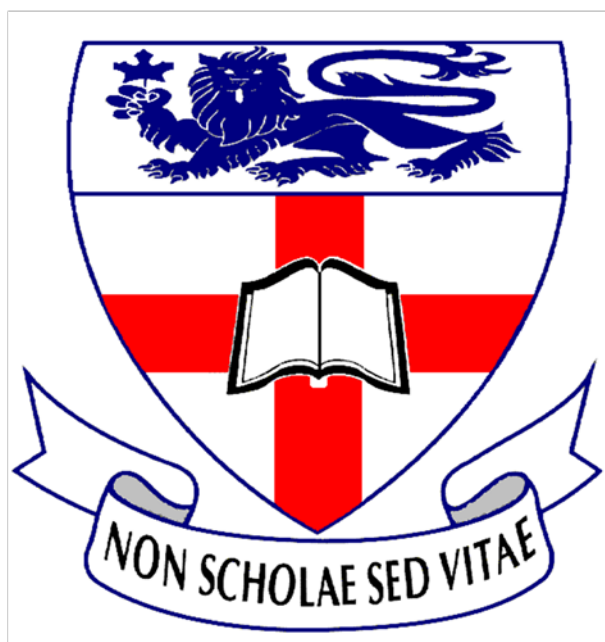


**SIR WINSTON CHURCHILL
HIGH SCHOOL**

**PLANNING GUIDE
2017 - 2018**



SIR WINSTON CHURCHILL HIGH SCHOOL

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CAREER AND LIFE MANAGEMENT (CALM)

CALM 20 (Career and Life Management) - 3 credits

Required for High School graduation

The aim of senior high school Career and Life Management (CALM) is to enable students to make well-informed, considered decisions and choices in all aspects of their lives and to develop behaviors and attitudes that contribute to the well-being and respect of self and others, now and in the future. CALM is the core course for health literacy at the senior high school level in Alberta. Emphasis is placed on individual decision making and goal setting throughout the CALM course.

CALM provides students with opportunities to develop and shape their lives occupationally, financially, and socially. The curriculum is organized into three major units: Personal Choices, Resource Choices, & Career and Life Choices. In addition, the course will contain one optional theme, Human Sexuality.

CAREER AND TECHNOLOGY STUDIES (CTS)

The Career and Technology Program of Studies offers students the opportunity to explore complementary courses that can develop and cultivate their individual talents, interests and abilities. These courses can help students:

- prepare for entry into the workplace and/or related post-secondary programs
- develop daily living skills
- investigate career skills

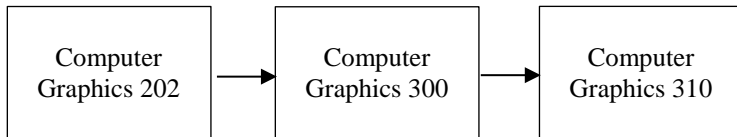
Alberta Education has reorganized the Career and Technology Program of Studies from the original 22 “strands” to 5 occupational “clusters”. The occupational clusters are based on the National Occupational Classifications (NOC). The 5 occupational clusters include: Business, Finance and Information Technology (BIT), Trade, Manufacturing and Transportation (TMT), Media, Design and Communication Arts (MDC), Health, Recreation and Human Services (HRH) and Natural Resources (NAT). The intent of this reorganization is to make it easier for students to develop a personal “pathway” when planning for post-secondary education or employment after high school. A pathway is a series of high school courses that reflect a student’s interests and abilities.

Advanced Level courses may be used to satisfy Alberta high school diploma requirements. Depending upon the university and faculty chosen, advanced level C.T.S. courses may be used for university entrance purposes. They may also be used for the Rutherford scholarship.

BUSINESS ADMINISTRATION, FINANCE AND INFORMATION TECHNOLOGY (BIT)

COMPUTER GRAPHICS/MULTIMEDIA

Computer Graphics 202 is the prerequisite to Computer Graphics 300



Computer Graphics 202 - 3 credits

Turn simple snapshots into unique photographs. Using Photoshop, learn to edit and enhance photos from the digital camera for printing, illustration and for the Web. Create effects that are seen in magazines, on TV, and on the Web. Retouch photos, colour, paint, mask, use adjustment layers and blend modes as well as filters and smart objects to make alterations to the photos. Students will be introduced to the fundamentals of animation, photo editing and graphic manipulation using Adobe software and photo capturing devices. The elements and principles of design for various media will be introduced. Students will use a variety of animation techniques to produce a simple animation; the focus is on basic skills, including planning, keyframing, stage set-up and production, used to create a moving picture. Storyboarding will be used to plan out a final animation project that tells a story.

Students learn the fundamentals of consumer-based digital image acquisition, management, composition, manipulation and editing software to improve image composition using Adobe Photoshop, Adobe Illustrator, Adobe Bridge, Adobe Lightroom and other titles in the Adobe software collection.

Computer Graphics 300 - 3 credits

Prerequisite: Computer Graphics 202

In the first module students will further their animation skills by learning how to design their own animations using 2d and 3d animation software for projects such as company and logo advertisements.

Students explore the evolution of various animation styles and techniques (traditional and digital). Students apply planning, idea development and storytelling techniques to create an effective animation. Students will also be introduced to character modeling using Autodesk Mudbox software.

They will have a thorough understanding of animation basics and know how to incorporate sound and interactivity to create engaging animations. In the second module students will work with their teacher to create a multimedia project of their choice.

Students will submit a project proposal and use the tools at their disposal to meet their outcomes. Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

In the final module students will work on various photography and graphic editing projects including movie posters, advertisements and relevant graphic projects in the world today. Students acquire original digital images from a digital camera and extend and refine their knowledge of image-editing software. Students focus on composition principles and more advanced editing techniques to enhance images as well as ways to maintain and organize personal libraries.

Computer Graphics 310 - 3 credits

Prerequisite: Computer Graphics 300

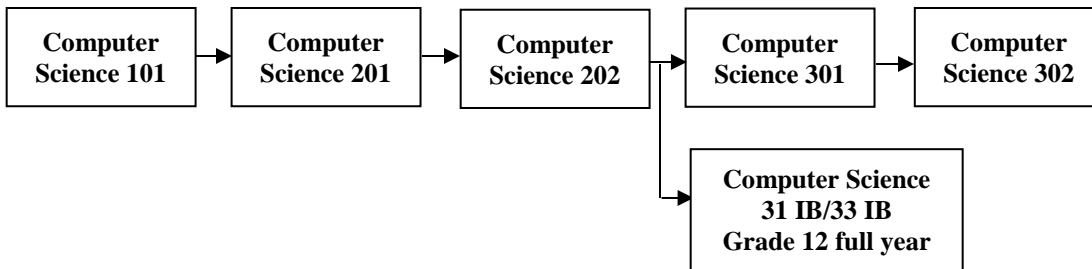
This course is a continuation of Computer Graphics 300

Photography and graphic editing focus

Students will learn to use the advanced features of animation and image editing software as well as video editing techniques such using Adobe software tools. Students will create interactive presentations using multiple software titles and tools at their disposal.

This course includes a project module where students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

COMPUTER SCIENCE



Computer Science 101 - 3 credits

Introduction to Computer Programming: This is an introductory Computer Science course that uses *Alice*, a Java based programming system. Students rapidly learn about object oriented programming. Students create movies and interactive games with characters from Alice in Wonderland, ballerinas, wizards, samurai, space aliens, robots, and lost worlds of ancient Greece and Egypt. Students are also introduced to other areas of computing such as robotics.

Computer Science 201 - 3 credits

Prerequisite: Computer Science 101

Object-Based Programming: Using the Java computer programming language, students will solve problems by organizing information in a way that reflects the real world rather than the way computers are designed. Students will develop their understanding of decisions and repetitive instructions. They will also be introduced to Java graphics libraries and use lists of information called arrays in their programs.

Computer Science 202 - 3 credits

Prerequisite: Computer Science 201

Object-Oriented Designs and Data Structures: This is a more advanced class that places an emphasis on systematic class design using a subset of UML (Unified Modeling Language), test driven development, debugging and error handling. Recursion, inheritance and polymorphism get demystified.

Computer Science 301 - 3 credits

Prerequisite: Computer Science 202

Project Driven Application of Computer Science Skills: Students develop their understanding of hardware and software as well as apply their computer programming skills. The ability to store data to files and implementing graphical user interfaces will be developed. Students will prepare a major project that develops their project management skills and integrate their skills acquired in other CTS areas.

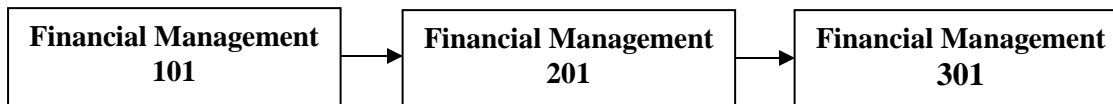
Computer Science 302 – 3 credits

Prerequisite: Computer Science 202

Dynamic Data Structures, Recursion and Project Problem Solving:

Data structures are explored with each structure being presented in the context of the standard Java collections library using iterators, sets and maps. Students also learn to implement their own structure classes. A major project is undertaken to synthesize concepts covered, the programs students develop are now more sophisticated, and an emphasis is placed on efficiency and speed of accessing data.

FINANCIAL MANAGEMENT



Financial Management 101 - 3 credits

The introductory level course will give students some experience in the mechanics of the accounting cycle. They will be introduced to the step-by-step preparation of simple sets of accounting records in a service business. This includes the preparation of journals, ledgers, and simple financial statements. This course will assist students if they take accounting in post-secondary institutions.

Financial Management 201 - 3 credits

Prerequisite: Financial Management 101

Students will be introduced to a step-by-step preparation of accounting records for a merchandising business. This includes the preparation of journals, ledgers, and simple financial statements. Incorporated through the course will be the opportunity to learn and use computer software to discover how this software may be used effectively to assist in the creation of accounting records.

Financial Management 301 - 5 credits

Prerequisite: Financial Management 201

Financial Management 30 allows students to take prior accounting knowledge and apply those skills in real world situations. Through the use of case studies, an investing competition while and numerous real world examples we will learn how to read and analyze the financial health of a business and prescribe ways in which to improve that health. We will also learn how determine which businesses are good investments and which are not. Come and make millions in Financial Management 301!

MANAGEMENT AND MARKETING

**Management and
Marketing
101**

**Management and
Marketing
201**

**Management and
Marketing
301**

Management and Marketing 101 - 5 credits

Students will learn how to be an entrepreneur. In the classroom, they will develop and operate their own businesses. By learning how to formulate a business plan, they will create and sell a product their company has designed.

Management and Marketing 201 - 3 credits

Learn basic management and marketing concepts, as well as retail merchandising strategies. Study the basics for setting up and successfully running a retail business.

Management and Marketing 301 - 3 credits

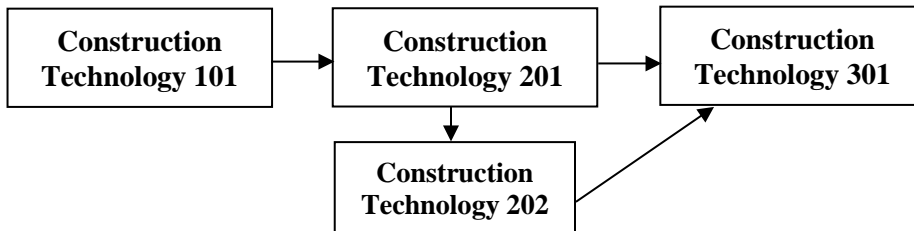
This is the class to learn about what it takes to be a business person. A great introduction if you have an interest in joining the business world right away and very valuable if you intend to take business at the post-secondary level.

Create your very own advertising campaign for television, radio and magazines! In this exciting and dynamic class, you are the creator, producer and director of an exciting marketing campaign. You will learn about effective selling strategies, and have the opportunity to deliver a pitch! Learn about strategies that are used to inform potential customers about products and services available in the marketplace, as well as techniques for successful selling.

Students will also have the opportunity to look at organizational structures, management theories and organizations as working units. The manner in which business decisions are made within the community, provincially, nationally and globally will be examined.

TRADE, MANUFACTURING AND TRANSPORTATION (TMT)

CONSTRUCTION TECHNOLOGY



These courses will introduce students to the interesting world of woodworking. Learn about the many different types and uses of wood - from furniture and cabinet making, to home construction and renovation.

These courses will be of interest to all students whether their interests are career exploration, art and design, or general interest.

Construction Technology 101 – 3 credits

Prerequisite: None

In Construction Technology 101 students will be introduced to basic hand tools, simple wood joinery techniques, and safe usage of large power tools. Students will complete projects using various solid woods.

Construction Technology 201 – 3 credits

Prerequisite: Construction Technology 101

Construction Technology 201 will continue to build upon the basic skills learned in Construction Technology 101, with the student focusing more on furniture and cabinet making. Multiple materials will be used and students will learn how to combine composite materials.

Construction Technology 202

Prerequisite: Construction Technology 101

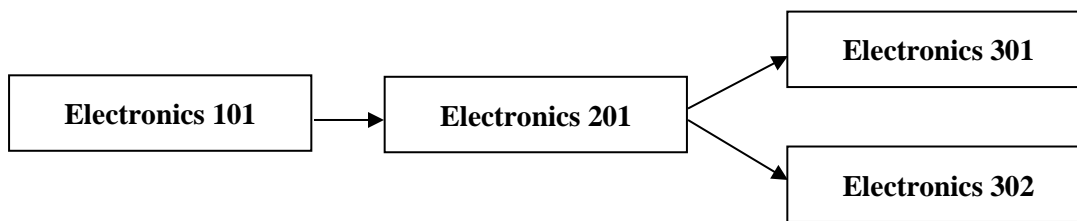
In Construction Technology 202 students will continue to build on the skills developed in Construction Technology 201. Students choosing both Construction Technology 201 and 202 will be able to build larger and/or more elaborate wood projects.

Construction Technology 301

Prerequisite: Construction Technology 201 or 202

Construction Technology 301 continues to develop skills in the fine art of furniture making and design. This course will provide the student an opportunity for complete design and creation of a free standing project of their choice.

ELECTRONICS



Approximately seventy percent of class time will be spent on practical lab work, exercises, and building projects. The remaining 30% will be spent on theory.

Electronics 101 - 3 credits

This is an introductory electronics course, where you will learn the main function of many electronic gadgets. Study DC power sources and learn how to read and measure resistances and voltages in DC circuits using a multimeter. You will learn bread boarding techniques and construct several circuits to practice your skills. Finally, you will assemble your own electronic project that you get to keep! – Strobe light

Electronics 201 - 3 credits

Prerequisite: Electronics 101

Digital electronics - Learn the building blocks to digital electronics. You will identify and explain logic systems, construct and experiment with basic gates, and simulate circuits using electronic workbench. You will completely disassemble a working computer system (easy part) and then reassemble the system to ensure it is still working properly (tricky part). You will be introduced to pneumatic circuits and have the opportunity to build 10 circuits using a variety of pneumatic components on the Festo learn line apparatus', and simulate circuits using FluidSim. Finally, using the photographic method you will assemble your own digital electronic project that you get to keep! – Siren.

Electronics 301 - 3 credits

Prerequisite: Electronics 201

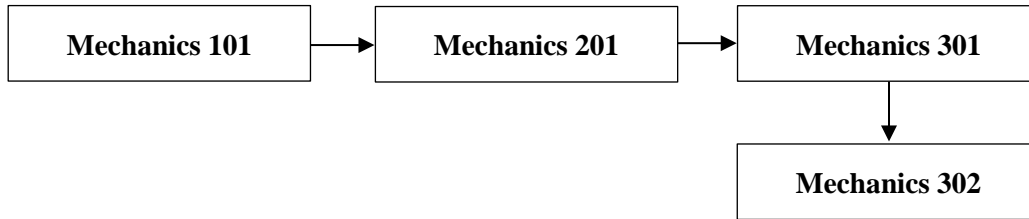
Power Supplies - This is an intermediate electronics course and will continue to build upon the basic skills learned in Electronics 101. You will explore, experiment, and manipulate various electrical components and equipment such as capacitors, transformers, oscilloscopes, and ohmeters. You will be introduced to electro-pneumatic circuits and have the opportunity to build 10 circuits using a variety of electro-pneumatic components on the Festo learn line apparatus', and simulate circuits using FluidSim. Finally, you will build and design your very own DC power supply that you get to keep!

Electronics 302 - 3 credits

Prerequisite: Electronics 201

Automation & Robotics - You will learn how to identify, interface, and experiment with small scale robots, such as Vex and Lego MindStorm. Construction techniques will be explored as you build and experiment with numerous variables to increase the efficiency and desired outcome of the task. You will also gain experience in controlling the robot through a variety of programming techniques. Using the Arduino-Uno platform, you will bread board several circuits and manipulate the outcomes with the programming language C. Finally, you will create a fully automated system using 4 MecLab's.

MECHANICS



The focus of the Mechanics courses is on skill development. The courses will be of benefit to all students, whether their interests are in vehicle ownership or career exploration.

Mechanics 101 - 3 credits

Mechanics 101 is an introductory level course. Students will study various vehicle systems and gain an understanding of how they operate together to make a functioning vehicle. Minor mechanical tasks will be performed in Mechanics 101 as well as disassembly and reassembly of a small gasoline engine. CTS modules in Mechanics 101 include:

- vehicle service and care
- engine fundamentals
- hydraulic and pneumatic systems.

Mechanics 201 - 3 credits

Prerequisite: Mechanics 101

Mechanics 201 is an intermediate level course that will focus on major mechanical repairs. CTS modules in Mechanics 201 include:

- braking systems
- ignition systems
- electric fundamentals.

Theory and practical tasks will cover all aspects of these vehicle systems.

Mechanics 300 (301 and /or 302) - 3 or 6 credits

Prerequisite: Mechanics 201

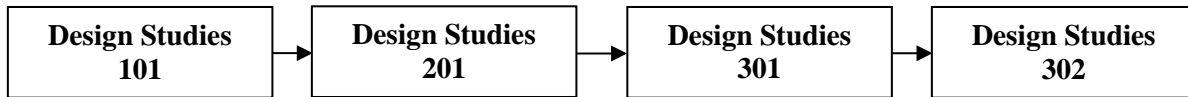
Mechanics 300 is an advanced level course. Students will be able to choose from a number of CTS modules. Modules in Mechanics 300 include:

- electrical components
- engine performance diagnosis
- engine tune-ups
- engine removal and installation
- engine reconditioning I (upper engine)
- engine reconditioning II (lower engine)
- computer management systems
- automatic transmissions

Prerequisites apply to some modules; therefore not all modules included in Mechanics 300 are available to all students. Students who have received full credits in Mechanics 101 and 201 will have the required prerequisites for all modules.

MEDIA, DESIGN & COMMUNICATION ARTS (MDC)

DESIGN STUDIES



Design Studies 101 - 3 credits

Students develop an understanding of design problems through research and select, generate and evaluate possible solutions. Students develop basic knowledge and skills in computer-aided design (CAD).

The course involves basic design sketching for architectural floor planning. Students create their own real world simulated products using solid part modeling software from Autodesk. In addition to Industrial product design students will spend time building houses in Revit Architecture by Autodesk.

3D printing is introduced with student designs printed in class using Autodesk Inventor software. Students also create a 3D model of a bungalow house from their earlier floor plan using Autodesk Revit architectural software.

Design Studies 201 - 3 credits

Prerequisite: Design Studies 101

Students are given a design brief and the opportunity to enter in the Calgary Home Builders design competition. Students plot their work on a large format printer and create posterboards from their architectural plans to enter in the city wide competition. Study architectural design dealing with residential construction techniques and their representation on drawings using Autodesk Revit architectural software. Students have a choice to further explore industrial design concepts creating solid part models through the use of Autodesk Inventor software. Students create parts, assemblies and digital prototypes simulating real world products. OR take a module introducing 3d Animation concepts using 3ds Max software by Autodesk.

Design Studies 301 - 3 credits

Prerequisite: Design Studies 201

Students create their own design brief for an architecture project of their choice, producing a set of working drawings for an architectural structure using Autodesk Revit Software. Students will be given the opportunity to produce working drawings and media to add to their design portfolio. Students may continue working with solid part assemblies in Autodesk Inventor and animation using Autodesk 3ds Max. Students concentrate on various drawing and computer drawing types to illustrate design concepts and solutions. From a design brief students will deal with such aspects as shaping, massing, proportion, scale, contrast, colour, texture and finish within the context of complex three-dimensional design projects. A variety of software programs from the Design Academy Suite will be used including 3ds Max for animation and architecture visualization projects, Inventor for solid part assembly modeling and Revit for architecture design problems.

Design Studies 302 - 3 credits

Prerequisite: Design Studies 202

Students are given a choice of potential design projects and software to accomplish module objectives to create a portfolio based presentation of work created in their previous courses. Project topics range from architecture to industrial design and design visualization using animation software such as 3ds max.

Course is largely project based.

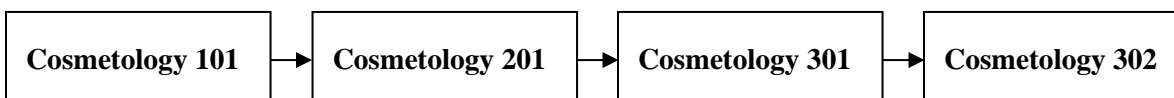
HEALTH, RECREATION, AND HUMAN SERVICES (HRH)

COSMETOLOGY

The Cosmetology program offers three years of study for students who are interested in learning all the secrets used to create artistic hair styles, haircuts, colors, and perming techniques. Students will also learn how to care for their nails, skin and to apply make-up products, by learning how to give esthetic treatments, and by choosing the best professional beauty products to use for themselves and others.

In grade 10, students can choose from four 3 credits courses. Students need a minimum of 3 credits from grade 10 in either the Cosmetology 101 or Cosmetology 102 courses to advance to the Cosmetology 200 level and then the Cosmetology 300 level.

HAIRSYLING



Cosmetology 101 – 3 credits

No prerequisite

This course will introduce the students to basic hair styling tools and techniques used to create a variety of hair styles with thermal styling, braiding designs, shampoos, roller sets and comb outs. These are just some of the techniques taught in this course. Students will also learn about professional hair care products that they can use for their own hair and scalp care needs.

Cosmetology 201 – 5 credits

Prerequisite: Cosmetology 101

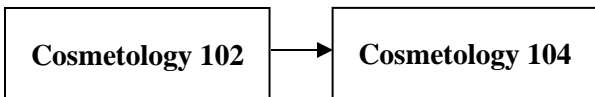
This course will provide students with an opportunity to develop skills and knowledge in hair cutting, hair coloring, and permanent waving. Students will continue to develop skills in shampooing, thermal styling, roller sets and comb outs on short and long hair. Students will receive not only their own manikin for hair cutting, and a cutting comb.

Cosmetology 301, 302 – 5 credits each course

Prerequisite: Cosmetology 201

Students at the 300 level of Cosmetology will be prepared to provide clients with basic salon services, such as: shampoos and sets, haircuts, colors, highlights, and perms. Students will also learn how to give pedicures and hair removal services. Reception duties, product sales, and salon management are also included at the 300 level to prepare them for further training in an apprenticeship and salon employment.

ESTHETICS



Cosmetology 102 – 3 credits

No prerequisite

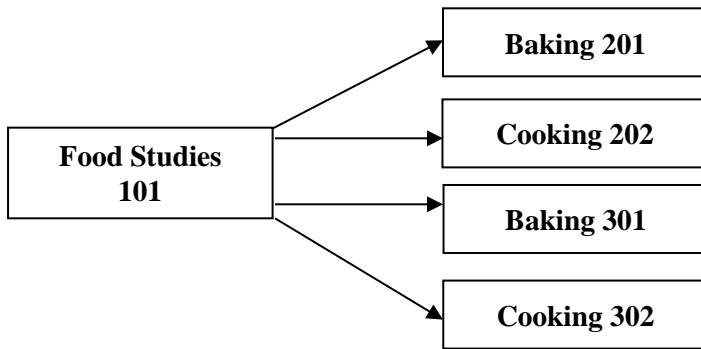
This course will teach the student how to care for their hands and nails. Students will be taught how to give a basic manicure with massage manipulations, and learn how to create nail art designs. They will also learn to give a facial treatment and do a make-up application while gaining a better understanding of professional skin care and make-up products.

Cosmetology 104 – 3 credits

Prerequisite: Cosmetology 102

This course is for students who want to learn more about creating nail art designs, French manicuring, skin care and facials services. Included will be spa inspired treatments such as aroma therapy, reflexology, and air brush make-up applications.

FOOD STUDIES



Food Studies 101 - 3 credits

Students will learn the basics of cooking and baking by developing skills in the preparation of a variety of foods.

Each module in the Foods 10 course consists of a combination of food preparation labs and written activities. Learning how to plan, prepare and serve family size portions. Each module will include food sanitation, kitchen safety, and nutritional wellbeing.

You must successfully complete the Food Basics 1010 module in order to take sequential courses in Grades 11 or 12.

Baking 201 - 3 credits

Prerequisite: Food Studies 101

This course is in greater depth than Foods 101 with a focus on Baking. Students will develop their skills and learn to prepare a variety of baked goods from Yeast Breads, Cakes and Pastry and piping and icing techniques.

Baking 301 - 3 credits

Prerequisite: Food Studies 101

Baking 301 is in further depth into baking techniques and various types of icing. Written projects and baking projects are an expectation.

Cooking 202 – 3 credits

Prerequisite: Food Studies 101

More advanced cooking techniques and styles are practiced. Nutrition and healthy food choices and styles are explored. Modules include; Safety and Sanitation, International and Vegetarian Cuisine.

Cooking 302 - 3 credits

Prerequisite: Food Studies 101

Cooking at the 302 level is advanced and continuing on from Cooking 202. In this course, more advanced cooking styles are explored. Theory and written work as well as selecting recipes are an integral part of this course.

LEGAL STUDIES

Legal Studies 101

Legal Studies 201

Legal Studies 301

Legal Studies 101 - 3 credits

What are an individual's rights? Through the use of realistic scenarios and case studies, students will gain a better understanding of our legal system. This exciting look at the Canadian justice system will include examining how laws directly affect students. This course will also look at various elements of criminal and civil law, and specifically at the Youth Criminal Justice Act.

Legal Studies 201 - 3 credits (No prerequisite)

Legal Studies 201 is an exciting class which allows students to examine in detail areas of law such as; **Family Law**, **Employment Law**, and **Travel Law**. Through the use of case studies and mock trials students will have the opportunity to examine a broad range of legal issues relating to personal relationships, contracts of employment, unions and collective bargaining, employment insurance, and workers' compensation in the workplace. Students will also have the opportunity to learn about legal issues that may arise when individuals travel domestically and internationally.

Legal Studies 301 - 5 credits (No prerequisite)

Legal Studies 301 is a dynamic class that investigates topics in areas of law such as; **Criminal Law**, **Negligence**, and **Property Law**. We will examine the criminal justice system, including the criminal process and the roles and responsibilities of the participants. We also explore challenging and controversial issues that have impacted and formed our Canadian justice system. You will have the opportunity to go see a real court room and participate in your very own mock trial. If you have any interest in law or the criminal justice system, this is the course for you, *no previous experience in Legal Studies is necessary*.

SPORT MEDICINE



Sports Medicine 15 - 5 credits

This is a course for students who are interested in working as trainers with one of the school's athletic teams. The curriculum offers a logical beginning for students who are interested in such fields as: sports medicine, physiotherapy, nursing, medicine, anatomy, kinesiology, physiology, physical education or basic first aid. In addition to class time, students are also required to work as trainers for a minimum of 20 hours with school teams.

Sports Medicine 25 - 5 credits

Prerequisite: Sports Medicine 15

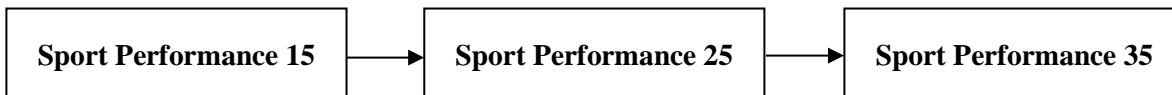
This is a continuation of the Sports Medicine 15 course, concentrating on injuries of the upper body. Students will have to perfect a wide variety of taping skills, train in first aid and CPR, and increase their knowledge of stress tests and assessment of athletic injuries. For the practicum, students will work as a trainer for a school team for a minimum of 60 hours throughout the school year. Some of the curriculum content will be available on-line in order that students may work more independently. Enrollment in class will be based upon teacher recommendations from Sports Medicine 15.

Sports Medicine 35 - 5 credits

Prerequisite: Sports Medicine 25

This course includes a concentrated study in the areas of rehabilitation of athletic injuries and an understanding of a variety of treatment modalities. Students will use the computer to work on scenarios focusing on detailed assessment and immediate care. Advanced CPR, taping skills, massage, and a study of career options through guest speakers and tours are also studied. As a trainer of a team, students will also work with mentoring Sports Medicine 15 and 25 trainers. For the practicum, students will work as a trainer for a school team for a minimum of 60 hours throughout the school year. Some of the curriculum content will be available on-line in order that students may work more independently. Enrollment in class will be based upon teacher recommendations from Sports Medicine 25.

SPORT PERFORMANCE



Sports Performance 15 - 5 credits

The purpose of this course is to provide students involved in sports with the knowledge, skills and attitudes necessary to understand the factors related to sports performance. By exposing students to both the theoretical and practical nature of sports, students will be expected to demonstrate outcomes in a variety of areas. These include: current training principles, basic sport nutrition and hydration, performance evaluation, goal setting, leadership fundamentals, and sport psychology.

Sports Performance 25 - 5 credits

Prerequisite: Sports Performance 15

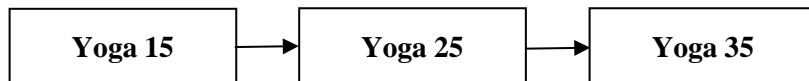
The purpose of this course is to build on the knowledge acquired in the Sports Performance 15 class. Students will be expected to demonstrate knowledge in high level athletic training. Students will study and use in a practical context: Developing and following a short term personal fitness plan, developing a nutrition and hydration plan, Olympic lifting, advanced concepts of speed, agility and aerobic training. Enrollment in class will be based upon teacher recommendations from Sports Performance 15.

Sports Performance 35 - 5 credits

Prerequisite: Sports Performance 25

This course is a continuation of Sports Performance 25. This course focuses on year round high level athletic training. Sports Performance 35 concentrates on individual performance in an athletic setting. Students learn to design and implement a year-round program specific to an activity. Students will also learn to track and analyze their nutritional habits as they pertain to physical & mental performance. Enrollment in class will be based upon teacher recommendations from Sports Performance 25.

YOGA



Yoga 15 – (3 or 5 credits)

This course will safely introduce students to the basic postures (asanas), breathing techniques and relaxation methods of yoga. It will also introduce students to the historical roots of yoga and give them an understanding of basic anatomy and physiology as it applies to this discipline. Students will develop an enhanced appreciation for, and acceptance of, their own body and its limitations. Students will learn to be non-judgmental about their own, and others', yoga practices. The program is designed to allow students to experience the benefits of increased flexibility, strength, focus and concentration. They will relieve stress, learn to relax at will, and experience the health benefits of yoga. Students must provide their own yoga mat.

Yoga 25 – (3 or 5 credits)

Prerequisite: Yoga 15

This course is a continuation of developing the basic postures (asanas), breathing techniques and relaxation methods of yoga. Students will investigate the origins of yoga, styles of yoga, philosophy of yoga, and continue to understand the anatomy and physiology as it applies to this discipline. Students will develop an enhanced appreciation for, and acceptance of, their own body and its limitations. Students will learn to be non-judgmental about their own, and others', yoga practices. The program is designed to allow students to experience the benefits of increased flexibility, strength, focus and concentration. They will relieve stress, learn to relax at will, and experience the health benefits of yoga. Students must provide their own yoga mat.

Yoga 35 – (3 or 5 credits)

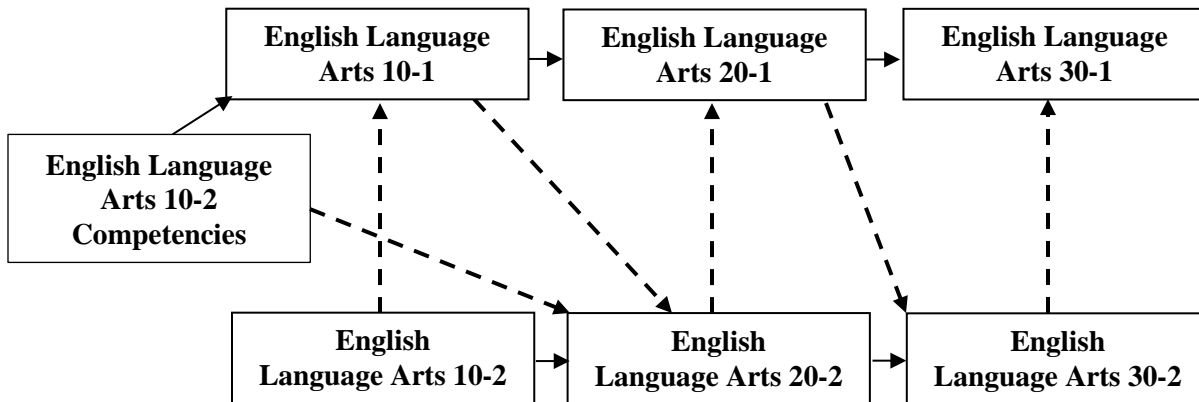
Prerequisite: Yoga 25

This course is to further develop the understanding of all aspects of yoga, including the anatomy, physiology, philosophy, historical origins and styles of yoga as they are practiced around the world today. Students will develop an enhanced appreciation for, and acceptance of, their own body and its limitations. Students will learn to be non-judgmental about their own, and others', yoga practices. The program is designed to allow students to experience the benefits of increased flexibility, strength, focus and concentration. They will relieve stress, learn to relax at will, and experience the health benefits of yoga. Students must provide their own yoga mat.

ENGLISH LANGUAGE ARTS

ELA 10-1, 20-1 and 30-1 are academically rigorous courses designed for students who are interested in the study, creation, and analysis of literary texts. Students registering in these courses should have demonstrated strengths in both their reading comprehension and writing skills.

ELA 10-2, 20-2 and 30-2 are courses for students who are interested in popular culture and real world contexts or students who have encountered difficulty with English and who could benefit from continuing support. This program can lead to the -1 program. Students should check with a guidance counsellor for more specific information regarding post-secondary entrance requirements.



English Language Arts 10-1 - 5 credits

This is an academically demanding course designed to help students develop skills in reading, writing, listening, and oral communication. Assignments will encompass formal essays, critical analysis, personal responses, and creative writing for a variety of audiences and purposes. This course serves as a preparation for ELA 20-1 and ELA 20-1 IB. Course requirements include the study of short stories, novels, poetry, Shakespearean or modern drama, film, and non-fiction. Students who are best suited for this course are those who enjoy reading literature, writing critically about what they read.

English Language Arts 10-2 - 5 credits

This course is designed to help students develop fundamental skills in reading, writing, listening, viewing, and oral communication. Teachers will offer an integrated approach in the development of language arts skills by using short stories, novels, poetry, Shakespearean or modern drama, film, and non-fiction for discussion and writing. Assignments and activities stress personal, analytical and functional writing for a variety of audiences, contexts, and purposes.

English Language Arts 10-2 Competencies – 5 credits

Serving as a bridge to English Language Arts 10-1

This is a new course designed for students who are interested in the 10-1 course, but who are currently lacking the demonstrated strengths (particularly with regards to reading and writing) needed to be successful in the -1 stream. Students registering in this course should have a sincere desire to improve their skills. Assignments and readings will lean towards providing the necessary skills for success at the English Language Arts 10-1 level.

English Language Arts 20-1 - 5 credits

Prerequisite: English Language Arts 10-1

Recommendation for Success – at least 65% in ELA 10-1

This is an academically demanding course designed to help students continue to develop more effective skills in reading, writing, listening and oral communication. Assignments encompass formal essays, both critical and analytical, personal responses, and creative writing for a variety of audiences and purposes. Course requirements include the study of short stories, novels, poetry, Shakespearean drama, film and non-fiction. Students who are best suited for this course are those who enjoy reading literature, writing critically about what they read.

English Language Arts 20-2 - 5 credits

Prerequisite: English Language Arts 10-2 OR 45% in ELA 10-1

This is a general course designed to help develop fundamental skills in reading, writing, listening, viewing and oral communication. Teachers will offer an integrated approach in the development of language arts skills by using short stories, novels, poetry, Shakespearean or modern drama, film and non-fiction for discussion and writing. Assignments and activities stress personal, analytical, and functional writing for a variety of audiences, contexts and purposes.

English Language Arts 30-1 - 5 credits

Prerequisite: English Language Arts 20-1 OR a Teacher Mark of 65% in ELA 30-2 and teacher recommendation

Recommendation for Success: 65% in English Language Arts 20-1

This is an academically demanding course that surveys a variety of literature and other texts, with emphasis on understanding themes and literary techniques. It is also designed to help students continue to develop more effective skills in reading, writing, representing, viewing, listening and speaking. Writing assignments encompass formal essays, both critical and personal, and creative writing for a variety of audiences and purposes. Course content includes the study of short stories, novels, poetry, Shakespeare play, modern drama or feature film, and non-fiction. Students who are best suited for this course are those who enjoy reading literature, writing critically about what they read.

Students will be required to write the Alberta Diploma Exam which will count for 30% of their overall grade.

English Language Arts 30-2 - 5 credits

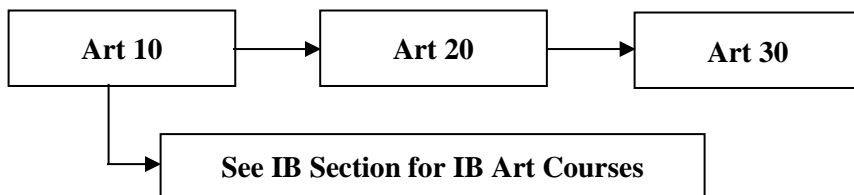
Prerequisite: English Language Arts 20-2 OR 45% in English Language Arts 20-1

This is a general course that emphasizes the integration of life skills with a study of language, media, and literature. It is designed to help students develop fundamental skills in reading, writing, representing, listening, viewing and speaking. Teachers will offer an integrated approach in the development of language arts skills by using short stories, novels, poetry, Shakespearean or modern drama, film and non-fiction for discussion and writing. Assignments and activities stress personal, analytical, and functional writing for a variety of audiences, contexts and purposes.

Students will be required to write the Alberta Diploma Exam which will count for 30% of their overall grade. Students wishing to graduate with ELA 30-1 credits need to register in 30-1 after successfully completing ELA 30-2. A minimum grade of 65% is recommended to do this.

FINE ARTS

ART



Art 10 - 5 credits

This is a fun and challenging introductory course which gives students the opportunity to explore and develop skills in drawing, colour and design, painting, ceramics and sculpture. The program also introduces students to the cultural importance of art through the study of significant artists. Junior high art is not a prerequisite; however students must have an interest in art and a good work ethic.

Art 20 - 5 credits

Prerequisite: Art 10

This is an intermediate course where students will continue to build their skills and confidence. Students will be challenged to explore a wider range of media in drawing, painting and sculpture.

Art 30 - 5 credits

Prerequisite: Art 20

This is the final course in studio art. Students will now have the skills and confidence to explore a number of individually developed projects. Students will further develop their skills and apply them towards the creation of original, personal statements in drawing, painting, photography, sculpture, printmaking and mixed media. All students in this course will exhibit their work in our Grad Art Show at the end of each semester.

The completion of this challenging program empowers students to visually express themselves with confidence. This program also enables serious art students to create competitive portfolios for application programs in art, graphic design, interior design and architecture to post-secondary.

CHORAL MUSIC



Choral Music 10 - 5 credits

This is a course that will allow the choral student to participate in a performing concert choir singing in a variety of musical styles and genres. It will be offered twice a week during after-school rehearsals *outside the regular timetable* for the entire school year. Concert Choir is scheduled this way to allow the ensemble to perform through the entire school year while receiving five credits. This course requires a commitment to a variety of performing experiences including concerts, workshops, and festivals.

Choral Music 20 - 5 credits

Prerequisite: Choral Music 10

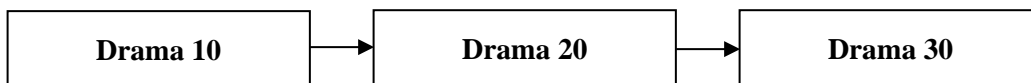
This course builds upon the fundamentals of large ensemble singing as introduced in Choral Music 10. Student musicians are challenged to develop sight-reading skills, interpretive skills and independent rehearsal skills via section practices. In this course students will perform at school assemblies, the winter and spring concerts at the university, local music festivals, and a variety of Calgary venues.

Choral Music 30 - 5 credits

Prerequisite: Choral Music 20

In their third year of choir students will be expected to fulfill team leadership roles such as section leaders. They will serve as musical role models for younger musicians. This type of cross-grade course involvement allows students to work as musical mentors. This course requires a commitment to a variety of performing experiences. Students will perform at school assemblies, the winter and spring concerts at the university, local music festivals, and a variety of Calgary venues.

DRAMA



Drama 10 - 5 credits

This is an entry level program. It is not necessary to have junior high drama, however, a sincere interest in theatre is important.

Areas of study are: movement, voice and speech, improvisation and character work.

Drama 20 - 5 credits

Prerequisite: Drama 10

Students will use the skills developed in Drama 10 to interpret and bring to life someone else's words - in other words, to focus on acting and script work. Acting, playwriting, scene study, and monologues are all part of the curriculum.

Drama 30 - 5 credits

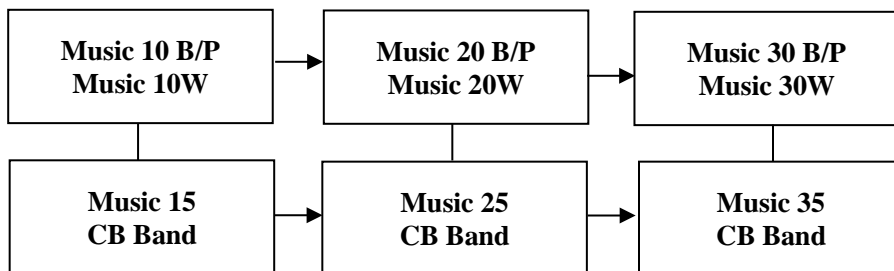
Prerequisite: Drama 20

This course pulls everything together. Topics include: acting, directing, auditioning, and technical theatre. When students have completed this program, they will:

- be comfortable in any secondary theatre setting
- be comfortable auditioning for any program
- enjoy giving reports and other public speaking situations
- find the analysis of literature easier.

Most importantly, students will find they have the tools to control and focus their creativity in theatre. Excellence is the result.

MUSIC (Instrumental)



If students do not own their own instruments, rentals are available.

Music 10W (Woodwind Section) - 5 credits

Prerequisite: ^{*1} Junior high band participation **OR** a minimum of one full year of regular private lessons on a band instrument and an ability to read music.

This is a course designed to build fundamental musical skills on instruments. It emphasizes performance and covers all facets of music study including performance, theory, applied history, and chamber music. A midi-lab is used to augment the studies. **This course is a co-requisite needed to enroll in Music 15CB (Concert/Symphonic Band, which is another 5 credit course occurring outside the regular timetable).** All Band and Instrumental music students must have basic skills in reading music notation.

^{*1} 3 years of Junior High band participation

Music 10BP (Brass/Percussion Section) - 5 credits

Prerequisite: See Music 10W above

Music 15 CB (Concert/Symphonic Band) - 5 credits

Prerequisite: Junior high music or equivalent private study

Co-requisite: Music 10BP, 10W

This course allows the band student to participate in a performing concert band. It will be offered two times per week during early morning rehearsals **outside of the regular timetable** for the entire school year. Concert band and Symphonic band are scheduled in this way to allow the group to perform for the entire school year while receiving five credits. This course requires a commitment to a variety of performing experiences including: concerts, workshops, festivals, and band trips, which occur on evenings and weekends. Parents of students in Music 15CB (and 25CB and 35CB) are members of the Sir Winston Churchill Band Parents' Association and volunteer to support the program.

Parents are responsible to pay the extra costs associated with Band Trips and Band Festivals. These costs will be outlined at the Annual General Meeting of the SWC Band Parents' Association held every September.

Music 20W (Woodwind Section) - 5 credits

Prerequisite: Music 10BP OR Music 10W

Co-requisite: Music 25CB

This course continues to develop the techniques of the apprentice student musician. Music theory, applied history, and chamber music continue at a higher level. Twelve mini-computer work stations are used for theory, ear training, and composition. This course is performance focused, and continues to develop musicality and music concepts for the instrumentalist. Independent study projects allow students to design and focus a portion of this course.

Music 20BP (Brass/Percussion Section) - 5 credits

Prerequisite: See Music 20W above

Music 30W (Woodwind Section) - 5 credits

Prerequisite: Music 20BP OR Music 20W

This is a sequential program for the advanced apprentice musician. Independent study projects will allow students to design and focus a portion of the course. This course, along with some private music lessons on instruments, fulfills the requirements for university entrance.

Music 30BP (Brass/Percussion Section) - 5 credits

Prerequisite: See Music 30W above

Music 25 CB (Concert/Symphonic Band) - 5 credits

Prerequisite: Music 15 CB

Co-requisite: Music 20B OR 20W

This course builds upon the fundamentals of large ensemble playing as introduced in Music 15 CB. Student musicians explore a wider array of repertoire and are challenged to develop sight-reading skills, interpretive skills, and independent rehearsal skills via section practices. This course requires a commitment to a variety of performing experiences including: concerts, workshops, festivals, and band trips, which occur on evenings and weekends. Parents of students in this course are members of the Sir Winston Churchill Band Parents' Association and volunteer to support the program. There are extra costs for Band 25.

Parents are responsible to pay the extra costs associated with Band Trips and Band Festivals. These costs will be outlined at the Annual General Meeting of the SWC Band Parents' Association held every September.

Music 35 CB (Concert Band) - 5 credits

Prerequisite: Music 25 CB.

Co-requisite: Music 30B OR 30W

In their third year of band, students will be expected to fulfill team leadership roles such as section leader, principal player, or soloist. They will be a musical role model for younger musicians. This type of cross-grade course involvement allows students to work as musical mentors. This course requires a commitment to a variety of performing experiences including: concerts, workshops, festivals, and band trips, which occur on evenings and weekends. Parents of students in this course are members of the Sir Winston Churchill Band Parents' Association and volunteer to support the program. There are extra costs for Band 35.

Parents are responsible to pay the extra costs associated with Band Trips and Band Festivals. These costs will be outlined at the Annual General Meeting of the SWC Band Parents' Association held every September.

Music 15, 25, 35 (Blue Jazz Band – Advanced Jazz Study) - 5 credits

Co-requisite: Music 10 or 20 or 30 AND Music 15 or 25 or 35

Concert/Symphonic Band

This group of musicians is selected by audition in mid-September. All members must be involved in the regular Concert/Symphonic Band program. This is a five credit course that meets twice per week outside of the regular timetable on Monday and Wednesday after school from 3:30 to 5:00pm. This course focuses on advanced performance of jazz music and jazz improvisation in all styles, and will be limited to twenty musicians.

MUSICAL THEATRE



Musical Theatre 15 - 5 credits

Musical Theatre is designed for students who wish to explore their talents in the disciplines of acting, dancing and singing with a strong emphasis on rehearsal techniques and theatre etiquette. Students will be introduced to a variety of musical styles from the 1920's to current Broadway hits.

Musical Theatre 25 - 5 credits

Prerequisite: Musical Theatre 15

In the second year of musical theatre, students will continue developing and refining their acting, dancing and singing skills. They will continue working with professionals, and will also begin to develop their own style. Directing skills are started, and students will be expected to perform small projects that are self-initiated.

Musical Theatre 35 - 5 credits

Prerequisite: Musical Theatre 25

In the final year of musical theatre students will develop and direct their own projects that will be presented to the school. In addition, resume and audition workshops will be explored. Students will be expected to perform in school productions as well as to continue to develop their singing, dancing, and acting skills.

TECHNICAL THEATRE

Technical Theatre 101

Technical Theatre 201

Technical Theatre 301

Technical Theatre 101 - 3 credits

In this course students will work with set design, set construction, lighting, costume, stage management, etc. When possible, they will work with the current school production.

Technical Theatre 201 - 3 credits

Technical students at this level will be expected to work on two more areas in technical theatre, and to control a real project for the school play or some other production.

Technical Theatre 301 - 3 credits

Students at this level are expected to take a leadership role in a production.

This course runs outside the timetable in conjunction with the Mainstage Production. Enrolment is at the discretion of the department.

INTERNATIONAL LANGUAGES

WHY LEARN ANOTHER LANGUAGE?

- The ability to communicate in many languages is valuable.
- Knowing other languages will help you in fields such as literature, art, business, technology, math and sciences.
- Studying languages develops well-rounded individuals who are able to think critically and relate to the world around them.
- Studying languages to the 30-level, may allow a student to replace a Math 30 or Social Studies 30 mark with the language 30 mark. (check the requirements with each post-secondary institution directly)
- To be awarded opportunities to travel, work, study in a variety of countries and cultures during the summer.

SIR WINSTON CHURCHILL HIGH SCHOOL OFFERS THE FOLLOWING LANGUAGES:

- Chinese
- French
- German
- Latin
- Spanish

NOTE: These languages are considered to be **academic subjects** and are used in calculating the academic average for scholarships and for entrance to many programs at the post-secondary level. Students are reminded that they are able to **enroll in more than one international language** during their high school career.

OTHER LANGUAGE OPPORTUNITIES SIR WINSTON CHURCHIL OFFERS:

- Exchange trips offered to:
 - Spain / Mexico
 - Germany
 - Macau (receiving Alberta Education credits and taught in English)
 - Quebec
- Bi-annual trip opportunity to China
- Summer job immersion programs in Quebec
- Speech competitions throughout the academic year
- Awarded opportunities to German students for summer travel to Germany

SIR WINSTON CHURCHILL IB LANGUAGE PROGRAMS:

- Chinese (off campus)
- French
- German
- Latin
- Spanish

NOTE: See the IB section of this course guide.

CHALLENGE EXAMS

Students wishing to challenge language courses in Chinese, French, German, Latin or Spanish should contact the Learning Leader of International Languages for information on the procedures to follow. The challenge exam covers all four aspects of language: speaking, listening, reading and writing.

CHINESE

Background	Grade 10	Grade 11	Grade 12
No Chinese or very little	Chinese 10	Chinese 20	Chinese 30
3 years of Junior High Chinese (Chinese 6Y) or family background in Chinese	Chinese 20	Chinese 30	
9 years of Chinese (Chinese 9Y)	Chinese 30		

NOTE: If students have previous experience with Chinese, please make an appointment with the Chinese teacher at the beginning of the school year **before** classes commence to determine which class is most appropriate.

Chinese 10 Language and Culture – 5 Credits

This beginner level course is for students who have no background in Mandarin Chinese (or a very limited background). All four areas of language learning (listening, speaking, reading and writing) will be covered to provide students with basic communication skills. They will learn to read and write Mandarin Chinese using simplified or traditional characters. They will also learn many aspects of Chinese culture.

Chinese 20 Language and Culture – 5 Credits

Prerequisite: Chinese 10 or students who have had Chinese as a second language instruction at the junior high level for grade 7, 8, and 9 or those who have a family connection to the culture and minimal knowledge of Chinese language.

This course is for students who want to continue developing their language fluency and global understanding of Chinese culture.

Chinese 30 Language and Culture – 5 Credits

Prerequisite: Chinese 20 or students who have had Chinese as a second language instruction at the elementary and junior high level for grades 1 to 9.

In this course students will continue developing their language competence so that they will be able to use Mandarin to communicate outside the classroom.

Chinese IB

NOTE: Cantonese IB and Mandarin IB are offered at The Chinese Academy, a Friday/Saturday Chinese school in partnership with the Calgary Board of Education.

FRENCH

Background	Grade 10	Grade 11	Grade 12
No French or very little	French 10	French 20	French 30
		French 20 IB ab initio	French 30 IB ab initio
<ul style="list-style-type: none"> • 3 years Jr. High 70% average *please verify component list provided • French 10-9Y 	French 20	French 30	French 31 IB
		French 30 IB	
Immersion program*		French 30	French 31 IB
		French 30 IB	

*Immersion program students may opt to take French 20 in their grade 10 year.

French 10 – 5 Credits

This is a beginner level course for students with no, or very limited, background in French. Students will be exposed to listening, speaking, reading and writing through a variety of topics and themes.

French 20 – 5 Credits

Prerequisite: French 10 or Grades 7, 8 and 9 French with a 70% average.

This course continues to develop language skills in the four language areas. The final grade at the end of French 20 will determine whether credits are granted in French 10 and/or 20. Successful completion of this course will make students eligible to participate in a three month **exchange trip** to Quebec during the Grade 11 year.

A student is ready for French 20 if the following **vocabulary and grammatical** concepts can be used independently in speaking, listening, reading, and writing:

- verb conjugations:
 - avoir, être, faire
 - common -er, -ir, -re verbs (regarder, chercher, choisir, finir, vendre, attendre, etc.)
 - auxiliary verbs: vouloir, pouvoir, devoir, aller, aimer, préférer + infinitive
 - aller + infinitive
- adjective agreement (gender + number) and placement
- common adverbs
 - toujours
 - souvent
 - etc.
- coordinate conjunctions : et, mais, ou, parce que
- possessive adjectives (mon, ma, mes, ton, ta, tes, etc.)
- question formats
 - Est-ce que . . .
 - Question format with question words, such as: quand, comment, où, quel(s), quelle(s), (avec) qui, etc.
- prepositions
- articles, demonstrative adjectives, interrogative adjectives
 - un, une, des
 - le, la, les
 - du, de la, des
 - ce, cet, cette, ces
 - quel, quelle, quels, quelles
- negative and placement of negative with one and two verbs (ne . . . pas, ne . . . jamais)

French 30 – 5 Credits

Prerequisite: French 20 OR Grade 9 French Immersion

This intermediate level course is for students who have successfully completed French 20 or have graduated from the Grade 9 French Language Immersion Program. This course further develops their ability to speak, listen, read, and write in French.

French IB

NOTE: See IB section for French IB course information.

TAKE PART IN THE 3 MONTH QUEBEC EXCHANGE PROGRAM!

GERMAN

Background	Grade 10	Grade 11	Grade 12
No German or very little	German 10	German 20	German 30
		German 20 IB ab initio	German 30 IB ab initio

NOTE: If students have previous experience with German, please make an appointment with the German teacher at the beginning of the school year **before** classes commence to determine which class is most appropriate.

German 10 Language and Culture – 5 Credits

This beginner course introduces all four components of language learning: speaking, writing, listening and reading. Students will acquire an introductory knowledge of the culture and history of Germany and certain facets of everyday German life will be experienced to some degree.

German 20 Language and Culture – 5 Credits

Prerequisite: German 10

German 20 follows German 10 with a more in-depth study in oral German, grammar structures and reading. Students will gain a critical awareness of how the German speaking world has influenced the sciences, inventions, and history. More emphasis is placed on writing and the modern culture of German speaking countries with emphasis on practical, everyday vocabulary and structures.

Successful completion of this course will make students eligible to participate in a three month **exchange trip** to Germany during the Grade 11 year.

German 30 Language and Culture – 5 Credits

Prerequisite: German 20

German 30 further refines linguistic skills and adds to the cultural understanding and appreciation of the German way of life. Students will be able to express themselves more freely in a variety of settings.

German IB

NOTE: See IB section for German IB course information.

TAKE PART IN THE 3 MONTH GERMAN EXCHANGE PROGRAM!

LATIN

Background	Grade 10	Grade 11	Grade 12
No Latin or very little	Latin 10	Latin 20	Latin 30

NOTE: If students have previous experience with Latin, please make an appointment with the Latin teacher at the beginning of the school year **before** classes commence to determine which class is most appropriate.

Latin 10 Language and Culture – 5 Credits

This course introduces students to the Latin language and develops reading, understanding, listening and translating Latin literature. By examining the influence of Latin, students will also gain an appreciation of language structure, scientific and legal terminology and Roman history.

Latin 20 Language and Culture – 5 Credits

Prerequisite: Latin 10

Students enrolled in Latin 20 will continue their study of the Latin language. A more detailed emphasis will be placed upon Latin vocabulary, grammar, and syntax, with a greater range of linguistic, political, and historical understanding of Ancient Rome.

Latin 30 Language and Culture – 5 Credits

Prerequisite: Latin 20

Latin 30 is an intense course involving an enriched study and appreciation for the structure of the language and the translation of excerpts of classical texts into colloquial English. In addition, students will acquire an appreciation of life during the Roman Empire.

SPANISH

Background	Grade 10	Grade 11	Grade 12
No Spanish or very little	Spanish 10	Spanish 20	Spanish 30
		Spanish 20 IB ab initio	Spanish 30 IB ab initio

NOTE: If students have previous experience with Spanish, please make an appointment with the Spanish teacher at the beginning of the school year **before** classes commence to determine which class is most appropriate.

Spanish 10 Language and Culture – 5 Credits

This is a beginner level course with emphasis on reading, writing, speaking and listening through a variety of activities. Emphasis is placed on discovering the influence and impact of Spanish and its culture around the world.

Spanish 20 Language and Culture – 5 Credits

Prerequisite: Spanish 10

This intermediate course focuses on perfecting and developing Spanish using a variety of thematic materials and activities. Practical use of Spanish is emphasised through reading, writing, speaking and listening, conversation, spontaneous writing, and using Spanish in the community.

Successful completion of this course will make students eligible to participate in a three month **exchange trip** to Spain/Mexico during the Grade 11 year.

Spanish 30 Language and Culture – 5 Credits

Prerequisite: Spanish 20

Spanish 30 incorporates a less structured manner of learning with emphasis on the students' abilities to express themselves naturally and freely. By the end of the course students will have a very solid, practical base in communicating in the language and understanding the culture.

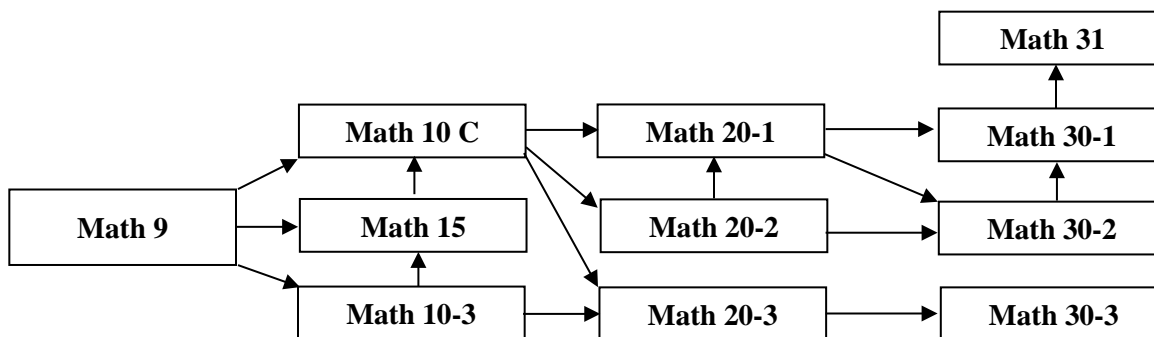
If students have previous experience with Spanish, please make an appointment with the Spanish teacher at the beginning of the school year **before** classes commence to determine which class is most appropriate.

Spanish IB

NOTE: See IB section for Spanish IB course information.

TAKE PART IN THE 3 MONTH SPANISH EXCHANGE PROGRAM!

MATHEMATICS



Mathematics 10C (Common) - 5 credits

Prerequisite: Successful completion of Mathematics 9

Recommendation for Success: Students should have 60% in Mathematics 9 and Science 9 OR 75% in Math 10-3

This course is designed to serve both the Pre-calculus and Math Foundations streams that begin in grade 11. Students will study polynomials and factoring, coordinate geometry, systems of equations, exponents and radicals, measurement and right angle trigonometry.

Mathematics 10C (Candidate) - 5 credits

This course is designed to serve students that will be registering in the IB program. Students must register in this course if they wish to apply to the mathematics IB program. Students will study an enriched Mathematics 10C Common program as well as further investigations into number systems, set theory and coordinate geometry.

Mathematics 15 (Competencies) – 3 credits

This course is designed to strengthen skills in mathematics. Students who wish to improve math competencies, who found Math 9 challenging, and who wish to attempt Math 10 Common should consider enrolling in this course. Students will study numeracy, exponents, fractions, measurement, linear algebra, functions, and problem solving.

Mathematics 10-3 - 5 credits

This course is designed for students who were not successful in Math 9. Math 10-3 should be taken by students with less than 60% in Math 9 and Science 9. Students will study measurement, geometry, right angle trigonometry and finance.

Mathematics 20-1 - 5 credits

Prerequisite: Mathematics 10C OR Mathematics 20-2 with teacher recommendation.

Recommendation for Success: Students should have a 65% or better in Mathematics 10C or 75% or better in Mathematics 20-2.

Course content includes: algebra and numbers, trigonometry, relations and functions.

Mathematics 20-2 - 5 credits

Prerequisite: Mathematics 10C

This course includes: measurement, geometry, number and logic, statistics, relations and functions.

Mathematics 20-3 - 5 credits

Prerequisite: Mathematics 10-3 OR 45% or better in Mathematics 10C.

This course focuses on the trades. Topics include: measurement, geometry, numbers, algebra, and statistics.

Mathematics 30-1 - 5 credits

Prerequisite: Mathematics 20-1 OR Mathematics 30-2 with teacher recommendation

Recommendation for Success: At least 65% in Mathematics 20-1 or in Mathematics 30-2

In this course students will study: transformations, polynomial, radical and rational functions, exponential and logarithmic functions, permutations and combinations, trigonometric functions. A diploma exam is written upon completion of this course.

Mathematics 30-2 - 5 credits

Prerequisite: Mathematics 20-2 OR 45% or better in Mathematics 20-1 with a teacher recommendation

Topics in this course include: probability, permutations and combinations, polynomial and rational functions, exponential and logarithmic functions. A diploma exam is written upon completion of this course.

Mathematics 30-3 - 5 credits

Prerequisite: Mathematics 20-3 OR 45% or better in Mathematics 20-2 with a teacher recommendation

Topics in this course include: measurement, precision and accuracy, sine law and cosine law, polygons, transformations, linear relations, mean, median and mode, buying and leasing vehicles, running a small business

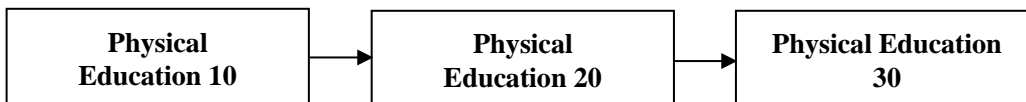
Mathematics 31 - 5 credits

Prerequisite: Mathematics 30-1

Recommendation for success: 70% in Mathematics 30-1

This course is designed for students who are planning to attend university and considering post-secondary studies in mathematics, applied science, engineering or business. The course begins with the study of limits, followed by an introduction to differential and integral calculus in one variable.

PHYSICAL EDUCATION



Physical Education 10 - 5 credits

Required for High School graduation

Students will participate in a variety of team activities and sports where the emphasis is on physical fitness, basic sport skills, strategies, rules, knowledge and understanding of techniques. There are a number of compulsory units, however students will be able to choose between a variety of sports and activities for the rest of their class curriculum. The course stresses cooperation, sportsmanship, self-discipline and active participation.

Physical Education 20 - 5 credits *(A one term 3-credit course is available)*

Prerequisite: approved pass from Physical Education 10

Students will participate in individual lifetime oriented activities. Due to the off-campus nature of the course, classes will require travel time outside of the regular timetable. Activities include: badminton, bowling, broomball, curling, dance, tennis, golf, racquetball, and kayaking. A snow shoe unit culminates in a one day trip to Kananaskis. The 5 credit course has a service component of 4 hours. (The 3 credit course requires 2 service hours).

Successful completion of either the 3 or 5 credit course allows enrollment in P.E. 30.

Physical Education 30 - 5 credits

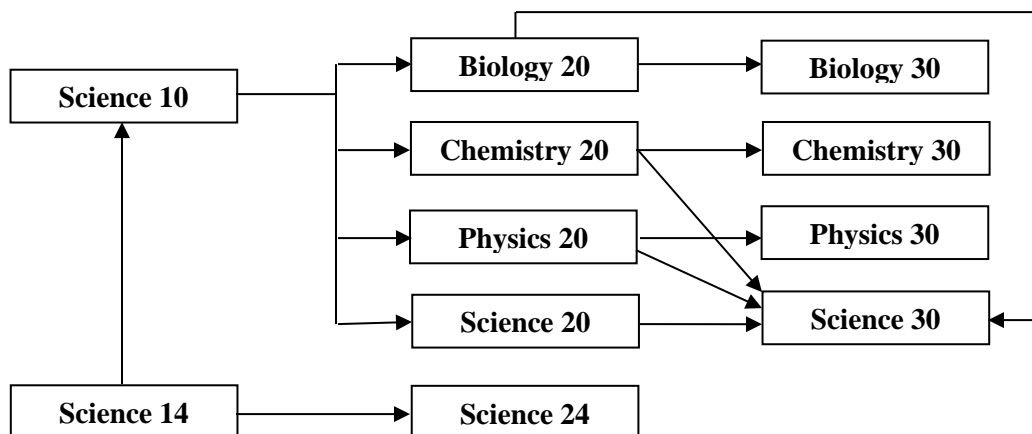
Prerequisite: Physical Education 20 (3 or 5 credit courses)

This course emphasizes individual off-campus activities and leadership skills. A leadership project involving volunteering in the community provides a valuable opportunity for individual growth. Course activities include: dance, rock climbing, curling, badminton, low organizational games, flat water and moving water kayaking, squash, tennis, and golf. The highlight of the course is an outdoor unit culminating in a three day camping trip.

The Physical Education 30 course may be used for university entrance in some situations.

Some of the activities in the Physical Education program have a limited element of risk to them. The department would like to assure parents and students that all activities will be taught with well-conceived progressions in very safe environments.

SCIENCES



Science 10 - 5 credits

Prerequisite: Successful completion of grade 9 Science

Recommendation for Success: Based on teacher recommendation in grade 9 Science and in grade 9 Math; Math 10 Common or Math 10 Candidate is advised

Science 10 is an integrated academic course designed to help students understand and apply concepts and skills common to biology, chemistry, physics and the environmental sciences. The themes of Science 10 are: energy, matter and change in chemical, technological, living, and global systems. Skills in algebraic problem solving, in tabling and graphing data, and in writing are used throughout the course. Strong math skills are expected. Workplace Hazardous Material Information System (WHMIS 2016) is learned. A final lab exam is scheduled for each student during the time of final examinations. There are many opportunities for activities, research, lab work and projects. Successful completion of Science 10 should allow the student to develop common skills and attitudes that are a part of the scientific process, and enable the student to make wise choices for the completion of a Science program in high school.

Science 14 - 5 credits

Science 14 is a course designed to provide an opportunity for success if students had difficulty in grade 9 Science or grade 9 Math. Science 14 should be considered if a student struggled with grade 9 Science and Math. The units to be covered in the course include properties of matter, energy transfer technologies, matter and energy in living systems, and matter and energy in the environment. Math skills are developed as well. Workplace Hazardous Material Information System (WHMIS 2016) is also learned. If successful in Science 14, the student would normally complete Science 24 next.

Science 24 - 5 credits

Prerequisite: Successful completion of Science 14

Science 24 is intended to allow students to complete the Science credit requirements for an Alberta high school diploma (10 credits). There is no Science course that follows this one. Students should consider taking this course if their Science 14 grade is less than 80%, or they have been recommended to take this course by their Science 10 teacher. The concepts in Science 24 build on those developed in Science 14, and include a study of the applications of matter and chemical change, understanding common energy conversions systems, linking disease defense and human health, and studying motion change and transportation safety. Skills in group or team work, individual work, lab work, computer

use, math skills, reading, writing and communication skills are usually developed in this course.

Biology 20 - 5 credits *

Prerequisite: Successful completion of Science 10

Recommendations for Success: 60% in Science 10 overall and 60% in the biology unit of Science 10. Chemistry 20 background and greater than 60% in Math 10 Common would be an asset.

Biology is the study of living systems. Students will study the processes in the exchange of matter and energy in the biosphere, ecosystems and population change, photosynthesis and cellular respiration, and some human systems. An extensive field study is required. Tabling, graphing, and writing skills are used throughout this course. Strong math and communication skills are required. Group work and computer work are expected, and independent study may be undertaken.

Biology 30 - 5 credits *

Prerequisite: Successful completion of Biology 20

Recommendations for Success: 60% in Biology 20. Chemistry 20 background and successful completion of Math 20-1 would be an asset.

The concept of maintaining equilibrium is examined through the study of electrochemical and chemical control in human systems. The theme of change is a focus of learning in the study of human reproduction and development. The topics of genetics and molecular biochemistry, as well as changes observed quantitatively in populations and communities are covered in this course. Tabling, graphing, and writing skills are used throughout this course. Strong math and communication skills are required. A diploma exam is written upon completion of this course.

Chemistry 20 - 5 credits *

Prerequisite: Successful completion of Science 10

Recommendations for Success: 60% in Science 10 and 60% in the Chemistry unit of Science 10. Students with success in the Chemistry unit of Science 10 will have a better chance to master the concepts in Chemistry 20. Greater than 60% in Math 10 Common is recommended.

Chemistry is the study of matter and its changes. In Chemistry 20 the different states of matter are investigated and the types of attractive forces between particles are discussed. Solutions such as acids and bases are introduced. Mathematical relationships between species in a reaction are investigated. Chemical reactions, algebraic problem solving, skills in tabling data and graphing, and writing are used constantly. Strong math and communication skills are expected. Skills (from Science 10) in naming chemicals, writing formulas, and balancing reactions, are expected at the beginning of this course. An in-class individual final lab exam is planned near the end of this course.

Chemistry 30 - 5 credits

Prerequisite: Successful completion of Chemistry 20

Recommendation for Success: 60% in Chemistry 20. Successful completion of Math 20-1 is recommended.

Chemistry 30 requires mastery of some topics taken in Chemistry 20 and extends these topics in the study of introductory organic chemistry, energy changes in chemical reactions, acid-base chemistry, reaction rates and equilibrium concepts, and a detailed study of oxidation-reduction reactions. Algebraic problem solving and skills in tabling, graphing

data and in writing are used constantly. Strong math and communication skills are necessary. A diploma exam is written upon completion of this course.

Physics 20 - 5 credits

Prerequisite: Successful completion of Science 10

Recommendation for Success: 60% in Science 10 overall and 60% in the Physics unit of Science 10. At least 60% in Math 10 Common is recommended. Completion of or concurrent registration in Math 20-1 is recommended.

Physics is the study of matter and energy and their interactions. Through a study of physics, an opportunity is given to explore and understand the natural physical world and to become aware of the influence of physics on our lives. Topics include: kinematics, dynamics, periodic motion and conservation of energy. Skills in algebraic problem solving, tabling and graphing data are used throughout the course. Success in this course depends on strong math and communication skills.

Physics 30 - 5 credits

Prerequisite: Successful completion of Physics 20

Recommendations for Success: 60% in Physics 20. Greater than 60% in Math 20-1 is recommended.

This is a continuation of the study of Physics concepts, with the addition of more abstract topics. It emphasizes conservation laws (especially momentum and energy), electricity and magnetism, field theory, electromagnetic induction and waves, models of the atom, wave-particle duality and radioactivity. Algebraic problem solving, tabling, graphing and writing skills are used throughout this course. Strong math and communication skills are required. A diploma exam is written upon completion of this course.

Science 20 - 5 credits

Prerequisite: Successful completion of Science 10

Recommendations for Success: 60% in Science 10. Successful completion of Math 10 Common (greater than 60%) is expected.

Science 20 is an **academic** Science course that has been designed to fit students' needs if they intend to go into post-secondary studies leading to a non-Science career. This course is designed to help students become scientifically literate adults by exposing them to a variety of Science topics from Biology, Chemistry, Physics, and Earth Science. The theme of change is explored in relation to geologic evidence, matter and energy in the biosphere, in chemical systems, and in velocity, acceleration, force and momentum. Algebraic problem solving, tabling, graphing and writing skills are used throughout this course. Strong math and communication skills are recommended.

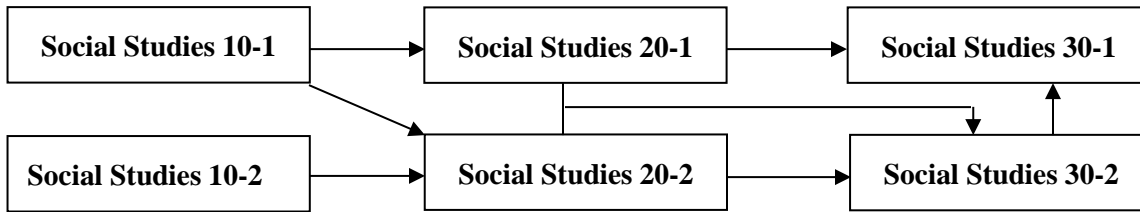
Science 30 - 5 credits

Prerequisite: Successful completion of any of Science 20, Chemistry 20, Biology 20 or Physics 20

Recommendations for Success: 60% in the prerequisite course. Successful completion of Math 20-1 is expected

Science 30 is an **academic** Science course. There is a major emphasis throughout this course upon developing skills in using scientific knowledge to make personal decisions. Science 30 continues the integration of the Science disciplines. The four units of study include living systems responding to their environment, chemistry in the environment, electromagnetic energy, and energy and the environment. Algebraic problem solving, tabling, graphing and writing skills are used throughout this course. Strong math and communication skills are required. A diploma exam is written upon completion of this course.

SOCIAL STUDIES



Social Studies 10-1 - 5 credits

Prerequisite: Social Studies 9

This course will examine multiple perspectives on the origins of globalization, and the impacts of globalization on culture, economies, human rights and quality of life for the world community. Students will examine these relationships with the goal of enhancing their skills for effective participation as citizens in a globalizing world.

The use of multiple perspectives will encourage the examination of globalization on Canadians (including impacts on Aboriginal and Francophone communities), as well as the global population. Themes of study will include concepts such as: identity development and cultural diffusion, historical studies of globalization and imperialism and the effects on contemporary, economic development; the status of human rights, and citizen's roles, and the global community for both indigenous and non-indigenous peoples.

Social Studies 10-2 - 5 credits

Prerequisite: Social Studies 9

This course will allow students to explore historical aspects of globalization as well as the effects of globalization on lands, cultures, human rights and quality of life. Students will explore the relationships among globalization, citizenship and identity. The infusion of multiple perspectives will allow students to examine the effects of globalization on people in Canada and other locations, including the impact on Aboriginal and Francophone communities. Students will develop skills to respond to issues emerging in an increasingly globalized world.

Social Studies 20-1 - 5 credits

Prerequisite: Social Studies 10-1

Recommendation for success: 65% in Social Studies 10-1

In this course, students will explore the complexities of nationalism in Canadian and international contexts. They will study the origins of nationalism and the influence of nationalism on regional, national, international and global relations. The infusion of multiple perspectives will allow students to develop an understanding of nationalism and how nationalism contributes to the citizenship and identity of peoples in Canada. Themes of study will include concepts such as: the relationship between nation and nation-state, the various types of nationalism (ethnic, civic, religious, political, economic, cultural, linguistic, spiritual and psychological), the connection between nation and identity, and the development of nationalism.

Social Studies 20-2 - 5 credits

Prerequisite: Social Studies 10-2

In this course, students will examine historical and contemporary understandings of nationalism in Canada and the world. They will explore the origins of nationalism as well as the impacts of nationalism on individuals and communities in Canada and other locations. Examples of nationalism, ultranationalism, supranationalism and internationalism will be examined from multiple perspectives. Students will develop personal and civic responses to emergent issues related to nationalism.

Social Studies 30-1 - 5 credits

Prerequisite: Social Studies 20-1 OR Social Studies 30-2

Recommendation for Success: 60% in prerequisite courses

This course is intended for students who have an interest in ideas and issues drawn from history, geography, economics, social science, and the humanities. Students will explore the origins and complexities of ideologies and examine multiple perspectives regarding the principles of classic and modern liberalism. An analysis of various political and economic systems will allow students to determine the viability of the principles of liberalism. Developing understandings of the roles and responsibilities associated with citizenship will encourage students to respond to emergent global issues. This understanding will enable students to effectively investigate, analyze and evaluate government policies and actions and develop individual and collective responses to contemporary local, national, and global issues. A diploma exam is written upon completion of this course.

Social Studies 30-2 - 5 credits

Prerequisite: Social Studies 20-1 OR Social Studies 20-2

In this course, students will examine the origins, values and components of competing ideologies. They will explore multiple perspectives regarding relationships among individualism, common good and collectivism. An examination of various political and economic systems will allow students to assess the sustainability of the practices of political and economic systems and the viability of the values of liberalism. Developing understandings of the roles and responsibilities associated with citizenship will encourage students to respond to emergent global issues. An awareness of the evolution of ideologies is key to comprehending and responding to local, national and global issues. A diploma exam is written upon completion of this course.

Psychology 30 - 6 credits

Prerequisite for Psychology: Social Studies 20-1 OR Social Studies 20-2

Prerequisite for Applied Sociology: Social Studies 20-1 OR Social Studies 20-2 and successful completion of Psychology 30

This course consists of two term courses for 3-credits each (Psychology and Applied Sociology). Students can either take the first term course of Psychology only, or choose to continue with the second term course Applied Sociology, for another 3 credits. Please note the prerequisites for each term course.

Psychology: This is a complementary academic course designed to introduce students to the social science of psychology. An intriguing science focusing on how the mind works, psychology is relevant and useful to each and every one of us. Students will explore a variety of topics and theories including cognitive processes (learning, thought, memory), personality theory, human development, stress, mental health and mental illness, therapy, altered states of consciousness, positive psychology, research methodology, and many more! Students will experience a variety of learning opportunities to develop their understanding of mental processes, and to build perspective of how and why human beings act and interact in this world.

Applied Sociology: Students will engage their critical thinking skills in this introduction to *the study of human society*. Exploring topics from socialization, culture, gender, conformity, and media, to social institutions, movements, and change, students are challenged to think like a sociologist and examine assumptions about society. Throughout the course students formulate sociological questions and participate in a variety of class activities and discussions, building connections between their personal experiences and the larger social forces around them.

WORK EXPERIENCE/CAREER EXPLORATION

15 / 25 / 35

Work Experience provides students with an opportunity to do some career exploration while working or volunteering outside the classroom in a community or professional environment. This course is designed for both career exploration and the development of valuable employability skills. Students must acquire a minimum of 75 hours to earn 3 credits. After that accomplishment, they receive 1 credit for every 25 hours earned after the 75 hours worked at their work site. Student must be engaged in supervised work and their hours are verified by their employer on weekly time sheets. Work Place Safety (HCS3000), a 1 credit course, must be completed by all students prior to beginning at their work site

REGISTERED APPRENTICESHIP PROGRAM (RAP)

15 / 25 / 35

RAP is a wonderful opportunity for those students who wish to pursue a career in the trades after high school. This course allows students to be matched with a journeyman mentor to begin their apprenticeship while still in high school. The students must complete Work Place Safety (HCS3000), a 1 credit course, before being placed. If they are involved with construction trades, the CSTS course and Work Place Safety Practices (HCS 3010) must be taken as well prior to their placement. Students then complete a 5 credit (125 hour) work experience probationary period at the work site, to see if the match is working for both student and mentor. If both sides are in agreement, the apprenticeship may begin. Hours are earned towards the student's trade, while earning high school credits and receiving a salary.

- Students wanting to be involved in the RAP Program should start the process in their Grade 10 or 11 year with possible placements for the spring/summer of their Grade 10 or 11 year. A student/parent information night will be held in the spring.

SPECIAL PROGRAMS

ENGLISH LANGUAGE LEARNERS (ELL)

Formerly known as English as a Second Language (ESL)

	Level 1 & 2		Level 3		Level 4	Level 5		
English	ELL Intro A	ELL Intro B	ELL Intermediate A	ELL Intermediate B	10-2 Competencies	→ 10-1	20-1	30-1
					ELA 10-2	→ 20-2	→ 30-2	
						→ 20-1	30-1	
	<p><i>Progress through each course is individually based. While some students may only require one semester at a level, others may require more time. Course progression will be determined by the teacher assessment of the student's English competencies.</i></p>					<p><i>*While students may go from 30-2 to 30-1, 20-2 to 20-1 has proven more successful as it allows for more experience with higher pace and critical analysis before entering 30-1.</i></p>		
Social Studies	ELL Canadian Studies	Social 10-2		Social 10-1	Social 20-2 Social 20-1		Social 30-2 Social 30-1	
Science	No Science at this level	ELL Science Process		Science 14	Science 24			
				↓ Science 10	Science 20 Bio 20 Chem 20 Physics 20		Science 30 Bio 30 Chem 30 Physics 30	
Math	<p>Math will be scheduled based on results of testing completed at Sir Winston Churchill when students arrive, or based on recommendations from Junior High Schools.</p>							

ELL Introduction (Levels 1 & 2) - 5 credits

This is a beginner level class offered for our level 1 and 2 students. In this class, students focus on reading, writing, grammar and vocabulary as well as learning some basic communication skills. Students enrolled in this class will be working towards completing Alberta ELL Proficiency Benchmarks 1 and 2. .

ELL Introduction to Canadian Studies - 5 credits

This is a Social Studies course designed for students who are new to Canada. The course teaches Canadian social issues, geography, history, politics and culture. Students work on their reading, writing, speaking and listening skills while learning about Canada. This class is for students who are working on completing Alberta ELL Proficiency Benchmarks 1 and 2.

ELL Intermediate (Level 3) - 5 credits

This is a low-intermediate/intermediate level English class. Students will continue to develop their language skills. There is a strong emphasis on improving writing skills, vocabulary-building and grammar. This class is for students who are completing Alberta ELL Proficiency Benchmark 3.

ELL Science Process and Vocabulary - 5 credits

This sheltered science course helps students build the vocabulary, knowledge and process skills required for further science courses. Students learn how to write lab reports and develop investigative and reading skills necessary for science. This class is for students who are working on completing Alberta ELL Proficiency Benchmark 3. Students who successfully complete this course and have their teacher's recommendation progress to Science 10.

ELA 10-2 Competencies (Level 4) - 5 credits

This is an academically geared course designed as a bridge to the English 10-1. There will be an emphasis on building critical analytical reading and writing skills with focused practice on the correct usage of language, including grammar, sentence structure and diction.

INTERNATIONAL BACCALAUREATE

Students who love learning and enjoy a rigorous academic challenge should consider the International Baccalaureate (IB) program. IB students are self-motivated, engaged in learning, are resilient and enjoy studying. Success in an IB program will depend on the student's ability to:

- handle a demanding workload at a fairly quick pace
- work to understand concepts and their development rather than just memorize
- learn to become an independent, self-disciplined student
- face challenges with enthusiasm and resilience.

Students have two candidacy options in IB: Diploma or Diploma Course.

Diploma - students take full IB (in Grades 11 and 12, all courses are in IB). In addition, students will complete Theory of Knowledge, Extended Essay and CAS (creativity, activity and service components).

Diploma Course - students must take a minimum of two IB courses plus Theory of Knowledge and CAS. The Diploma Program Courses must be balanced or well-rounded*, including a humanities based IB course and a math/science based IB course (for example, Mathematics IB, Chemistry IB and History IB, plus be involved in TOK and CAS activities).

*Students can take Computer Science HL, Business Management SL or Visual Arts HL as a stand-alone IB course (with TOK and CAS).

In May, of either the Grade 11 or Grade 12 years, or both, students will write challenging IB exams and, when applicable, the Alberta Education Diploma exams in January and/or June.

Additional costs – students will be responsible for: registration fees (currently \$225 per year of examination), examination and mailing fees for the external assessment of their Extended Essay and Theory of Knowledge essays (currently \$175 per examination).

IB courses are: Higher Level (HL) and Standard Level (SL). Higher Level courses are in-depth two year studies of a particular subject, usually beginning in grade 11, except Math HL. Higher Level courses are similar in difficulty to a first-year University course. Standard Level courses are normally more than one year study duration, beginning in grade 10 or grade 11. They do not go into the depth or detail of HL courses. Universities usually recognize only HL courses, and a full Diploma program.

IB Courses Offered through Sir Winston Churchill:

1. Language A1 (HL) - English Literature
 2. Language B - French SL **OR** Mandarin SL* **OR** Cantonese SL* or French ab initio **OR** German ab initio **OR** Mandarin ab initio* **OR** Spanish ab initio
 3. The Study of Individuals and Society –World History HL
Business Management SL
 4. Sciences: Chemistry HL, Physics SL, Biology SL **OR** Computer Science HL
 5. Mathematics HL/SL
 6. Visual Arts HL
- NB *Cantonese IB and Mandarin IB are offered at The Chinese Academy, a Friday/Saturday Chinese school in partnership with the Calgary Board of Education.

Admission into IB

Students usually apply in November of Grade 10 for admission into the IB program. Selection is granted on a course-by-course basis and the admission criteria are:

1. a mark of 75% **OR** better in each course
2. a positive recommendation by the subject area and other teachers
3. priority placement for (full) IB Diploma Candidates
4. a well-rounded selection of IB courses for Diploma Program Course IB Candidates (e.g Mathematics, Physics, and English **OR** e.g. Biology, Mathematics, and History)

If students accept placement in IB **they will be expected to fulfill their 2-year commitment to the program** notwithstanding unforeseen circumstances. Withdrawal from the program will be granted only with IB Coordinator's consent, not usually at the student or parents' request. Not achieving the grades you would like is not a reason to request and exit from the IB program. There is a second round of application for grade 10 students in May of their grade 10 year, for English HL, Computer Science HL, Chemistry HL, World History HL, Art HL, French ab initio, French SL, Spanish ab initio and German ab initio.

Please select IB cautiously.

Over the next two years, in order to fulfill the IB Diploma Requirements and an Alberta Education High School Diploma, a grade 10 student seeking a full IB Diploma must register for the following:

1. Math 10-1 (Candidate) Science 10 in semester 1.
2. Math 20-1 IB, one Physics 25 **or** Biology 25, **or** Business Management 25 for the second semester of Grade 10.
3. PE 10.
4. International language at SWC:
 - French 10, 20 or 30 IB (depending on their previous French background)
 - German 10
 - Latin 10
 - Mandarin 10
 - Spanish 10
5. CALM 20.
6. Theory of Knowledge, Extended Essay and CAS.
7. 3 HL subjects.
8. 3 SL subjects.

HL subjects are:

English 30/35

World History 30/35

Math 30/31/35 IB HL

Chemistry 35/30 IB

Visual Arts 35/30 IB

Computer Science 31/33 IB

SL subjects are:

Biology 25/20/30 IB

Physics 25/20/30 IB

Math 20/30/31 IB SL

Business Management 25/30/31 IB

Language ab initio:

- *French IB ab initio 20 and 30*
- *German IB ab initio 20 and 30*
- *Mandarin IB ab initio 20 and 30*
- *Spanish IB ab initio 20 and 30*

Language B:

- *French IB SL 30/31*
- *Latin IB SL 30/31*

GRADE 10 COURSE SELECTIONS

Prerequisite – Acceptance into the IB Program

Biology 25 IB - 3 credits

Prerequisite: Science 10

This course continues the biology section of Science 10. Topics that are studied may include: an in-depth study of cells and cell processes, cell division and nutrients. As well, the course introduces the statistics needed for IB science classes. This course is a prerequisite for Biology 20 IB.

Business Management 25 IB - 3 credits

Suggested course: Financial Management 101

Students will identify basic management and marketing concepts, explore organizational structures, management theories, the nature of business, organizational planning and decision making, growth and the impact of globalization, and the management of change.

Mathematics 20-1 IB - 5 credits

Prerequisite: Math 10 Candidate

Students will study an enriched and extended presentation of the Math 20-1 curriculum. This course is taken in the second semester of the grade ten year. Therefore candidates must take Math 10 Candidate in the first semester. Continuation in IB Mathematics SL or movement into IB mathematics HL will occur in consultation with Mathematics IB teachers at the end of 20IB and the beginning of 30IB.

Physics 25 IB - 5 credits

Prerequisite: Science 10

Students will study an enriched presentation of various topics covered in regular Physics 20, such as: the scientific process and measurement with uncertainties, and kinematics and dynamics in one and two dimensions. This course is a prerequisite for Physics 20 IB. Math 20 IB is strongly recommended for the Physics IB program, as the sequence of topics in the Math IB program more closely matches the needs of the Physics IB SL program.

GRADE 11 IB COURSE SELECTIONS

Art 20/30 IB - 10 credits (full year)

Prerequisite: Art 10

Students in Art and Design 20 IB are introduced to an enriched studio program that provides opportunities to develop technical skills while exploring the following media: drawing, sculpture, printmaking, mixed media and painting. This is a rigorous and rewarding program where students will begin to develop their own personal vision through studio work and personal research of themes, significant artists and culture in the I.B. Research Work Book.

Biology 20/30 IB - 10 credits (full year)

Prerequisite: Biology 25 IB

Students study many of the same topics in Biology 20/30 IB as in the regular Biology 20 and 30 courses, but in more depth. The scientific method is used to explore the natural world. A major interdisciplinary research project is undertaken. The students must compile a final portfolio of scientific investigations.

Business Management 30/31 IB - 10 credits

Prerequisite: Business Management 25 IB

Students will continue developing skills in the areas of business and commerce including the exploration of topics such as; Human Resources, Accounting and Finance, Marketing, and Operations Management.

Chemistry 20 IB - 5 credits

Prerequisite: Science 10

Students will cover all the components of the Chemistry 20 Alberta Program of Studies. In addition, an in-depth study of atomic structure, periodicity, additional bonding concepts such as hybridization, crystal field theory, ligands and introductory organic nomenclature will be covered. A final lab exam is scheduled for each student near the end of this course. A wide variety of lab experiences are provided, and a lab portfolio is begun to be completed the following year. A major interdisciplinary research project is undertaken.

English 20 IB - 5 credits

Prerequisite: English 10-1

Students will be introduced, literally, to the wide world of literature. Different genres of writing from various eras and countries will be discussed, studied, and compared. An emphasis will be placed on examining the effects of writers' craft. There is a great variety of reading, writing, listening, discussing, viewing and representing during this course. Pre-reading is required prior to the beginning of the course.

International Languages – ab initio Level

The two year ab initio language course is designed for students enrolled in the IB program who have a limited experience of learning the target language. The language **ab initio** course aims to develop a variety of areas of linguistic skills. In addition, students will become familiar with aspects of the everyday life and culture of the countries in which the language of study is spoken. Three themes are used to explore the life and culture: **Individual & Society, Leisure & Work, and Urban & Rural Environment**. A specific core syllabus and language-specific syllabus for the International Baccalaureate Program (IB) is used to guide the course.

French 20 IB ab initio – 5 credits

Prerequisite: French 10

In addition to covering the French 20 Alberta curriculum, students in this course are challenged further with additional oral, writing and reading comprehension activities within each of the language IB ab themes, thus increasing the breadth and depth of the French 20 course. Attention will also be paid to increasing students' cultural awareness of the Francophone community.

German 20 IB ab initio – 5 credits

Prerequisite: German 10

This German course builds on various elements presented in the German 10 Language and Culture course. Students in this course will further develop the four areas of language learning (reading, writing, listening, and speaking). The three German language IB ab initio curriculum themes accentuate the exploration of the German 20 Language and Culture curriculum from Alberta Education, thus increasing the breadth and depth of the German 20 course. Cultural elements of the German-speaking countries and regions will be included to increase students' awareness.

Spanish 20 IB ab initio – 5 credits

Prerequisite: Spanish 10

In this Spanish course students will begin to study the three themes of the language IB ab initio curriculum through reading, writing, listening and speaking activities while also fulfilling the Alberta Education language curricular requirements. Students will explore various aspects of Spanish-speaking cultures.

International Languages – Standard Level

French 30 IB – 5 credits

Prerequisite: French 20 or Grade 9 French immersion

This course prepares students for the French 30/31 IB oral reading comprehension and written exams. The regular French 30 Alberta Education curriculum is initially covered. Additionally, a variety of supplements readings are added to the program to improve reading comprehension and a source for developing oral skills. Language, vocabulary, idiomatic expressions and grammatical structures will be introduced using several different types of text and discourse that serve particular communicative purposes. Students will be able to explore cultural aspects of the Francophone world through the study of texts and visual materials as a mean of exploring the history, current events, values and attitudes of a range of French speaking countries. Comparisons to other cultures will be established in order to celebrate the difference.

Latin 20 IB – 5 credits (projected 2018/19)

Prerequisite: Latin 10

This Latin IB course continues to enhance a student's understanding of the Latin language in order to be able to further their study of the translation passages as well as make relevant connections contextually between the time period of the translated works and our current times. In addition to studying concepts prescribed by Alberta Education's curriculum, students will form an appreciation for the merit of literary classical texts while fulfilling the requirements of enhanced grammar, etymology, and the structure of Latin, established by the IB curriculum. Students will study a variety of texts and other products of classical cultures. The Latin 20 IB ab initio student will develop an awareness of his/her intellectual engagement through the process of inquiry and the development of critical thinking and researching skills.

Mathematics 30-1/31 IB - 10 credits (full year)

Prerequisite: Math 20-1 IB

In addition to an enriched presentation of all the topics in Math 30-1 and Math 31, this course will cover extensions in calculus, vectors, probability, and statistics.

Mathematics 30-1/31/35 IB - 13 credits (to be taken over 3 semesters)

Prerequisites: Math 20-1 IB and teacher recommendation

In addition to an enriched presentation of all the topics in Math 30-1 and Math 31, this course will cover extensions in calculus, vectors, matrices, inverse trigonometric functions, probability density functions, sets, relations and groups.

Physics 20/30 IB - 10 credits (full year)

Prerequisite: Physics 25 IB

In this course, you will complete all the Alberta Physics Program of Studies in Physics, and also complete the requirements for Standard Level Physics IB. This is an enriched, accelerated physics program. Excellent math skills are required and the Math IB program is strongly recommended concurrently. A major interdisciplinary research project is undertaken. A lab portfolio is completed.

Social Studies 20 IB - 5 credits

Prerequisite: Social 10-1

This course provides students with an introduction to the discipline of history by surveying the development of western civilization from the Enlightenment to the types of government we have in society – both democratic and dictatorships. (Includes American history)

Theory of Knowledge - 3 credits

This course introduces the ideas of knowing and knowledge, types of knowledge and how we know what we know by examining the various ways of knowing IB has identified. All grade 11 students are required to take TOK. It is offered in a blended format with both an in-class and an online component or as a term course. This course is begun in grade 11, and TOK continues to be explored in the core IB subjects at the grade 12 level.

GRADE 12 IB COURSE SELECTIONS

Art 31 IB - 5 credits

Prerequisite: Art 20 IB

Students in Art 30/31 IB continue to explore the exciting connection between their studio work and individual research. Students will have individual and class instruction and work towards creating powerful, and personally meaningful themes in drawing, photography, painting, sculpture and mixed media.

Chemistry 30/35 IB - 10 credits (full year)

Prerequisite: Chemistry 20 IB

This rigorous course, combined with Chemistry 20 IB, is equivalent to the first year of university chemistry. Topics covered include: energetics, reaction kinetics, equilibrium systems, acid/base chemistry, organic chemistry, oxidation-reduction systems, and periodicity. Two optional units (selected by the teacher) are also covered. The year ends with an IB exam in May and the Alberta Diploma Exam in June; Chemistry 30 credits are earned upon successful completion of the course. A lab portfolio is completed.

Computer Science 31 IB/33 IB - 6 credits for 31 IB and 5 credits for 33 IB

Prerequisites: IB Computer Science 202 and enrollment as an IB Higher Level Computer Candidate

A student cannot get credit in both Computer Science 301 and Computer Science 31-IB

Students have an opportunity to engage in a rigorous and dynamic course that is of university level in rigor.

Topics include:

- **Dynamic Data Structures:** Structures are studied as standard Java collections, using iterators, sets and maps, but student must also independently design ADT (Abstract Data Types) implementing their own versions of dynamic data structures such as arraylists, linked lists, binary search trees, stacks and queues.
- **File Handling:** Both sequential and direct access file handling structures are designed and implemented.
- **Object oriented programming option** will be selected and taught from the IB optional topics.
- **Computer Program Internal Assessment Project:** Students will plan and develop programd solutions from their choice of IB topic areas, the program will provide a solution to a problem and encompass exception handling, testing, file handling, a suitable data structure and a graphical user interface. The internal assessment provides students an opportunity to truly demonstrate and extend their skills.
- **Extended Computer Science Topics:** Topics include: computational thinking, systems analysis and design, computer architecture and peripherals, data representation, number systems and representations, Boolean logic,
- Operating systems and utilities, algorithmic evaluation, social significance and implications of computer systems, and a case study of an industry wide application.
- IB students complete the Computer Program Internal Assessment Project begun in Computer Science 31-IB and present it for assessment using web technologies.
- **Extended IB Project:** Students extend their knowledge and skills by undertaking a further project in which they select a topic of their choice. Previous projects have

included app development, web services, creating a compiler and robotics solutions. This project commences once IB exams are completed in May.

English 30/35 IB - 10 credits (full year)

Prerequisite: English 20-1 IB

This program is a continuation of English 20 IB and is designed to further develop student awareness of and appreciation for writers' craft. Students will further develop a literary perspective by studying literature from different cultures, and time frames. At various points during this year long experience, students will be expected to complete both oral and written final exams as well as write a self-directed World Literature paper in order to meet expectations of the IB program. In addition, they will be responsible for writing the Alberta Diplomas by the end of the course. Pre-reading will be required prior to the beginning of the course.

International Languages – Ab initio Level

French 30 IB ab initio – 5 credits

Prerequisite: French 20 IB ab initio

Based on the French 30 curriculum of Alberta Education and the language IB ab initio curriculum, this course prepares students for the French 30 IB ab initio oral, reading comprehension and written exams through the expansion of the three ab initio themes. Students will engage in more advanced enriched activities in terms of scope and depth, frequency, and richness of expression.

German 30 IB ab initio – 5 credits (starting 2018/19)

Prerequisite: German 20 IB ab initio

Based on the German 30 Language and Culture curriculum of Alberta Education and the language IB ab initio curriculum, this course prepares students for the German 30 IB ab initio oral, reading comprehension and written exams. The three ab initio themes are explored in more depth which will allow students to increase the scope and depth of their understanding of the German culture while enriching their overall German language skills in all four areas of language learning (reading, writing, listening and speaking).

Spanish 30 IB ab initio – 5 credits

Prerequisite: Spanish 20 IB ab initio

Based on the Spanish 30 Language and Culture curriculum of Alberta Education and the language IB ab initio curriculum, this course prepares students for the Spanish 30 IB ab initio oral, reading comprehension and written exams. Students will further explore the three ab initio themes and enhance their understanding of the Hispanic community.

International Languages – Standard Level

French 31 IB – 5 credits

Prerequisite: French 30 IB

This course is designed to expand proficiency in all four primary skill areas of listening, speaking, reading comprehension and writing. Students will cover the regular French 31 curriculum of Alberta Education and IB language SL curriculum. They will continue to practice using language in practical and social situations, but will also cover more expressive and intellectual domains. They will be able to give and defend their opinions on controversial issues. Emphasis is placed on consolidation of grammatical structures to

enhance written composition using a variety of formats: Journals, blogs, editorials, personal and formal letters, etc.

Mathematics 35 HL – 3 credits

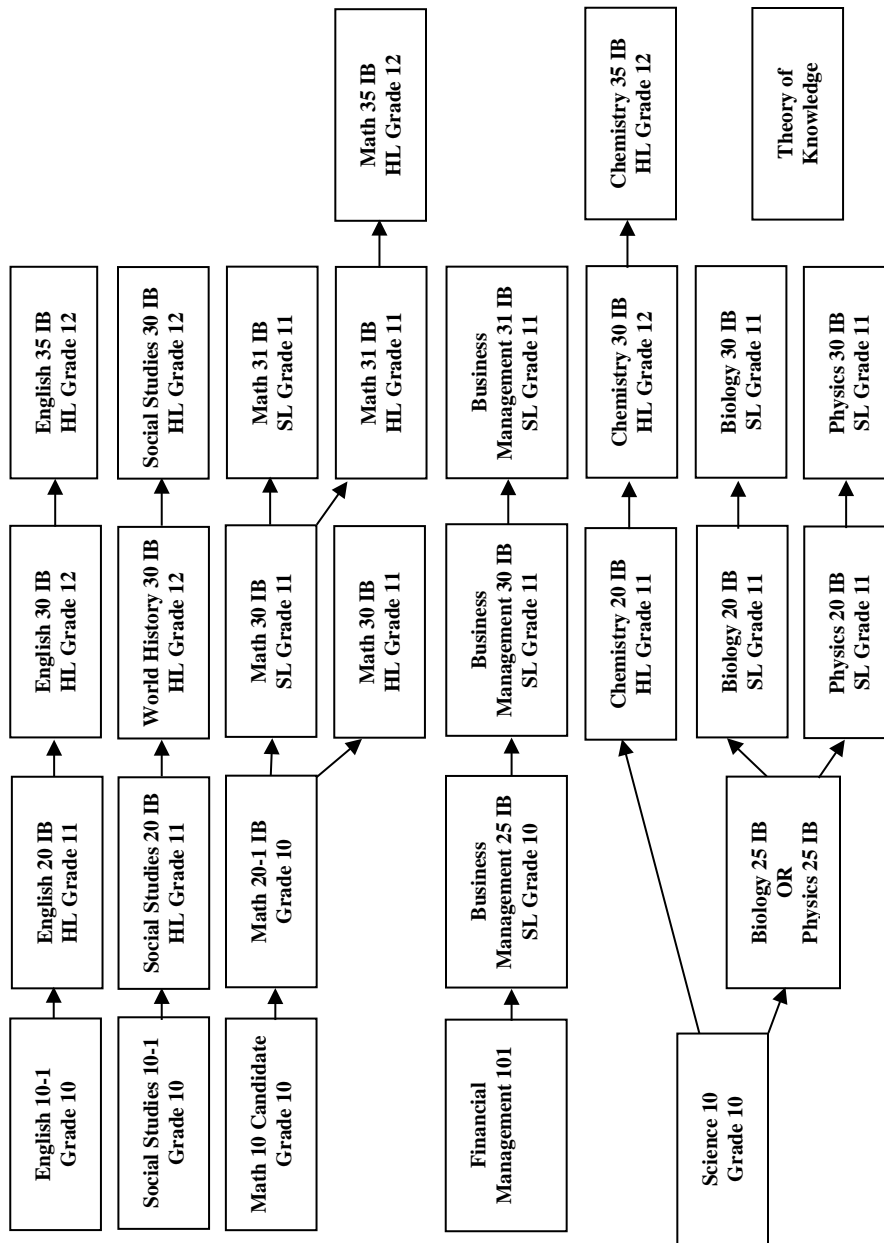
Prerequisite: Mathematics 30-1/31 HL IB

Students will focus on the study of complex numbers, polar geometry, statistical methods, and series and differential calculus.

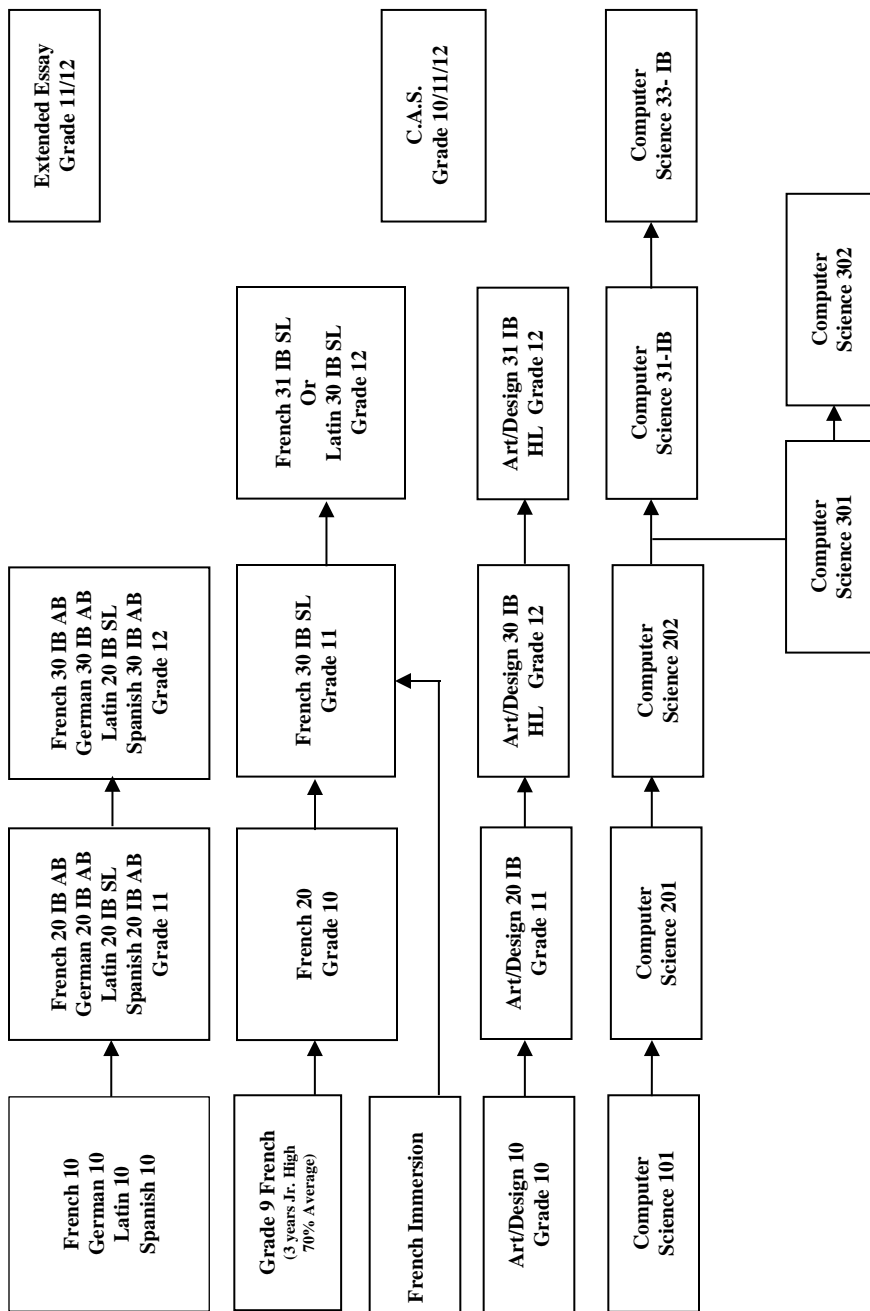
World History 30 IB/Social Studies 30 IB - 10 credits (full year)

Prerequisite: Social Studies 20 IB

This course provides a detailed outline survey of modern American and European history from 1900's to the present era. Emphasis is placed upon the study of major historical themes, document analysis, research procedures and class discussions. Our regional study is The Americas. Topics covered include events from the U.S. Civil War to the end of the Cold War.



IB at Churchill: Possible Program Complementary Sequences



GRADE 10	GRADE 11	GRADE 12	Credits
1. ELA 10-1/10-2	1. ELA 20-1/20-2	1. ELA 30-1/30-2	5
2. Social Studies 10-1/10-2	2. Social Studies 20-1/20-2	2. Social Studies 30-1/30-2	5
3. Science 10/14	3. Science 20, Bio 20, Chem 20, Physics 20 or Science 24	3. 30 Level Course	5
4. Math 10 C or Math 10-3	4. Math 20-1 or Math 20-2 or Math 20-3	4. 30 Level Course	5
5. Phys. Ed. 10	5. a. C.A.L.M. 20 b. _____		
6.	6.	5.	
7.	7.	6.	
8.	8.	7.	
		8.	
Total Credits _____ (Minimum 40)	Total Credits _____ (Minimum 35)	Total Credits _____ (Minimum 30)	
		Total High School Credits _____	