



Grade Ten Course Handbook

WINDSOR PARK COLLEGIATE

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Principal: Karen Haluschak
Vice-Principal: Nicole Mager

Windsor Park Collegiate: Credit Check Worksheet

In order to graduate, all students are expected to complete:

- 17 compulsory credits and 13 Elective credits for a total of 30 credits
- Of the 13 Elective credits, one must be a grade eleven credit, and two must be grade twelve credits.

Grade Nine	Grade Ten	Grade Eleven	Grade Twelve
English 10F <input type="checkbox"/>	English 20F <input type="checkbox"/>	English 30S <input type="checkbox"/>	English 40S <input type="checkbox"/>
Math 10F <input type="checkbox"/>	Math 20S Ess Intro <input type="checkbox"/>	Math 30S Ess App PreC <input type="checkbox"/>	Math 40S Ess App PreC <input type="checkbox"/>
Canada in the Contemporary 10F <input type="checkbox"/>	Geography 20F <input type="checkbox"/>	History 30F <input type="checkbox"/>	Physical Ed. 40F <input type="checkbox"/>
Science 10F <input type="checkbox"/>	Science 20F <input type="checkbox"/>	Physical Ed. 30F <input type="checkbox"/>	Elective 40 <input type="checkbox"/>
Physical Ed. 10F <input type="checkbox"/>	Physical Ed. 20F <input type="checkbox"/>	Elective 30 <input type="checkbox"/>	Elective 40 <input type="checkbox"/>
Reading is Thinking 10S <input type="checkbox"/>	Elective _____	Elective _____	Elective _____
Elective _____	Elective _____	Elective _____	Elective _____
Elective _____	Elective _____		
Elective _____			

Important Notes:

In order to graduate you must complete all the requirements above. For example, if you have 34 credits, but do not have a grade 12 English credit, you are NOT eligible to graduate because a grade 12 English is a compulsory course.

There can be a big difference between high school graduation requirements and post-secondary (university/college) entrance requirements. You may graduate from high school but be unable to enter the school of your choice because you have not taken the right courses.

Remember to include special language or music credits, credits earned at Manitoba Institute of Trades and Technology (MITT) or Louis Riel Arts and Technology Centre (LRATC), distance education courses and/or summer school courses.

Course Registration Instructions:

The following are the details of what you need to know the day that you sit down to sign up for your courses for next year.

Step One: Write down on the worksheet all of the courses that you have successfully completed or will complete by the end of this year.

Step Two: On your worksheet, check off the compulsory courses that you must take next year. (Remember if you have failed a compulsory course, you must take it again.)

Step Three: Read through the list of elective courses on the following pages of the handbook.

Step Four: List five Electives in order of priority from your 1st choice to your 5th choice. (Not all choices will be scheduled.)

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

Step Five: Bring these worksheets with you on course selection day so that you can easily sign up for next year. You will be signing up for your courses online with a Student Services Teacher.

Step Six: Look for MyBlueprint Course Selection Sign-Off Sheet in the report card envelope on April 13th.

Step Seven: Sign and return MyBlueprint Course Selection Sign-Off Sheet with Registration Fees of \$90.00 and any extra fees by April 20th. This will determine your official registration.

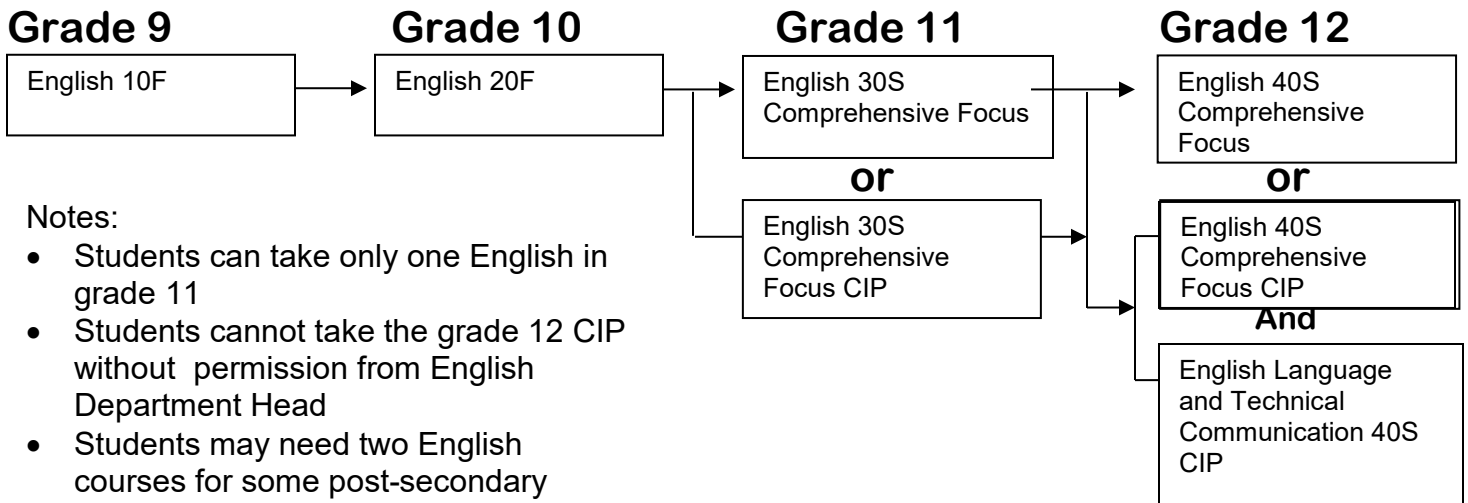
Step Eight: Timetables and opening day information will be mailed out in late August to those students that have paid their school fees for 2019-2020.

Important Note:

Once choices have been made and finalized, classes will be organized and staff determined. Courses that have very low enrollment may not be offered or combined with others. It is important that you put a lot of thought into the courses that you want as it will be very difficult to make changes to course requests at a later date.

Compulsory Courses: English Language Arts:

English Language Arts Flow Chart:



Notes:

- Students can take only one English in grade 11
- Students cannot take the grade 12 CIP without permission from English Department Head
- Students may need two English courses for some post-secondary institutions
- For more info on CIP contact Student Services

GRADE TEN ENGLISH LANGUAGE ARTS 20F 1 credit

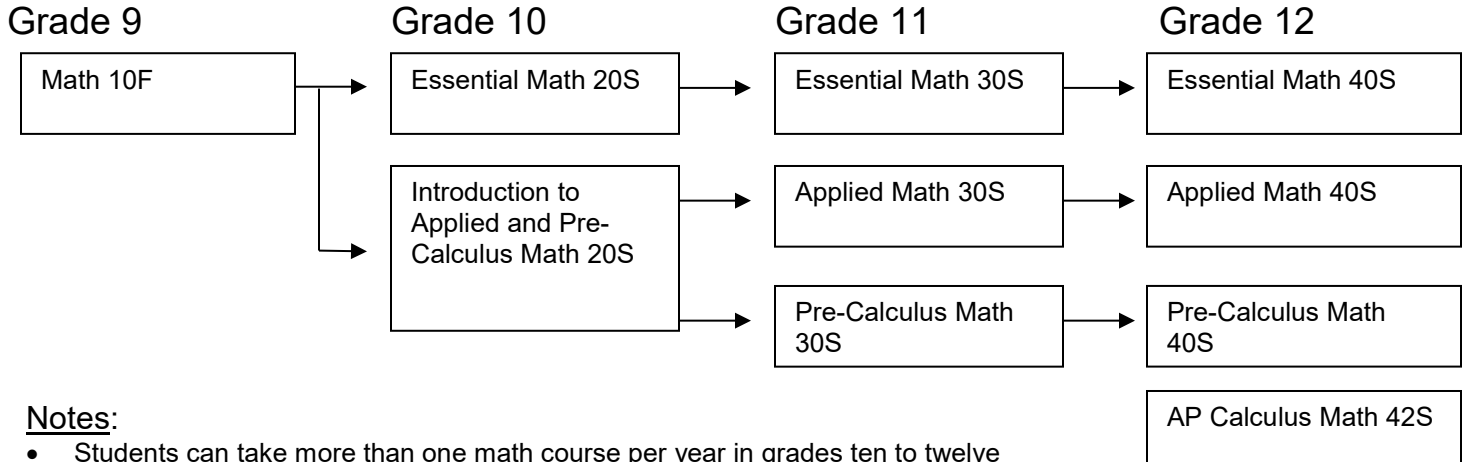
PREREQUISITE: English Language Arts 10F

This course is designed to increase students' knowledge of reading, writing, listening, speaking, viewing and representing. This course helps students become more skillful language users in a variety of task and assignments that emphasize purpose and audience. Students expand their knowledge of literary concepts as they continue to build their skills and knowledge of informal and formal essays.

Students study news and magazine articles, short stories, film, poetry, novels, a Shakespearean play (*Romeo and Juliet*), and complete projects throughout the semester, as they juxtapose personal views/reactions with larger perceptions and truths within the world. Grade 10 places importance on the proper use of grammar, punctuation, spelling, and vocabulary in all assignments. All students write a final exam worth 20% of their final grade.

Compulsory Courses: Mathematics:

New Curriculum – Mathematics Flow Chart:



Notes:

- Students can take more than one math course per year in grades ten to twelve
- *Students planning to take AP math should see notes that follow
- **Grade 12 MATH COURSES HAVE A FINAL PROVINCIAL ACHIEVEMENT TEST worth a certain percentage:**
 - **Grade 12 Pre-Calculus and Grade 12 Applied – 30%**
 - **Grade 12 Essential – 20 %**

A GUIDE TO MATHEMATICS COURSE SELECTION

In grade 10, students may choose from TWO mathematics programs: Introduction to Applied /Pre-Calculus or Essential Mathematics. They must take a minimum of ONE credit in mathematics in each of their grade 10, 11 and 12 years in order to graduate. However, students may choose to take two mathematics credits each year as students can obtain credits for more than one mathematics course at the same level. (For example: Grade 10 Intro and Grade 10 Essentials).

Each of these programs is sequential, and is designed to meet different interests, learning needs and education/career goals of students. Students and parents are advised to follow recommendations of grade nine math teachers and to consult with mathematics teachers and/or Student Services staff in making this choice at the grade 10 level, as each course continues through grades 11 and 12. Once a program choice of either Pre-Calculus or Applied Math has been made, it is not possible to switch between the two without the required prerequisites. (For example, after receiving credit in Grade 11 Pre-Calculus a student COULD NOT receive a credit in Grade 12 Applied Math without first taking Grade 11 Applied Math.) Going from Applied or Pre-Calculus to Essentials Math is allowed under certain circumstances. When students choose courses which best suit their needs and abilities, they have the greatest chance for success, now and in the future.

Some Things That All Students Need To Know About Their Math Choice In Grade 10

After you graduate, you may wish to go to university, college, or become an apprentice etc.

Some programs that you may want to apply for have certain prerequisites. If you have not taken these particular courses in high school they will not let you into the program. This means that some of the courses that are chosen in grade 10 may have an effect on whether or not a student can take the program that they want after they graduate. Please check web sites for the mathematics and science prerequisites for entry into various programs at universities and colleges.

INTRODUCTION TO APPLIED AND PRE-CALCULUS MATHEMATICS 20S 1 credit

PREREQUISITE: Math 10F (75% recommended in Grade 9 Math) and teacher recommendation
Grade 10 Introduction to Applied and Pre-Calculus Mathematics (20S) is the Grade 10 curriculum available for students planning to pursue post-secondary studies in mathematics and science. This curriculum is particularly directed to students planning to enter science or the high-tech world of work. Topics include: Algebraic Reasoning and Manipulation, Measurement, Relations & Functions, and Data Management and Analysis.

EQUIPMENT/PERSONAL SUPPLIES: All students are required to have a 3-ring binder, pencil, eraser, a **scientific calculator** and ruler.

SPECIAL NOTES:

Students entering this course will require a proficiency in polynomials, exponents, algebraic manipulation and linear equations and relations from the Grade 9 program. Students taking this course should enjoy Math and be willing to practice new topics outside of class time. Algebra skills, numeracy, and reading and writing skills are important to the kinds of thinking and representing that are required in this course.

ESSENTIAL MATHEMATICS 20S 1 credit

PREREQUISITE: Math 10F

Grade 10 Essential Mathematics 20S is intended for students whose post-secondary planning that includes everything except a focus on mathematics and science-related fields. This course replaces the Grade 10 Consumer Mathematics course and has a similar content. Grade 10 Essential Mathematics emphasizes consumer applications, problem-solving, decision making, as well as number sense and number use. This course centers on the connections to mathematics that we face in our day to day lives. Topics include: Analysis of Games and Numbers, Personal Finance - including wages and salaries, Transformations, 2D Geometry, Trigonometry, and Consumer Decisions.

EQUIPMENT/PERSONAL SUPPLIES: All students are required to have a 3-ring binder, pencil, eraser, **scientific calculator** (showing trigonometry functions – sin, cos, tan) and ruler.

SPECIAL NOTES:

Essential Mathematics is accepted by MOST faculties at University, and Post-Secondary Institutions. Check with a counselor to ensure that Essential Mathematics is a viable Elective for your chosen career path.

*Info about AP Calculus (for Grade 11 and 12 future planning):

AP MATHEMATICS 42S 1 credit		
Windsor Park is proud to offer AP Calculus Math. Mathematically talented students can obtain a university credit in mathematics before they finish high school if they follow the following schedule.		
Grade	Semester One	Semester Two
*Nine	Math 10F (in either semester)	
**Ten	Introduction to Pre-Calc and Applied (in either semester)	
***Eleven	Pre-Calc 30S	Pre-Calc 40S
Twelve	AP Calculus	
*A minimum mark of 75% is required in math 10F in order to take AP math. **A minimum mark of 75% is required in Introduction to Pre-Calc and Applied ***A minimum mark of 75% is required in both Pre-Calc 30 and 40 in order to take AP math.		

Compulsory Courses: Social Studies:

Social Studies Flow Chart:

Grade 9

Canada in the Contemporary World 10F



Grade 10

Geography 20F



Grade 11

History 30F

Grade 12

**although there are no compulsory courses in Social Studies in grade 12, students are encouraged to consider such courses as Global Issues: Citizenship and Sustainability, or Law.*

GEOGRAPHIC ISSUES 20F

1 credit

PREREQUISITE: Canada in the Contemporary World 10F

This course is designed to help students:

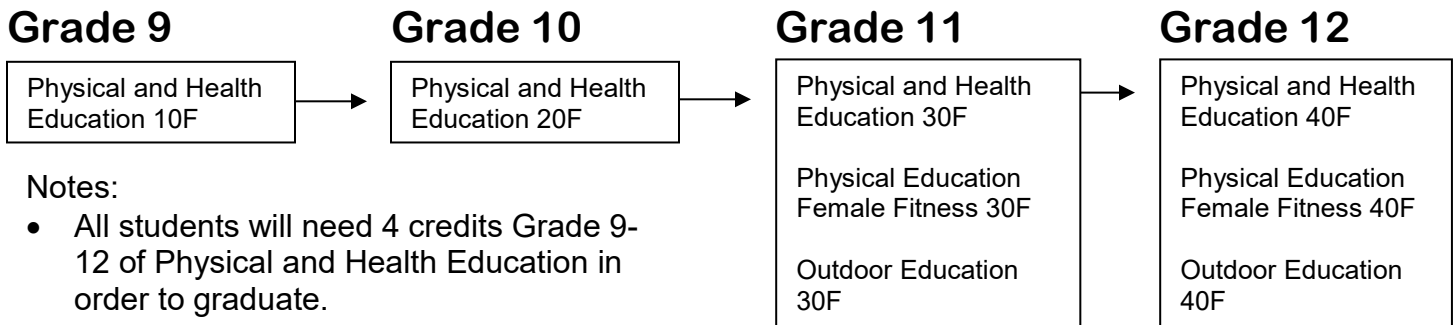
- Gain perspective on physical, social and political events and processes.
- Understand the processes that shape the earth and how living things interact with the environment.
- Understand interactions among groups of people.
- Engage in decision making and problem solving in planning, development, and environmental and resource management.
- Comprehend global interdependency.
- Make informed judgments about environmental and social issues.

Units of Study:

- Unit 1 – Geographic Literacy
- Unit 2 – Natural Resources
- Unit 3 – Food from the Land
- Unit 4 – Industry and Trade
- Unit 5 – Urban Places

Compulsory Courses: Physical and Health Education:

Physical and Health Education Flow Chart:



EQUIPMENT/PERSONAL SUPPLIES FOR ALL PHYSICAL EDUCATION COURSES

For safe and effective participation, students are expected to change into appropriate gym clothes for each class. Appropriate gym clothing includes a T-shirt, running shoes and gym shorts or track pants. A notebook and pen will be needed and a towel is recommended.

PHYSICAL EDUCATION AND HEALTH 20F

1 credit

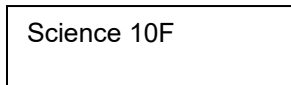
PREREQUISITE: Physical Education and Health 10F

The course general outcomes include development of movement skills, fitness management, safety, personal and social management, and healthy lifestyle practices. Activities will include team, dual and individual sports, leadership activities such as officiating, lifetime activities such as golf and tennis, alternate activities such as rock climbing, fitness programming, theory and classroom work.

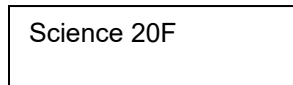
Compulsory Courses: Science:

Science Flow Chart:

Grade 9



Grade 10



Grade 11

Although there are no compulsory courses in Science in grade 11 and 12, students are encouraged to consider such courses as Chemistry, Biology and/or Physics.

Grade 12

Students interested in going to a university, college or other school after they graduate should make sure that they have the needed grade 11 and/or 12 electives.

SCIENCE 20F

1 credit

PREREQUISITE: Science 10F

Science 20F is a required course which prepares the student for further study in Biology, Chemistry, and Physics. The course is broken down into four Units.

- Chemistry in Action - prepares the student for the essentials needed to continue study in the science of Chemistry. Naming of compounds, balancing and classifying reactions are the main topics.
- Dynamics of Ecosystems – Prepares the student for the science of Biology. The unit deals with the chemical and biological cycles in nature.
- In Motion – Prepares the student for the science of Physics. This unit focuses on the calculation of motion; specifically displacement, velocity, acceleration and forces experienced in types of motion.
- Weather Dynamics – A unit that focuses on climate and creation of severe weather phenomenon.

EQUIPMENT / PERSONAL SUPPLIES

Students will be required to have a scientific calculator.

GRADE 10 ELECTIVE COURSES:

ARTS

ACTIVIST ART 20S

1 credit

PREREQUISITE: None

Activist Art will explore how artists create work that engages social and political issues. If you are interested in examining local and global injustice through art – this course is for you! Topics studied (but not limited to) are Indigenous Rights, Feminism, Poverty, LGBTQ Rights and Environmentalism. A variety of learning tasks such as discussions and journaling will deepen your understanding of the complexity of social and political issues. Create art on an issue(s) you are passionate about.

Studio Fee \$20

CONCERT CHOIR 20S- extra credit only (every other day at lunch class)

1 credit

PREREQUISITE: None

This is a performance oriented course. Students will perform as part of the Vocal Ensemble in a variety of venues and events. They will learn about the anatomy of the voice, and how to sing in a healthy manner through music of multiple genres. Students will also be exposed to different repertoire of popular acapella music groups via in-class and at-home listening.

REQUIRED MATERIALS

A Music Program fee of \$20.00 is charged for Choir unless the student is already registered in Band or Guitar. Method books and music sheets will be supplied by the school at no extra cost to the student. Students will also be expected to have simple concert attire, consisting of black dress pants, dress shoes, and a black or white dress shirt/blouse or similarly professional shirt. All students will require pencils and erasers for rehearsal marking.

SPECIAL NOTES

Choir typically takes place during the lunch hour on alternating days, and runs throughout the entire year. Being a performance and rehearsal-based course, students will be expected to attend and participate in all scheduled rehearsals, sectionals, and performances.

CONCERT BAND 20S

1 credit

PREREQUISITE: none

Concert Band is a performance-based course, with a focus on the skills required for making music as part of an ensemble. Instruction in theory, instrumental technique, improvisation, composition, and application of skills in the lifelong appreciation of music will also be given. Students at this level are expected to exhibit a degree of musical independence, with a particular focus on technique and ensemble skills. The Windsor Park Concert Band performs a diverse range of historical and contemporary music across a wide variety of genres. The band is highlighted by many performances throughout the year at special events, festivals, feeder school visits, evening concerts and on the spring music trip.

EQUIPMENT / PERSONAL SUPPLIES

Students using division-owned instruments will be charged a course fee of \$140.00 to defray the cost of the maintenance, cleaning, repairs and supplies. Students may instead rent or purchase their own instrument, if desired, which must be approved by the teacher and then a \$20.00 fee will be due at school. All related supplies (reeds, valve oil, etc.) will be provided by the school as available, but are ultimately the student's responsibility.

SPECIAL NOTES:

Students are expected to participate in all scheduled rehearsals, sectionals, concerts and performances. Independent preparation of individual musical parts is expected and required. Students should note that Concert Band 40S can be used as a university entrance credit.

DRAMATIC ARTS (DRAMA) 20S

1 credit

PREREQUISITE: None

Drama students learn about theatre by doing warm-up games, improvisations, scenes, exercises, and formal productions. Students learn about acting and theatre history with an emphasis on "getting out of your seat and doing it". To learn how to act, students have to actually do it.

The students will study:

- Improvisation and theatre sports
- Modern play scenes
- Theatre history
- Public performance

Special notes: Drama is especially beneficial for students wishing to study the performing arts, but it is also appropriate for all students looking for a creative outlet. A great deal of emphasis is placed on encouraging creative thinking and positive teamwork.

GUITAR 20S

1 credit

PREREQUISITE: None

This is a performance oriented course. Students will perform as part of the full Guitar Ensemble, in smaller groups and in solo presentations. Students will continue to develop their technical skills on the instrument and their abilities to read and write music. They will begin to learn about arranging music for small group performance.

EQUIPMENT / PERSONAL SUPPLIES

A fee of \$20.00 applies to all guitar students. Method books and music sheets will be supplied by the school at no extra cost to the student.

SPECIAL NOTES

The study of a music instrument is a lifelong endeavor which can provide hours of enjoyment during leisure time. The dedicated musician may further their study at the undergraduate level or pursue a variety of professional careers in music.

ELECTRIC GUITAR 20S

1 credit

PREREQUISITE: Music Guitar 10S

The aim of this course is to cultivate an understanding of the elements and structures of jazz music as it relates to the guitar. The improvisation component of jazz provides an excellent outlet for creativity and self-expression. The curriculum will focus on jazz theory and history, with an emphasis on performance.

JAZZ BAND 20S

1 credit

PREREQUISITE: Registration in Concert Band

Jazz Band is a performance-based course, with a focus on the skills required for playing jazz as part of an ensemble. Instrumentation includes trumpets, trombones, saxophones, guitar, piano, bass and drums. Band members will be given instruction in theory, instrumental technique, improvisation and composition, and will focus increasingly on their own playing style as section players and as soloists. The Windsor Park Jazz Band performs a diverse range of historical and contemporary music across a wide variety of genres. The band is highlighted by many performances throughout the year at special events, festivals, feeder school visits, evening concerts and a spring music trip.

EQUIPMENT / PERSONAL SUPPLIES

Students registered in Concert Band will not be charged for using a division-owned instrument in Jazz Band. Students may instead rent or purchase their own instrument, if desired. All related supplies (reeds, valve oil, etc.) will be provided by the school as available, but are ultimately the student's responsibility.

SPECIAL NOTES:

Students are expected to participate in all scheduled rehearsals, sectionals, concerts and performances. Independent preparation of individual musical parts is expected and required. Students should note that Jazz Band 40S can be used as a university entrance credit. Jazz Band is a full-year course.

MUSICAL THEATRE 20S

1 credit

PREREQUISITE: None

Students learn about Musical theatre through performing in the musical theatre production. Students from all four grades work in the same production, and study characterization, vocal projection, blocking, storytelling, and performance while sharing a creative adventure with other members of the cast.

Special notes: This is the entry level course for students in grades ten to twelve. Students do enter the course by audition, but previous training or experience is not required. Rehearsals are after regular school hours.

THEATRE PRODUCTION 25S

0.5 credit

PREREQUISITE: None

Theatre production students work on the technical requirements for the musical theatre production. Students learn about Stage Management, lights and sound operation, set design and construction, costume design and construction, and theatrical House Management.

Special notes: This is the entry level course for students from grades ten to twelve. Work on the musical theatre production occurs after regular school hours.

VISUAL ARTS 20S

1 credit

PREREQUISITE: None

Whether you are continuing your artistic journey or starting a new one, this course has something for you. The focus of the course is on the creative process and developing your artistic skills. Gain awareness of the variety of art created locally and globally. Dive into projects and be surprised by what you can achieve. Visual Arts allows students to investigate an assortment of media among fellow artists in a fully equipped studio. Studio Fee \$20

COMPUTER SCIENCE

COMPUTER SCIENCE 20S

1 credit

PREREQUISITE: Desire to learn a programming language, creativity and patience.

This introductory course in computer science is of interest to a broad audience. As Steve Jobs said "I think everybody in this country should learn how to program a computer because it teaches you how to think." Students will develop knowledge, skills, and attitudes applicable to situations beyond computer science. Students will learn how to work both independently and collaboratively in order to complete a series of projects and rich tasks. Students will use interactive programming software such as scratch, Alice and Greenfoot to produce original games and interactive stories that can be shared with a global audience. For more information on why you should take computer science visit <http://code.org>.

INFORMATION COMMUNICATION TECHNOLOGY

YEARBOOK

This stream has been created for students who are interested in applying computer technology to the production of the schools' yearbook. Students in Grade, 10, 11 or 12 can sign up for one course per year, and receive 1 credit per year in the completion of the yearbook. Students will learn methodology as it relates to industry and transfer those skills into the production of the yearbook. Typically the yearbook courses will be scheduled outside the normal timetable.

DIGITAL PICTURES & DESKTOP PUBLISHING - YEARBOOK 25S-Y

1 credit

PREREQUISITE: None

The purpose of this course is to provide students with the skills and knowledge to convey a message through an original image. Students will learn how to capture and manipulate a still image. Topics will include; Digital camera and how to use it, Adobe Photoshop and Picture manipulation. The focus will be on the schools yearbook. The desktop publishing component of this course allows students to plan and create a variety of published documents. Students will learn about, plan and produce print documents conforming to recognized standards. Topics will include; layout and design, photos and artwork, and print media. DIGITAL PICTURES 25S AND DESKTOP PUBLISHING 35S will appear on the official school transcript.

EQUIPMENT / PERSONAL SUPPLIES

Students may supply and use their own digital camera.

FRENCH

FRENCH: COMMUNICATION AND CULTURE 20F

1 credit

PREREQUISITE: French 10F

This course is designed to offer the student a more advanced level of sentence structure, grammar and oral competency. Students will write compositions, give oral presentations and discuss material presented in French.

EQUIPMENT / PERSONAL SUPPLIES

French/English dictionary, 3 Ring binder with loose-leaf, highlighter, pen.

HUMAN ECOLOGY

GENERAL INFORMATION

- All Home Ecology courses are worth 1 credit.
- There are no prerequisites for any Home Ecology course. The Provincial curriculum allows for much flexibility and is designed to be non-sequential. All courses are open to any grades 10, 11 and 12 students.
- Family Studies 40S and Foods and Nutrition 40S are approved admission courses at the University of Manitoba and University of Winnipeg.
- In order to offer as many choices to students throughout their years at WPC, we may be offering courses on a rotational basis from year to year.

CLOTHING, HOUSING, & DESIGN 20G

1 credit

PREREQUISITE: None

This is a hands-on course where the projects will be based on the experience the student has in the sewing lab. There are three required projects to ensure that each student can complete required skills in the lab and the remainder of the course consists of choice projects. The focus of the class will be design and construction of textiles and textile products. Supplies for required projects are available to students in the classroom. Many supplies are also available for choice projects but if specific materials or patterns are needed, they are the student's responsibility.

FAMILY STUDIES 20F

1 credit

PREREQUISITE: None

This course involves the examination of pregnancy, birth and the first year of life, including an infant's emotional, social, intellectual and physical development. A special project includes caring for a "computerized baby". Specific topics include: Readiness for Parenting, Parenting Styles, Conception, Pregnancy, Labor and Delivery, The Newborn, Feeding the Infant, The Infant's First Year, and Positive and Negative Aspects of Parenting.

FOOD AND NUTRITION 20G

1 credit

PREREQUISITE: None

In this course, students gain a greater understanding of the role of the 6 nutrients groups and explore the most current, science-supported advice about what to eat more of, and what to limit. They will discover the strong link between eating habits and lifelong health and wellness. Cooking days offer numerous opportunities to improve recipe reading abilities, measuring and knife skills. The recipes chosen are varied, with an emphasis on healthy, whole, every day food. Students also have opportunities to create their own variations of recipes.

EQUIPMENT / PERSONAL SUPPLIES

Students require a binder and pen for each class. All other necessary equipment for practical labs is supplied.

INDUSTRIAL ARTS

GRAPHIC COMMUNICATION TECHNOLOGY 20G

1 credit

PREREQUISITE: None

This area of study is designed to allow students to work effectively with materials, applications, equipment, and technology in the graphics field in order to communicate visually.

Some areas of study are:

- Image Generation
- Photography
- B/W Darkroom Processes and Photo Design
- Vinyl sign/sticker design
- Airbrushing

- Architecture and Residential Design
- Photo Screen Printing
- Digital Photography
- Graphic Art Design

Special Notes:

This course offers hands-on experiences and problem solving on a daily basis. Evaluation will be based on, individual assignments and projects, group assignments and projects, tests, quizzes, and problem solving procedures.

This course will be of interest to students who are considering a career in commercial art, printing, architecture, interior design, fine arts, drafting and design, electronic imagery, photography or a related field.

METALWORK TECHNOLOGY 20G

1 credit

PREREQUISITE: None

Metalwork Technology allows students to explore the processes involved in the manufacturing and fabrication of metal products with a “hands on” approach. CNC operations, aluminum sublimation. There is an emphasis on the elements of design and the design process which is utilized to create student projects. Projects will be manufactured using a variety of materials, computers, welding and machining technologies. Students’ projects range from wrought iron furniture, sheet metal cabinets, precision tool milling and engine lathe machining.

EQUIPMENT / PERSONAL SUPPLIES

Students are expected to come to class prepared to work, with a 3-ring binder, a pencil and an eraser.

SPECIAL NOTES

Due to safety concerns, there is a dress code in effect while attending Tech. Ed programs. Safety glasses are to be worn at all times.

PRE-ENGINEERING II CONCEPTS AND APPLICATIONS 21G (EP21G)

1 credit

PREREQUISITE: None

This course is an introduction to engineering which bridges the gap between pure science and pure technology. Using problem solving, experimentation and self-directed research projects students are given an opportunity to investigate and experience hands-on learning. Students will work cooperatively in teams to create, test, and communicate solutions to a variety of interesting challenges.

Additional Information: Pre-Engineering 15G is recommended but not required. Students should have the ability to meet deadlines, and work independently and cooperatively with others. This course places a strong emphasis on basic mathematical skills, design, applied physics, manufacturing processes and computer applications in engineering technology. Course work includes classroom lectures, hands-on opportunities and individual projects that provide students with a broad range of technical knowledge used by today's engineers. Major topics include:

Introduction to Engineering Principles

- Tools Materials & Processes
- Technical Writing
- Basic Electronics
- Pneumatics
- Hydraulics
- Mechanical Devices
- Drafting by Design
- Projects and Challenges
- Lab Safety

WOODWORK TECHNOLOGY 20G

1 credit

PREREQUISITE: None.

Woodwork Technology gives students the opportunity to learn “hands on” technical aspects of wood. Through instruction, fabrication and finishing methods, students will manufacture projects such as: cabinets, Intarsia and wood turnings. (Style and type of projects vary each year.)

EQUIPMENT / PERSONAL SUPPLIES

Students are expected to come to class prepared to work, with a 3-ring binder, a pencil and an eraser.

SPECIAL NOTES

Due to safety concerns, there is a dress code in effect while attending Tech. Ed programs. Safety glasses are to be worn at all times.