the theoretical and the practical concepts in mathematics. All external assessments involve the use of technology. Students are also encouraged to develop the skills needed to continue their mathematical growth in other learning environments. The internally assessed exploration allows students to develop independence in mathematical learning. Throughout the course students are encouraged to take a considered approach to various mathematical activities and to explore different mathematical ideas.

Aims

The aims of all DP mathematics courses are to enable students to:

- Develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power.
- Develop an understanding of the concepts, principles and nature of mathematics.
- Communicate mathematics clearly, concisely and confidently in a variety of contexts.
- Develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics.
- Employ and refine their powers of abstraction and generalization.
- Take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities.
- Appreciate how developments in technology and mathematics influence each other.
- Appreciate the moral, social and ethical questions arising from the work of mathematicians and the applications of mathematics.
- Appreciate the universality of mathematics and its multicultural, international and historical perspectives.
- Appreciate the contribution of mathematics to other disciplines, and as a particular “area of knowledge” in the TOK course.
- Develop the ability to reflect critically upon their own work and the work of others.
- Independently and collaboratively extend their understanding of mathematics.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Paper 1	40%	30%
	Paper 2	40%	30%
	Paper 3	-	20%
INTERNAL	Individual Investigation	20%	20%

Courses offered at St. Mary's

COURSE	LEVEL
Mathematics: Analysis And Approaches (AA)	SL, HL
Mathematics: Applications And Interpretation (AI)	SL, HL

GROUP 6 ARTS

MUSIC

Course Description

The Diploma Programme Music course (for first teaching from 2020) has been designed to prepare the 21st century music student for a world in which global musical cultures and industries are rapidly changing.

The course is grounded in the knowledge, skills and processes associated with the study of music and offers a strengthened approach to student creativity through practical, informed and purposeful explorations of diverse musical forms, practices and contexts. The course also ensures a holistic approach to learning, with the roles of performer, creator and researcher afforded equal importance in all course components.

Aims

The aims of the music course are to enable students to:

- Explore a range of musical contexts and make links to, and between, different musical practices, conventions and forms of expression.
- Acquire, develop and experiment with musical competencies through a range of musical practices, conventions and forms of expression, both individually and in collaboration with others.
- Evaluate and develop critical perspectives on their own music and the work of others.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	EXPLORING MUSIC IN CONTEXT	30%	20%
	PRESENTING MUSIC	40%	30%
INTERNAL	EXPERIMENTING WITH MUSIC	-	20%
	EXPERIMENTING WITH MUSIC	30%	30%

Courses offered at St. Mary's

COURSE	LEVEL
Music	SL, HL

VISUAL ARTS

Course description

The IB Diploma Programme visual arts course encourages students to challenge their own creative and cultural expectations and boundaries. It is a thought-provoking course in which students develop analytical skills in problem-solving and divergent thinking, while working towards technical proficiency and confidence as art-makers. In addition to exploring and comparing visual arts from different perspectives and in different contexts, students are expected to engage in, experiment with and critically reflect upon a wide range of contemporary practices and media. The course is designed for students who want to go on to study visual arts in higher education as well as for those who are seeking lifelong enrichment through visual arts.

The role of visual arts teachers should be to actively and carefully organize learning experiences for the students, directing their study to enable them to reach their potential and satisfy the demands of the course. Students should be empowered to become autonomous, informed and skilled visual artists.

Aims

The aims of the arts subjects are to enable students to:

- Enjoy lifelong engagement with the arts.
- Become informed, reflective and critical practitioners in the arts.
- Understand the dynamic and changing nature of the arts.
- Explore and value the diversity of the arts across time, place and cultures.
- Express ideas with confidence and competence.
- Develop perceptual and analytical skills.

The aims of the arts subjects are to enable students to:

- Make artwork that is influenced by personal and cultural contexts.
- Become informed and critical observers and makers of visual culture and media.
- Develop skills, techniques and processes in order to communicate concepts and ideas.

Assessment at a Glance

	TYPE OF ASSESSMENT	WEIGHING OF FINAL GRADE	
		SL	HL
EXTERNAL	Comparative Study	20%	20%
	Comparative Study	40%	40%
INTERNAL	Exhibition	40%	40%

Courses offered at St. Mary's

COURSE	LEVEL
Visual Arts	SL, HL

Useful Links

- [International Baccalaureate Organization](#)
- [International Baccalaureate: Subject Briefs](#)
- [Japanese Universities with IB diploma track \(Japanese\)](#)

