



ST PAUL'S HIGH SCHOOL

GRADE ELEVEN COURSES

2008-2009

REQUIRED COURSES

1. Religion 31G (.5 credit)
2. English 30S (1 credit)
3. History 30S (1 credit)
4. Physical and Health Education 30F (1 credit)
5. Mathematics (select one)
 - Pre-Calculus Mathematics 30S (1 credit)
 - Applied Mathematics 30S (1 credit)
 - Consumer Mathematics 30S (1 credit) (Students who take Consumer Math are exempt from the Science requirement indicated below.)

The school reserves the right to decide if a student has shown the aptitude in Mathematics to take Pre-Calculus Mathematics 30S or Applied Mathematics 30S.

ELECTIVES

Students must select FOUR (4) electives, at least one of which must be a Science option from Group One and one Humanity option from Group Two.

Group One Electives: Sciences

At least one of your top four choices must be a Science.

1. Biology 30S (1 credit)
2. Chemistry 30S (1 credit) co-requisite Pre-calculus 30S or Applied Math 30S
3. Physics (select one)
 - Physics 30S (1 credit) co-requisite Pre-calculus 30S or Applied Math 30S
 - AP Physics 32S (1 credit) co-requisite Pre-calculus 30S Mathematics

Group Two Electives: Humanities

At least one of your top four choices must be from the Humanities.

1. AP French 32S (1 credit)
2. French 30S (1 credit)
3. Music 30S Concert Band (1 credit) prerequisite Music 20S or background in music.
4. Art 30S (1 credit)
5. History 40S (Western Civilization) (1 credit)

Group Three Electives: Other Options

1. Law 40S (1 credit)
2. Understanding Mass Media 31G (1 credit)
3. Computer Science 30S (1 credit) (prerequisite for Computer Science 40S)
4. Advanced Mathematics 31G (1 credit) Note: There is limited enrolment in this course. Preference will be given to students who obtained 80% or higher in PC Mathematics 20S - starting from the highest mark.

**ST PAUL'S HIGH SCHOOL
GRADE ELEVEN COURSES
2008-2009 continued...**

EXTRA CREDIT COURSES

1. Jr Jazz Ensemble Music 35S (.5 credit) Audition required in September.
2. Sr Jazz Ensemble Music 35S (.5 credit) Audition required in **March**.
3. Sr Wind Ensemble Music 31G (.5 credit). Approval of the instructor required.

Note: Please remember that there is a limited enrolment in each elective. The school reserves the right to add or cancel courses depending on the number of students in that particular elective. If there are more applicants than the course can accommodate, the school **WILL** assign spaces in that elective starting with the student with the highest marks in previous relevant courses. The school also reserves the right to move the student to the next elective of his choice.



ST PAUL'S HIGH SCHOOL

GRADE ELEVEN ELECTIVE COURSE DESCRIPTIONS

2008 – 2009

REQUIRED COURSE OPTIONS:

MATHEMATICS: (One of the following three courses must be chosen)

PRE-CALCULUS MATHEMATICS 30S

Pre-Calculus Mathematics 30S is designed for students who intend to study calculus and related mathematics as part of their post-secondary education. The course comprises, primarily, a high-level study of theoretical mathematics with an emphasis on problem solving, mental mathematics, as well as cumulative exercises and testing. Many of the exercises and problems are expected to be original or different from those presented in class. Topics include quadratic functions, trigonometry, algebra, analytic geometry, geometry, consumer math, logic and proof, and functions. The student is expected to work both individually and in small groups and must demonstrate a high level of mastery in algebraic operations, an aptitude for problem solving and an ability to effectively communicate both in verbal and in written format the logical steps required to arrive at solution. *It is recommended that students should have achieved a mark of 70% or more in PreCalculus Mathematics 20S to ensure future success in this program of study. This is a prerequisite for Pre-Calculus Mathematics 40S.*

APPLIED MATHEMATICS 30S

This course is available for students planning to pursue post-secondary studies in mathematics and science. This course is an extension of the ideas and concepts presented in the Applied Mathematics 20S course. The curriculum is particularly directed to students planning to enter areas that require a mathematics/technology based background. The course is data-driven. Students collect data from a wide array of sources in a series of experiments and activities. The student develops mathematical concepts through the analysis of this data. Topics found in this course include: data management and analysis, technical communications, geometry, personal finance, systems of linear equations, precision measurement, linear programming, and non-linear functions. *This is a prerequisite for Applied Mathematics 40S.*

CONSUMER MATHEMATICS 30S

This course is intended for students whose post-secondary planning does not include a focus on mathematics and science related fields. The Consumer Mathematics program of study that will be completed with the 40S level is recognized by the universities as a mathematics elective for first year university entrance. The course is structured into two half courses, each emphasizing communication, number sense, patterns, problem solving, reasoning, technology, visualization and connections. Students are expected to work both individually and in small groups on mathematical concepts and skills encountered in a technological society. There is no pre-requisite for this course.

ST PAUL'S HIGH SCHOOL
GRADE ELEVEN ELECTIVE COURSE DESCRIPTIONS
2008 – 2009 continued...

ELECTIVE COURSES:

BIOLOGY 30S

The Biology 30S program provides the student with an opportunity to learn some basic language, skills and knowledge of biology which they could use in higher levels of study at university or in an applied technology area. The students will study human biology using a ASystems@ approach.

Course topics include the following: cell structure and function, biochemistry, metabolism and energy, an introduction to anatomy, digestion and nutrition, the heart and circulatory system, the respiratory system, the lymphatic, immune and endocrine system and the nervous system.

There is an extensive lab program involving dissection and microscope techniques. Students will be required to keep a lab journal and will be required to write research papers. The dissection of a preserved specimen will be in the second term.

CHEMISTRY 30S

Chemistry is the study of the structure and interaction of substances. Chemistry 30S provides the student with an introduction to the basic language and fundamental skills required to study chemistry at a higher level. While students began studying Chemistry in Science 10F and 20F, this course will go into much more detail and introduce new topics. Some topics covered are atomic structure, gases, solubility, different types of solutions, chemical reactions and quantitative calculations based on these. Organic chemistry will be introduced through a systemic organization based on alkanes, alkenes, alkynes, aromatic compounds, alcohols, organic acids, esters and other substituted derivatives.

In the lab program students will learn basic laboratory skills with experiments that relate to the topics developed in the classroom. The prerequisite for this course is Science 20F. A reasonably strong mathematical aptitude is required because of the large amount of problem solving done.

PHYSICS 30S

Physics deals with the relationship between matter and energy. Physics 30S builds on the Physics component of the Science 20S program. It provides the student with the ability to describe the natural world around him both theoretically and mathematically.

Areas of study include vector analysis, kinematics, mechanics, fields (gravitational, electrostatic and magnetic) and waves (sound, water and light). Tools such as graphical analysis, vectors and problem solving are used throughout. An emphasis is placed on lab work and practical applications of the material.

This course is a prerequisite for Physics 40S. It requires a high level of problem solving and calculation. Students must have demonstrated good skills in prior Science 20F and Mathematics 20S courses. **(A minimum average of 60 % in these subjects is required and a minimum average of 65% in Physics component of Science 20F is recommended.)**

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ADVANCED PLACEMENT (AP) PHYSICS 32S

The AP Physics B course is an advanced physics curriculum which follows the Manitoba curriculum for Grade Eleven Physics but is supplemented with a number of topics from the Grade Twelve program including 2-D Vector Analysis, Projectiles, 2-D Momentum, Work and Energy. The AP Physics B program, while non-Calculus based, requires a very high level of Mathematical skill. This course should be considered as the beginning of a two-year program although students may opt for the regular 40S Physics program, after Year 1.

Only students who have excelled in both Science 20F and Math Pre Calculus 20S will be accepted into this course.

COMPUTER SCIENCE 30S

This is a first course in Computer Science. Students will learn to program computers using the C++ programming language as a problem solving tool. The course also contains the study of the fundamental algorithms of computer programming. Students will study the binary nature of the computer by examining the internal structure of data and designing Boolean circuits. Other topics to be included in the course are: recent advances in computer hardware and software, the INTERNET, computers in society, and career opportunities in information technology.

ADVANCED PLACEMENT FRENCH 32S

Le cours de français secondaire deux est pré-requis ou la permission du chef de département est requise.

Ce cours est axé sur l'expression orale. Il vise à approfondir les connaissances linguistiques des étudiants à travers l'étude de documents authentiques. Les étudiants seront appelés à visionner plusieurs bulletins d'informations et quelques films; à faire des recherches sur Internet, à profiter des logiciels qui leur sont disponibles au laboratoire de langues, à lire diverses publications en vue de préparer un débat sur un sujet controversé, à monter quelques saynètes à partir du vocabulaire nouvellement acquis et à participer activement aux nombreuses discussions en classe. Ils auront à améliorer leur français écrit également en maîtrisant les concepts grammaticaux suggérés par le curriculum du Ministère et en faisant appel à la composition et à la dictée.

FRENCH 30S

The prerequisite for this course is Grade Ten French or the approval of the Department Head. This course deals primarily with mastery of two basic skills: speaking and comprehension. The emphasis will be on everyday teenage conversations.

Students will be invited to improve their proficiency in French by participating actively in classroom discussions, by preparing and improvising skits in small groups, and by working with interactive software in the Language Lab. Testing will focus primarily on oral examinations.

ST PAUL'S HIGH SCHOOL
GRADE ELEVEN ELECTIVE COURSE DESCRIPTIONS
2008 – 2009 continued...

MUSIC 30S

The prerequisite is good standing in Grade Ten music or the ability to demonstrate a comparable playing level on a band instrument. Grade Ten *Concert Band One* students continue their study of music in *Concert Band Two*, while Grade Ten *Junior Band* students continue in *Concert Band One*. This is a performance-focused course that will continue the development of each student's musical skills and understanding through the playing of their instrument. The course also includes the study of music theory and music history.

MEDIA 31G - FILM STUDIES

Media 31G is an introduction to the study of film. Film history, technique and criticism are emphasized. Students will focus on the practical; watching significant films will form a major part of the course. There will also be opportunity to produce short films. There is no prerequisite.

LAW 40S

This course is intended to increase the students' awareness and appreciation of the laws that govern and protect society. The first term will deal mainly with criminal law and will follow the justice system as to how it deals with items such as search laws, arrests, defences, evidence, jury selection and sentencing. The second term will deal with contract law, tort and family law. An attempt will be made to make the course as practical as possible in that a number of speakers will be invited to share their views on the legal system (i.e. lawyer, policemen, social worker). A field trip to the Law Courts building is planned.

ART 30S

Grade Eleven Art will deal with all of the skills in drawing, design and analysis that have been dealt with in Grade Nine and Grade Ten Art. Rather than a rigid adherence to one outline of study, however, there will be more of an opportunity for students choose their own particular area of expertise. The Art History and Theory part of the course will be continued, with a particular focus on Twentieth Century Art. Credit in Grade Nine and Grade Ten Art is useful, but not essential. Students are expected to continue to develop their skills through take home sketchbook assignments.

EXTRA CREDIT ELECTIVE COURSES:

ADVANCED MATHEMATICS 31G

This is the first course in our Advanced Mathematics Programme at St. Paul's. ***This course is a pre-requisite for all the Advanced Mathematics courses found in the Grade 12 year.*** The objective of this course is to provide an introduction to the Calculus topics as well as further development of intuitive and deductive reasoning skills. The topics covered are: limits of a function, rules to determine the derivative for a function, Canadian Mathematics Competition preparation, and instantaneous rates of change. Students require an average of 80% or more in PreCalculus 20S to take this course. The Advanced Mathematics course prepares students for university courses in the area of Calculus, Linear Algebra and other key study areas.

**ST PAUL'S HIGH SCHOOL
GRADE ELEVEN ELECTIVE COURSE DESCRIPTIONS
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Music 35S (.5 extra-credit)

Wind Ensemble is an option reserved to select students who wish to continue their study of music although due to other course elective future career needs are unable to accommodate the full credit Concert Band in their timetable. This course is reserved to students with high standing in Grade 9 or Grade 10 music. Entry into Wind Ensemble will be limited and at the discretion of the music teacher and the student's counselor. Students who wish to take Wind Ensemble must make their request in writing to the music teacher and their counselor.

Music 35S (.5 credit)

Jr. Jazz Ensemble is an introductory level half-credit course in jazz music that is open to students from Grade Nine to Grade Twelve. Admission to Jr. Jazz Ensemble is by audition only. Auditions take place during the first couple of weeks of classes. Audition music will be distributed to interested students during the first few concert band classes. Jr. Jazz Ensemble meets two mornings per week outside of the regular schedule.

Sr. Jazz Ensemble is an advanced level half-credit course in jazz music. The course is performance focused. An audition is required and takes place in March prior the upcoming school year.

No previous jazz experience is required for Jr. Jazz Ensemble, yet is an asset. Good standing in Jr. Jazz Ensemble is a prerequisite for Sr. Jazz Ensemble. **It is expected that students who wish to take either jazz ensemble must be enrolled in the Concert Band program.**