

COURSES AND ACTIVITIES

Please note that some elective courses may not be offered without sufficient enrollment. For further details on courses, see the website.

ENGLISH

The aim of the English Department is to promote an appreciation of the wealth and subtleties of language; to encourage independent thought; to promote an enjoyment of and interest in literature; and to develop traditional skills in written and oral expression. Specifically, this is done by introducing students to all genres of literature and engaging them in critical and independent analysis of works of literary merit. Furthermore, students will gain an international perspective through comparative study of works from the canon of World Literature.

English 1

Grade 9

Skills developed in this course are perceptive reading, accurate writing and the effective use of spoken language. The course stresses enrichment of vocabulary, grammatical and syntactical accuracy, thoughtful revision and careful editing. Students are encouraged to experiment with the various forms of written discourse and explore a range of voice and audience in their writing. Study of the novel, short story, poetry and drama offers students a foundation in literary analysis.

English 2

Grade 10

Building on skills developed in English 1, this course focuses on language skills and grammatical structures, which are increasing in complexity and depth. Vocabulary and grammar are taught through the study of literature and students begin to experiment with developing their own written style. Reasoning and oral skills are strengthened through class discussion, debate, presentations and dramatic interpretation as well as formal essay writing. Literature in this course is drawn from the canon of American Literature such

as *The Great Gatsby* and *The Scarlet Letter*, but also includes *Macbeth* by William Shakespeare, *Heart of Darkness* by Joseph Conrad and some modern poetry. Students also read a selection non-fiction and news publications.

English 3

Grade 11; IB A1, A2, HL1, SL1

This course serves as the first year of the IB English Language A1/A2 program and therefore includes the study of literature prescribed by the International Baccalaureate. In keeping with the philosophy of the English Department, the literature is drawn from various cultures, periods and genres providing a rich background of knowledge for students. Student coursework includes oral presentations, creative writing assignments, analytical essays and commentaries. These are assessed according to the criteria set by the IB, which require a knowledge and understanding of the text, logical structure and presentation of ideas, depth of analysis and a fluency and precision in language. The texts studied include: *A Streetcar Named Desire* by Tennessee Williams, a selection of British romantic poetry; *The House of the Spirits* by Chilean Author Isabel Allende and *Antigone* by Sophocles.

English 4 A1

Grade 12; IB A1 HL2, SL2

This course continues the study of literature begun in English 3 and an additional seven to nine texts are studied. Students preparing for the IB Language A1 examinations complete coursework for both the Internal and External Assessment. The components and assignments in this course focus on enabling students to engage in close, detailed and critical examination of written text by way of commentary and essay. Students are examined orally and in a written mock IB examination. The syllabus for this course includes *World Literature* by Lampedusa, Dazai and Ionesco and English Literary works by Shakespeare, Stoppard, Beckett, Pinter, Ted Hughes, Sylvia Plath and T.S. Eliot. Students sitting Higher Level IB Exam must attend a weekly tutorial.

English 4 A2 – Language and Literature

Grade 12; IB A2 HL2, SL2, non-IB Language and Literature

This course continues with the study of literature begun in English 3. Four to six additional texts are studied together with a unit on Media and Culture. The assignments and exercises in this course enable students to engage in close, detailed and critical examination of written text by way of commentary and essay. In addition, students create a dossier of writing that can include expository, persuasive or creative writing that is preceded by a rationale and includes a conclusive self-evaluation. Students will be examined orally and in a written mock IB examination. This course is especially recommended for IB Diploma candidates who are taking a Language A1 course in a language other than English. The course provides an excellent preparation for college or university English courses for students whose primary interests are in maths or sciences. Students sitting Higher Level IB Exam must attend a weekly tutorial.

English Language Support (ELS)

Grades 9 - 11

This is a supplementary course for non-native English speakers who need extra tuition in the basic English language skills of reading, writing, listening and speaking. There is an emphasis on vocabulary acquisition, grammar practice and oral participation. Interpreting the subtleties of the literature studied in the regular English courses. ELS meets twice a week and is taken in addition to a regular English course.

Theory of Knowledge

Grades 11/12 IB

This is a required course for the IB Diploma. Class meets twice weekly for one hour and ten minutes and covers six main areas of knowledge that are represented in the IB hexagon including Natural Science, Mathematics, Human Science, History, Aesthetics and Ethics. Students examine philosophical questions about the ways of knowing and the problems of knowledge. IB diploma candidates take TOK 1 in semester two of their first year and TOK 2 in semester one of their second year.

MODERN LANGUAGES

The study of a foreign language has always been an essential part of St. Stephen's curriculum, as is appropriate in a school situated at the crossroads of many cultures. The Language Department believes that the knowledge of a foreign language is a skill, which is an essential asset for any individual in our modern age. It also feels strongly that such a study will contribute greatly, giving students a more acute awareness of language as a means of expression and communication, to broaden their outlook on other cultures and consequently to enhance their capacity for expressing themselves. Placement of new students in the appropriate level is determined through interview and a writing sample.

Italian Conversation

The main goal of this class is to develop proficiency for beginners. Students acquire a solid linguistic base on which to build communication skills. Grammar and vocabulary are taught in an interactive manner. The teaching points are practiced through the use of short dialogues, drills, exercises and frequent field trips. This course meets twice a week for a semester and is worth 1/4 credit.

Italian 1

IB Language Ab initio 1

The goals of Italian 1 are to instruct the beginner in vocabulary, grammar and idiomatic expressions so that he or she may begin to speak correctly and develop an awareness of Italian culture. Oral and written expression of Italian is approached through a series of graded exercises and simple conversations. Field trips to historical sites in Rome are taken regularly in order to acquaint the student with the city and its people.

Italian 2

IB Language Ab initio 2

Italian 2 continues the work of Italian 1 by reinforcing the student's knowledge of the language as an expression of Italian civilization. Grammar,

vocabulary and syntax are reviewed and students begin to prepare for upper level courses as they gain a wider and deeper sense of Italian culture through Italian movies, field trips, and the study of 20th century Italian history.

Italian 3 Grammar

IB Language B HL1, SL2

This course is designed to encourage non-native language students (after Italian 1 and 2) to increase their vocabulary, improve grammar and syntax and get a firmer hold on Italian language through a basic knowledge of modern and post-modern Italian culture and to prepare students for IB exams.

Italian 3 Literature

IB Language B SL2 or HL1

This course is designed for non-native language students who intend to continue their study of the Italian language and to take the IB Language B exam. Students are asked to deepen their knowledge of Italian society and culture of the 20th century. Texts include novels by contemporary authors such as Benni, Baldini, Fabbri, and Lakhous.

Italian 4 Literature

IB Language B HL2

This course is designed for advanced non-native language speakers who intend to take the IB language exam HL. Students are required to prepare for both oral and written IB exams by reading books of modern and post-modern authors (N. Ammaniti; F. Piccolo; G. Culicchia and G. Carofiglio). Students will acquire a basic knowledge of Italian history and culture. They will write essays on contemporary events and answer questions on assigned readings.

Italian Studies

Grade 9

This course precedes Italian 4 and is the first course in the four- year

sequence for native Italian speakers. It is an opportunity for students to revise grammar and literature and to write short compositions. Special focus is given to the study and discussion of current social issues.

Italian 4

Grade 10

This course is designed for native Italian speakers who intend to continue their study of the Italian language at the A1 level and who aim to strengthen both their oral and written expression. The main objectives of the course are to consolidate syntax, refine vocabulary, and improve students' knowledge of 19th century Italian literature, history and culture. Texts include novels by authors such as U. Foscolo, G. Leopardi, A. Manzoni, G. Verga, G. Deledda and some contemporary authors such as A. Baricco, A. De Carlo, I. Calvino.

Italian 5

Grade 11: IB Language A1, HL1/SL1

Designed for native speakers, Italian 5 assumes both a sound degree of linguistic precision and coherence and a mastery of the language appropriate for the study of literature.

This course aims to help students express themselves with clarity and accuracy, both orally and in writing. Literary works studied: Dante Alighieri's "Divina Commedia", Boccaccio's "Decamerone", Tomasi di Lampedusa's "Il Gattopardo", Pasolini's "Scritti Corsari".

Italian 6

Grade 12: IB Language A1, HL2/SL2

Designed for native speakers, Italian 6 continues the development of both the student's linguistic skill and ability in critical analysis. Students are engaged in appreciating similarities and differences between literary works from different ages and cultures. Students must have a sound knowledge of Italian Culture. Literary works by the following authors are studied: Pirandello, Goldoni, Calvino and De Filippo amongst others.

French 1

IB Language Ab initio 1

This course teaches the basic structure of the French language with the aim of developing the student's reading, writing and speaking skills. Oral expression is approached through reading aloud, pronunciation exercises and simple conversation.

French 2

IB Language Ab initio 2

French 2 continues the development and mastery of fundamental reading, writing and speaking skills in French. The vocabulary learned in French 1 is extended and increased, and one begins to approach civilization topics through the use of videos and movies as a means of further introducing the student to a wider knowledge of the French language and culture.

French 3

IB Language B SL1

This course provides a general reinforcement of grammar covered in the first two years. Students are introduced to literature, both prose and verse. They also read about current events and engage in classroom discussion. A variety of topics are covered through the use of newspapers and movies. Particular emphasis is placed on written skills and comprehension.

French 4

AP, IB Language B SL2, HL1

French 4 assumes a sound knowledge of the French language. The aim of the course is to teach the rules of essay writing in French on subjects of general interest and to provide a last review of grammar. A variety of topics are covered using literature, journals, newspapers, videos and internet. Emphasis is placed on both spoken and written language.

French 5

AP, IB Language B HL2

Fluent knowledge of the French language, both oral and written, is taken for granted. As in French 4, texts from a variety of genres are studied as well as topics relating to French civilization. Particular attention is given to interactive communication.

French Studies

Grades 9/10

This course is designed for native speakers and bilingual French students. Poems, songs and movies enrich the revision of basic grammar. Emphasis is placed on French culture, literature and history. Students will be asked to do research, make oral presentations and read French literary works.

French 4 Studies

Grade 11/12 IB A2 SL, HL

This course is designed for native speakers and for bilingual French students. Emphasis is placed on elements of French culture, literature and history. The preparation for the IB French A2 examination is spread over two years.

Spanish 3

Grades 11/12 AP,IB Language B SL2, HL1

This upper level Spanish course is designed for advanced students of Spanish as a foreign language. Students will review basic Spanish grammar and syntax: the verb, past tenses, conditional and subjunctive. They will read and comment on articles from magazines and newspapers and will learn to exercise on formal text analysis.

Spanish 4

Grades 11/12 AP, IB Language B HL2

At this level, students should have consolidated syntax and grammar, enriched their vocabulary and continued review. Students will read and

discuss articles on current affairs in the Spanish speaking world. Excerpts from Spanish and Latin American literature will be analyzed.

CLASSICAL STUDIES

Classical Studies includes courses in both the classical languages and in the culture and history of the Greek and Roman worlds. Four consecutive years of Latin are available, leading to IB qualifications. The study of classical languages and civilization forms an integral part of the curriculum of St. Stephen's School, for we believe that not only do the classics provide the traditional standards of academic excellence to which the school is committed, but that we have a particular responsibility in Rome to encourage our students to appreciate and understand the basis of Western culture. As the political, literary and artistic center of the ancient Roman world, Rome provides a living background to the pursuit of more historical studies and enables students to see both its inheritance from the Greek world and its legacy to our own. Field trips in all courses provide an active engagement with the immediate environment. Latin may be taken to satisfy the language requirement, but also, because of its broader cultural nature, Latin 1 taken in grade 9 may be taken in place of Roman Topography.

Roman Topography

Grade 9

This course, unique to St. Stephen's School, gives students the opportunity to learn about Roman history and society through direct study of the monuments and museums of Rome. Within a chronological framework, students learn to look at Roman art and architecture as reflections of the social, political, economic, religious and artistic life of the time. St. Stephen's central location allows regular weekly field trips, which form the basis of the course.

Classical Greek and Roman Studies (CGRS)

Grades 11/12

This course explores, within a historical framework, aspects of the literary, artistic, philosophical and political life of the civilizations of the classical

world. The first semester is devoted to a study of Greek civilization, focusing on ‘Greeks at war’ through the works of Homer, Thucydides and Euripides, while the second semester concentrates on the Roman world, with particular emphasis on the late Republic and Augustan Rome. Field trips are made where appropriate.

Latin 1

Latin 1 provides an introduction to the language and culture of ancient Rome and its empire. Modern methods are used to rapidly and effectively develop the reading ability of the student. Grammar and vocabulary are introduced through readings rather than as isolated elements in the language. The readings center on the Roman world of the 1st century B.C. and introduce students to aspects of Roman civilization such as religion, politics, literature and education.

Latin 2

IB SL1

Latin 2 consolidates and expands both the grammatical and cultural knowledge attained in the first year. More complex grammatical forms and constructions are introduced through the readings, which, at this level, focus on the breakdown of the Roman Republic and the creation of the Empire under Augustus. Selections from Latin authors, both poetry and prose, are read towards the end of the year.

Latin 3

IB SL2, HL1

In the third year, Latin students develop their abilities to translate, to analyze and to appreciate the writings of Latin authors such as the epic poet Vergil, the satirist Juvenal, and the poet Ovid.

Latin 4

IB HL2

Students’ knowledge of selected texts is expanded and deepened, skills in

literary criticism are developed and historical prose is studied and analyzed through the writings of Livy. Students also have the opportunity to examine, through an independent research project, a particular aspect of classical language, literature or civilization.

HISTORY

The History Department offers courses which fall into three general categories, a core of historical courses focused on Rome, Italy, Western Europe and the Mediterranean; courses in regional or non-European histories and civilizations of special relevance and interest to our students and faculty; and internationally-oriented studies aimed at understanding the complexities, tensions and workings of the contemporary world.

Roman Topography and Medieval Renaissance are required ninth and tenth grader courses. The rest are upper-level electives for eleventh and twelfth graders, a number of which prepare students for Advanced Placement examinations or for the International Baccalaureate.

The history courses introduce students to the fundamentals of historical writing and research and provide exposure to a variety of primary and secondary source materials. A wealth of archaeological, artistic and historical evidence is dealt with through regular field trips.

Roman Topography

Grade 9

This course or Latin 1 is required of all ninth graders. See course description under Classical Studies.

Medieval/Renaissance History

Grade 10

This course is a survey of European and Mediterranean history from the early Middle Ages to the Renaissance. Students are introduced to the question of how and why the ancient Mediterranean world of the Roman Empire was transformed into that of Christian medieval Europe, and how early modern European civilization began to emerge from its medieval matrix. Students will be initiated into some of the ideas and techniques of

historical thinking and will be provided with basic knowledge invaluable for their personal culture. Frequent field trips are especially important and exploit Rome's role as the key documentary city for this phase of history.

United States History

Grades 11/12 AP

Emphasis is placed on the evolution and development of American political, social, economic and cultural traditions from colonial times to the present. Attention is given to the ways in which American society evolved from its European roots and to the major stages in the development of its unique political and social values. Special concern will be placed on analyzing primary and secondary source materials as well as on the development of writing skills. Students may choose to prepare for the AP examination.

Art History

Grades 11/12 AP, IB SL1

This course is a survey of the history of Western art (painting, sculpture and architecture) with concentration on major works and the historical development of styles and themes. Classes include slide-illustrated lectures and on-site visits. Particular emphasis is given to classical Roman, Renaissance and Baroque art works which can be seen in Rome. Students may choose to sit for the AP History of Art examination. This course is also the first year preparation for the two year IB school based syllabus in Art History.

Renaissance Art in Rome - (First Semester)

Grades 11/12 IB SL2

The course examines the painting, sculpture and architecture of the Early and High Renaissance in the city of Rome between 1420 and 1550. Slide lectures and weekly field trips will pay particular attention to the roles art, as well as urban planning, played in transforming the tattered medieval town into a city once again worthy of the great name of Rome. Site visits will include such major Roman museums as the Vatican and the Capitoline Hill as well as churches, palaces, and the network of Roman streets and squares. This

course and Baroque Art in Rome offered in the second semester form the second year preparation for the IB History of Art exam.

Baroque Art in Rome - (Second Semester)

Grades 11/12 IB SL2

The course examines the origins and development of Baroque painting, sculpture and architecture in their natal city, Rome. Attention will focus on particular geniuses of the new style, including Caravaggio, Bernini, Borromini and Pietro da Cortona, many of whose works still occupy their original locations in Rome.

Weekly field trips will accompany classroom slides as students are encouraged to examine closely, in both an intra- and extra-mural context, the evolution of the Roman Baroque style as a unique and distinctive event in European history. Local custom, politics, and the personalities of such specific patrons as popes, cardinals, and Roman nobility will receive particular attention. The opportunities the city of Rome offers as a classroom will be extensively explored.

Classical Greek and Roman Studies

Grades 11/12

This course is an offering under Classical Studies but may count toward fulfillment of the History requirements.

Modern European History

Grades 11/12 AP, IB SL1, HL1

This is a study of European history from the Reformation to the Era of Bismarck. The early modern period is dealt with in a fairly rapid survey, with certain topics studied in greater depth. Most time is devoted to understanding the history and civilization of 18th and 19th century Europe. Geographically the focus is on western and central Europe, with as much attention as possible to Italy. The course follows the main outlines of political and diplomatic history, and considerable attention is given to cultural, social and economic issues. The evolution of historical thought is the principal intellectual theme to be followed. Some students may choose to

prepare for the AP European History examination.

Contemporary History

Grade 12 IB SL2, HL2

This course covers major world historical events since 1890. The topics covered are the main ones emphasized in the IB History Examination. Particular emphasis is placed on the inter-war period and the Second World War, as well as the Cold War and East-West relations up to 1980. The course focuses on Western and Eastern Europe, including Russia, though events in other parts of the world, particularly Asia and the Middle East are surveyed. Students sitting Higher Level IB Exam must attend a weekly tutorial.

Islamic History and Civilization

Grades 11/12 IB SL

This course is a survey of Islamic history and civilization from its pre-Islamic origins in Arabia and the Fertile Crescent to the emergence of the Ottoman Turks, Safavid Iran and the Mughals in the Indian subcontinent. The emphasis is on early and “medieval” Islam in the central lands: from Egypt to Central Asia. Though the framework is chronological and political, equal or more attention is given throughout the year to Islam as a religion, to the human and natural environment, to literary and philosophical traditions, and to the visual arts, especially architecture. The aim is to present a balanced and sympathetic view of a great civilization. The nature of Islamic history and its Middle Eastern setting also make frequent reference to recent or contemporary situations inevitable and can make them more comprehensible as well.

Economics 1 and 2

Grades 11/12 IB SL, HL

This two year course introduces students to the main concepts and methods of economics, stressing their application to “real-life” situations and issues. The syllabus includes the following topics: Foundations of Economics (models, resource allocation and economic systems, demand and supply, market and government failure); Business Economics (elasticity, objectives

of firms, market structure, efficiency); Macroeconomics (national income accounting, macroeconomic models, unemployment, policy objectives and instruments); International Issues (gains from trade, protectionism, balance of payment, exchange rates); Growth and Development (productivity, indicators of economic development, development strategies, barriers to development, sustainable development). Students sitting Higher Level IB Exam must attend a weekly tutorial.

EXPERIMENTAL SCIENCES

Courses in the Experimental Sciences Department at St. Stephen's have the following aims: to present the principles of science in a way comprehensible to students of varying capabilities; to engage the experimental skills necessary for successful scientific investigation; to develop the necessary precision in the use of language, both oral and written, for communicating scientific data; to create an awareness of the impact of science in modern society and of its importance in the technological age. Achievement of these aims requires emphasis on experimentation. The Experimental Sciences Department is well equipped for experimental work, with three laboratories at its disposal.

Biology 1

Grade 9

This required course is an introduction to the biological sciences with emphasis on laboratory work. In the first semester the following topics are presented: cell structure, biochemistry, ecology, photosynthesis, cell respiration, DNA structure and function, protein synthesis and chromosome structure. In the second semester, the topics of human anatomy and physiology, zoology, botany, evolution, Mendelian and human genetics and introductory genetic engineering are studied. Students learn the importance of the scientific method by engaging in weekly investigative practical work. Group project work and field trips are also important components of this course.

Foundations of Chemistry and Physics

Grade 10

This required course is divided into two semester courses. Foundations of Chemistry introduces the topics of atomic theory, the periodic table, chemical bonds, stoichiometry, states of matter, energetics, chemical kinetics, equilibrium, solutions and mixtures, acids and bases, redox reactions, organic chemistry and biochemistry, and environmental chemistry. The Foundations of Physics introduces the topics of waves, sound and light, matter, forces, motion and energy, heat, static and current electricity and magnetism, and the scale of things from subatomic particles to the solar system and the universe - all in an historical context. Hands-on laboratory work is an integral part of each course.

Environmental Systems and Societies 1 and 2

Grade 11/12 IB SL

Environmental Systems and Societies is a two-year IB course that is interdisciplinary between Science and Social Studies. The first year of the course focuses primarily on the biological and cultural dynamics of environmental systems. The second year is focused primarily on the environmental issues/political aspects and population studies. This division is not strict, but reflects some general trends in the material. This course is a new offering in the IB curriculum as of September 2008. Also new at St Stephen's with the first teaching beginning in September 2009 and first examinations to be held in May 2011. Throughout the two years, the course includes a selection of experiments and fieldwork to better understand environmental systems and their impact on society.

Prerequisite: Biology 1 and Foundations in Chemistry and Physics

Biology 2

Grade 11 IB, SL1, HL1

During the first semester, students are introduced to the chemical structure of biological molecules with special emphasis on proteins, carbohydrates and lipids, eukaryotic and prokaryotic systems, animal and plant tissues, ecology, photosynthesis, cellular respiration, nucleic acid structure and

function, protein synthesis and enzyme function, amino acid and fatty acid metabolism, chromosome structure, mitosis and meiosis. In the second semester, plant physiology, Mendelian genetics, origin of life, organic evolution (with emphasis on paleontology), and human anatomy and physiology are studied. There is a regular program of assessed portfolio and laboratory work.

Prerequisite: Biology 1 and Foundations of Chemistry and Physics

Biology 3

Grade 12 IB SL2, HL2

The following topics are presented in detail: chemistry of the plasma membrane, genetics of viruses and bacteria, DNA recombinant technology, DNA as genetic material, genes in action, gene mutations, micro and macroevolution, animal classification, plant biology. Special attention is given to the immune system and cancer, physiology of muscle contraction, exchange of gases, homeostasis, hormonal regulation, thermo and osmotic regulation, kidney excretion and functions of the liver. Laboratory and portfolio work are integral parts of this course. Students sitting Higher Level IB Exam must attend a weekly tutorial.

Prerequisite: Biology 2

Chemistry 2

Grade 11 IB SL1, HL1

This is the first year of the IB HL/SL program. The topics studied are stoichiometry, atomic theory, periodicity, bonding, states of matter, energetics, kinetics, equilibrium, acids and bases, oxidation and reduction. Laboratory experiments are an integral part of the course and are graded for IB internal assessment. Prerequisite: Foundations of Chemistry

Chemistry 3

Grade 12 IB SL2, HL2

This course completes the preparation of students for the International Baccalaureate Higher Level (HL) and Standard Level (SL) examinations in chemistry. The topics covered are organic chemistry, human biochemistry,

environmental chemistry, and the remainder of the HL core material. In the second semester of the course, the material covered in Chemistry 2 is reviewed and students sit mock IB exams. Laboratory experiments are an integral part of the course and are graded for IB internal assessment. Students sitting Higher Level IB Exam must attend a weekly tutorial.

Prerequisite: Chemistry 2

Physics 2

Grades 11/12 IB SL1, HL1

This is the first year of the IB HL/SL program. Topics include measurement, mechanics, thermal physics and properties of matter, waves, electricity and magnetism, atomic and nuclear physics. There is a regular program of laboratory work with internal assessment.

Prerequisite: Foundations of Physics; Co-requisite: Pre-calculus

Physics 3

Grade 12 IB SL2, HL2

The second year of the IB HL/SL program further develops the topics covered in Physics 2 with extension work in historical physics and optics. Assessed laboratory practical work continues. Students sitting Higher Level IB Exam must attend a weekly tutorial.

Prerequisite: Physics 2, Precalculus; Recommended co-requisite: Calculus

MATHEMATICS

Courses offered by the Mathematics Department at St. Stephen's have these common objectives: to introduce basic mathematical concepts and extend them to a level appropriate for future courses and careers; to emphasize the application of these concepts to daily life and to equip students with the necessary reasoning and problem-solving skills to do this; to develop confidence as well as patience and persistence in problem solving; to create an awareness of the structures unifying the various branches of mathematics; to train students to think logically and deductively and to use the language of mathematics with precision both orally and in writing; to help students efficiently use calculators and computers as tools in the process of problem

solving, visualization, exploration and verification; to encourage students to develop the ability to do mental calculations where appropriate; to understand and appreciate mathematics from a historical perspective; to develop self-confidence, a positive attitude towards mathematics and the ability to cope with the mathematical demands of everyday life.

In addition to covering topics examined on College Board standardized tests, the mathematics courses at St. Stephen's are so designed that students enrolled in the IB program may prepare to take an examination at one of the following levels: Higher Level, Standard Level or Standard Level Mathematical Studies. We recommend that students have a TI 83+ or a TI 84+ calculator. Please refer to the website for the updated list of IB approved graphic display calculators.

Algebra 1

Grade 9

This course is the first stage of an integrated three-year mathematics sequence. Students will learn the fundamental algebraic skills and concepts that will prepare them for future mathematics courses and, in particular, for the next two courses offered at St. Stephen's. They will learn how to use calculators and computers as tools in the learning process without being completely dependent on them. Skills developed are: mental computation, ability to judge the reasonableness of numerical results, reasoning and problem solving, oral and written communication skills, organisational and study skills, ability to learn independently as well as part of a team.

The specific topics studied are: order of operations; basic statistical measures such as mean, median, mode; solutions of linear equations with integers, fractions and decimals; graphs and tables to solve problems; direct variation; modelling linear data; ratios, proportions and scale measurements; similar figures; perimeters and areas of similar figures; theoretical, experimental and geometric probability; Pythagorean Theorem; operations on and simplification of expressions with radicals (surds); real numbers ; operations with and factorization of polynomials; graphs of linear equations; systems of linear equations solved algebraically and graphically; linear inequalities; parabolas; solutions of quadratic equations using factorization and the

quadratic formula; operations on variable expressions with integral exponents; functions involving exponential decay and growth; rates of increase and decrease; scientific (standard) notation; inverse variation; rational expressions and equations; factorial notation; permutations and combinations; connecting counting and probability. Although students are advised to have a calculator with scientific functions, they are permitted to use an approved graphic display calculator.

Geometry

Grade 9/10

The study of geometry is different from algebra in that it relies on visual representations and visual thinking. Some goals of this course are to involve students in exploring and discovering mathematical concepts and to connect geometry to the real world, to other subjects and to other mathematical topics. Topics covered are: patterns, lines and planes; triangles and polygons; reasoning and proofs; coordinates in 2-D and 3-D, equations of lines and circles, coordinate proofs; parallel lines; conjectures about triangles; quadrilaterals, areas and volumes; using transformations; similar polygons; applications of right triangles; circles and spheres; matrices for transformations. Although students are advised to have a calculator with scientific functions, they are permitted to use an approved graphic display calculator.

Algebra 2/Trigonometry

Grades 10, 11, 12

IB Mathematical Studies, SL1

This course uses functions as a unifying theme while connecting algebra to geometry, data analysis, probability, and discrete mathematics. In order to be successful in this course, students must have a strong background in the fundamentals of arithmetic, algebra and geometry. Through the use of exploratory activities students will connect algebra to the real world and to other subjects and topics of mathematics. The topics of study include: linear, exponential, logarithmic and quadratic functions; data investigations; solving systems of equations algebraically and graphically; graphs of systems of inequalities; operations on matrices; radical functions; number

systems; polynomial functions; sequences and series; analytic geometry; permutations and combinations; probability; triangle trigonometry; sine and cosine functions on the unit circle and degree and radian measurement. Students will learn how to use calculators and computers as tools and must have an approved graphic display calculator.

Mathematical Studies

Grades 11/12 IB Mathematics, SL2

One of the main goals of this course is to build confidence and encourage an appreciation of mathematics in students who do not anticipate a need for calculus in their future studies. Students need to have good fundamental skills and should have taken an Algebra 2/Trigonometry course. All students who take this course must demonstrate an ability to apply the mathematics they have studied by completing a project. General topics are: Number and Algebra, Geometry and Trigonometry, Sets and Logic and Probability, Statistics, Financial Mathematics, Functions and Introductory Differential Calculus. Students will learn how to use calculators and computers as tools and must have an approved graphic display calculator.

Prerequisite: Algebra 2 / Trigonometry course.

Precalculus

Grades 11/12 IB HL1, SL1 Mathematics

This course provides the background necessary for students who will pursue advanced studies in areas that require the use of calculus. Students should have a strong background in algebra, geometry and right-triangle trigonometry. They will learn to make full, appropriate and efficient use of technology as a tool in the learning process. The topics of this course include: linear inequalities solved algebraically and graphically; functions and transformations of their graphs; polynomial, rational, exponential, logarithmic and trigonometric functions: their graphs and inverse functions; analytic trigonometry: identities, equations, sum and difference formulas, multiple-angle and half angle formulas, product-sum formulas, compound formula; sine and cosine rules, ambiguous case, area, vectors in a plane, dot

product, angle between two vectors; complex number plane, absolute value, trigonometric form, powers, DeMoivre's Theorem, roots of complex numbers; polar coordinates; systems of equations and inequalities, matrices and determinants; sequences and series; combinatorics and probability; statistics; limits and an introduction to calculus by looking at the tangent line problem from first principles and at area as a limit of summations. Experience with a graphic display calculator is essential, but students will have opportunities to improve calculator skills during the development of the course.

Prerequisite: Algebra 2 / Trigonometry course.

Calculus SL

Grade 12 IB SL2

This course completes the syllabus of SL Mathematics. Topics included are: introduction to differential and integral calculus, vectors in 2-space and 3-space, probability and statistics. Experience with a graphic display calculator is essential, but students will have opportunities to improve calculator skills during the development of the course.

Prerequisite: precalculus/recommendation of teacher

Calculus HL

Grade 12 IB HL 2

This course completes the core of the Higher Level Mathematics syllabus. Topics include: differential and integral calculus and applications, vectors in 3-space and probability and statistics (including discrete and continuous probability curves and the normal curve). Students intending to sit for the HL examination must attend a weekly tutorial in addition to the regular classes. This tutorial is an introduction to group theory and abstract algebra. Students should be proficient in the use of a graphic display calculator before beginning the course.

Prerequisite: precalculus/recommendation of teacher.

FINE & PERFORMING ARTS

Courses in this area of St. Stephen's curriculum include a variety of activities in fine and performing arts. One credit unit in the Arts is required for graduation. Each course is offered as a semester course which meets twice a week and is awarded 1/4 credit per semester. The Fine Arts Program consists of three courses for students ranging in ability and experience from beginners to advanced. Projects in each course encourage the student to be aware of the historical development of diverse techniques and media and, through the creative process, to develop an understanding and appreciation for the wide range of expressive styles in the man-made environment. Our location in Rome offers us the opportunity to complement the studio exercises with direct observation of the entire panorama of stylistic trends in architecture, painting, and sculpture. Field trips to artists' studios, museums and galleries are an important part of the art courses. Throughout the year St. Stephen's hosts student art exhibits open to friends and family members.

Sculpture (3-D)

The fundamentals of sculpture techniques are introduced and developed in this semester. Students learn to manipulate clay, creating vessels from the "coil and slab" method, as well as using the electric wheel. They prepare mixed media projects, which provide the technical and visual basis from which they will then explore sculpture making with traditional non-traditional materials. The projects all evolve from resources available in Rome (museums, exhibits, competitions). Mold making in plaster, paper mache, metal sculptures, glazing and firing techniques are studied and applied.

Drawing and Painting (2-D)

This course is designed to develop the student's creative and technical abilities in a variety of two-dimensional media. Problems in composition, perspective, volume, tone and color are explored. Pencil, charcoal, pen and ink, pastels, tempera, oil paint, and collage are utilized. Students will have the opportunity to work from direct observation both in the studio and outdoors.

Black and White Photography

This semester course focuses on photography as an art form and an expression of individual creativity. Students learn about its history, including the life and work of celebrated artists. Students apply design elements and principles to create their own compositions using a variety of photographic techniques, both modern and traditional. They learn the basics of the contemporary SLR camera as well as black and white film processing in the darkroom. Visits to current exhibitions are also organized. Students will capture, through the lens, the architectural splendor and unique lighting offered in Rome.

Digital Photography

This semester course is designed for students who want to learn about photography in general and digital photography specifically. Part of the activity is devoted to looking at photos made in class and those of other artists, to get new ideas and to develop a critical but constructive approach to the images viewed. Students will first learn the technical aspects of photography, mainly through direct experience but also by a theoretical introduction into the different ways of using a camera. We will then learn to use programs on the computer, such as Art Weaver or Photoshop, in order to manipulate digital photos.

Advanced Art - Visual Arts

Grades 11, 12

IB HL, SL

This class is designed for the advanced, motivated art student. Although structure is provided and ideas and media are introduced, it is up to the individual students to interpret them as he/she sees fit. Demonstrations of techniques such as ink wash, conte crayon, linoleum cuts, masking, watercolor and photography will be provided by the instructors. A sketchbook is required of all students in the class. Critiques, field trips, slides and films are also regularly scheduled during the class time. This course is required for students planning on taking IB Visual Arts.

Music Theory and Practice

This course will teach music theory “from the ground up” integrating theoretical knowledge with practical application through instrumental and/or vocal performances. It will begin by developing fundamental music reading skills (rhythm and pitch) and aural recognition skills (rhythmic, intervallic and – ultimately - melodic dictation). Interactive internet sites which permit each student to develop their skills individually will be used during class lectures. Once students are in command of the fundamentals of the musical alphabet, the course will discuss the basics of musical language: scale construction, chord construction, the tonal system, harmonic progression, voice leading, species counterpoint, etc. analyzing a number of different musical examples taken from both the popular and classical music repertoire. At the same time, musical projects which utilize the new information will be carried out in class. A source syllabus which amalgamates two complete Music Appreciation Courses, “Classical and Popular Music”, will be provided and used, along with the two accompanying DVD’s of musical examples, as a class reference text throughout the year.

Drama

Students spend three to four hours a week at the beginning of the year doing body awareness exercises and vocal exercises as well as improvisation. Then they begin preparation of a show to be performed before the Winter Break. This show can be improvised or published material. In the spring, the students perform a full length play. In both cases, the students are responsible for the total result (costumes, lights, sets, posters, and publicity) under the guidance of the instructor.

Modern Dance

The dance course offers both physical activity and creativity through movement. Simple modern dance techniques are used for warm ups and then problem-solving improvisations are proposed. From these improvisations the students’ original approach to movement emerges. The final result is choreographed and performed at the end of each semester. This course fulfills the physical education requirement.

Chorus

The music studied and performed in this course ranges from four-part Renaissance madrigals to contemporary popular music. The chorus performs at concerts held at the end of each semester. While previous musical experience is helpful, it is not required for participation in chorus.

SKILLS:

HEALTH, STUDY SKILLS & INFORMATION TECHNOLOGY

The Health, Study Skills & Information Technology program has been designed to address a variety of needs of 9th and 10th grade students. These team-taught semester courses help ensure that all St. Stephen's students are proficient in areas which are crucial for success in their high school career.

Skills 9

Meets once a week in the first semester and is divided into three parts. The Skills sessions focus on research and study skills and time management. The Choices sessions focus on health issues and the role values play in making good decisions regarding friendship, relationships and other common teen issues.

Skills 10

Skills 10 meets in the second semester and is divided into three parts. These skills sessions focus on making thoughtful decisions involving the risks of adolescence, including tobacco, alcohol and drug use and sexual activity and continue the development of research and study skills and investigation of career choices.

Information Technology 9 and Information Technology 10

IT 9 meets once a week in the first semester and IT 10 meets once a week in the second semester. In order to satisfy the St. Stephen's graduation requirements, all students will be requested to take a "Computer Proficiency Exam" based on the International Computer Driving License program.

Students will have to show to be familiar and productively use the tools required in the following computer areas:

- 1) Basic Concepts of Information Technology (IT)
- 2) Using the Computer and Managing Files, Hardware structure and electronic components. Operating systems (Windows)
- 3) Word Processing (Microsoft Word)
- 4) Spreadsheet (Microsoft Excel)
- 5) Database (Microsoft Access)
- 6) Presentation (Microsoft Power Point, Web editors)
- 7) Information and Communication: Internet Research, Email, File transfer, Network concepts.

Physical Education

Each year the Physical Education Department offers a variety of competitive and intra-mural sports including track and field, soccer, volleyball, basketball, tennis, calcetto, Pilates, martial arts, yoga and modern dance. Tennis, volleyball, basketball and calcetto courts are located on school grounds. We also make use of private athletic facilities located in the vicinity. In addition to intra-mural competitions, regular games and meets are scheduled between St. Stephen's and varsity teams of other schools within the local and international communities.

Trips

In addition to weekend and course-related field trips and excursions, all students participate in an extended educational trip program in the fall and spring of each year. Faculty plan a short three-day fall and a full-week spring excursion for groups of twelve to twenty students. Short trips include exploring cities, towns and archaeological sites, as well as hiking and outdoor endurance activities throughout Italy, while the long trips focus on European and mediterranean destinations, as well as, more remote Italian locations such as Sicily, Calabria, the Dolomites and the Istrian peninsula.