



Grade Eleven  
Course Handbook

WINDSOR PARK COLLEGIATE

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# Windsor Park Collegiate: Credit Check Worksheet

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 _____
Physical Ed. 10F <input type="checkbox"/>	Physical Ed. 20F <input type="checkbox"/>	Elective 30 _____	Elective 40 _____
Reading is Thinking 10S <input type="checkbox"/> _____	Elective _____	Elective _____	Elective _____
Elective _____	Elective _____	Elective _____	Elective _____
Elective _____	Elective _____		
Elective _____			

## Important Notes:

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.

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:

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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 the courses that you have successfully completed or will complete by the end of this year.

**Step Two:** Decide on what programs you wish to be a part.

- High School
- AP Calculus - Online
- Career Internship Program (CIP)
- Louis Riel Arts and Tech Centre (LRATC)
- Manitoba Institute of Trades and Technology (MITT)

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

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

**Step Five:** List five electives in order of priority from your first choice to your fifth choice. (Not all choices will be scheduled.)

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

**Step Six:** 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 on-line with a Student Services Teacher.

**Step Seven:** Look for Course Selection Sheet

**Step Eight:** Sign and return the Course Selection Sheet with Registration Fees of \$90.00 This will determine your official registration. Fees can now be paid online on the Portal.

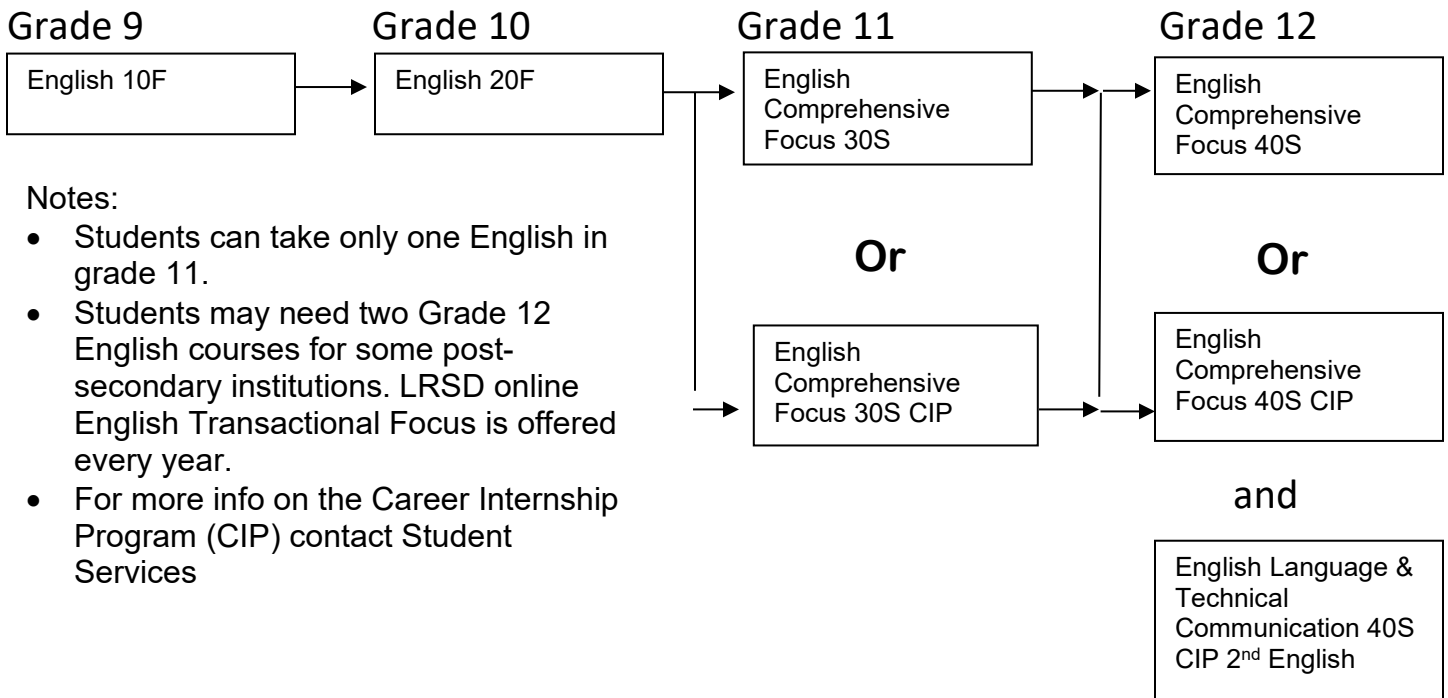
**Step Nine:** Timetables and opening day information will be posted on the Portal in late August.

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 may be 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 later.

# Compulsory Courses: English Language Arts:

## English Language Arts Flow Chart:



### Notes:

- Students can take only one English in grade 11.
- Students may need two Grade 12 English courses for some post-secondary institutions. LRSD online English Transactional Focus is offered every year.
- For more info on the Career Internship Program (CIP) contact Student Services

## ENGLISH LANGUAGE ARTS COMPREHENSIVE FOCUS 30S

1 credit

**PREREQUISITE:** English Language Arts 20F

This course develops students' ability to think critically and to function more effectively within their community. Students will be exposed to materials to further develop their literacy skills and enable them to respond to and interact with a variety of texts: short stories, poetry, drama, film, a Shakespearean text (*Macbeth*), magazines, newspapers, and the Internet as springboards for reflective and critical thought. Students are immersed in texts that inform, persuade, analyze, foster understanding and empathy, and reflect culture, express feelings and experiences. Essay forms are given more prominence at this level to provide a solid foundation for writing at the grade 12 level. The proper use of grammar, punctuation, spelling, and vocabulary in all assignments is emphasized. All students write a final exam worth 25% of their final grade.

## ENGLISH LANGUAGE ARTS COMPREHENSIVE FOCUS 30S -CIP

1 credit

**PREREQUISITE:** English Language Arts 20F

This course offers the traditional English experience with education, work and career planning integrated into it. Grade 11 CIP students engage in career pathing and skill-building activities alongside their regular English 30S curriculum. These activities include resume and cover letter writing, interview preparation, a job shadow experience with a local business partner, volunteering in the community, transferable skill development, participation in career development focused workshops and conferences, mentorship of younger students, and much more.

### Students will:

- Attend a live theatre production at the Royal Manitoba Theatre Centre.

- Participate in resume, cover letter, interview, and job search workshops.
- Complete up to a two-day job shadow experience in a career field of interest.
- Volunteer 20 hours in the community.

**Special Note:** Students taking ECOM30S-CIP pay a fee of \$40

## Compulsory Courses: Mathematics:

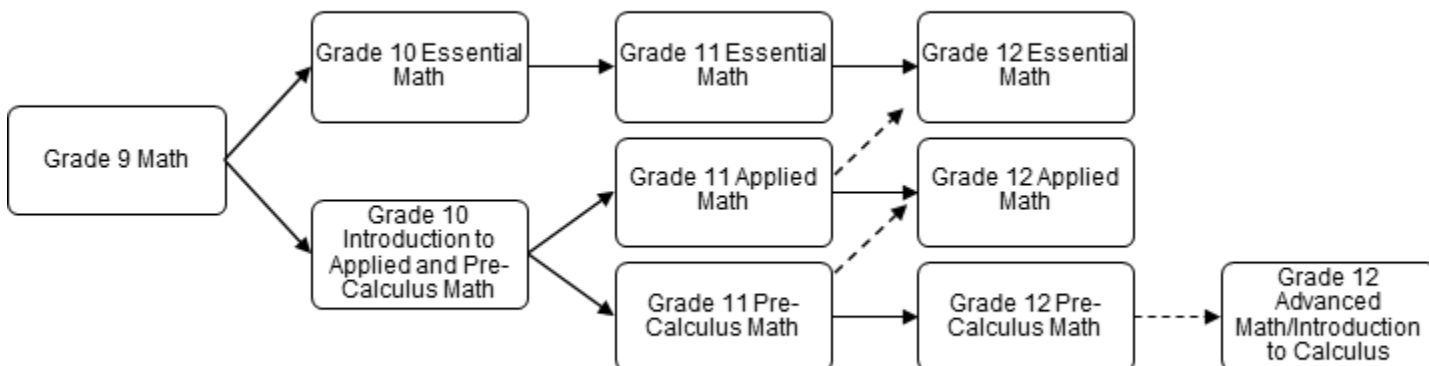
### *Mathematics Flow Chart:*

**Grade 9**

**Grade 10**

**Grade 11**

**Grade 12**



#### NOTES:

- Dashed lines - - - - indicate other possible choices.
- Taking at least one Math course is required at each grade level.
- Grade 12 Essential, Applied and Pre-calculus courses have final provincial achievement tests.
- When choosing a mathematics program, students should consider post-secondary requirements. Each of the mathematics programs is sequential, and is designed to meet different interests, learning needs and education/career goals of students. Students and parents are advised to consult with mathematics teachers and student services to decide the best program.
- Changing programs between Applied and/or Pre-Calculus and/or Essentials is allowed but can be difficult for students as they may be missing previously covered skills in that program. When students choose courses which best suit their needs and abilities, they have the greatest chance for success, now and in the future.

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### **ESSENTIAL MATHEMATICS 30S**

**1 credit**

**PREREQUISITE:** Essential Math 20S or Introduction to Applied and Pre-Calculus Math 20S

This course is intended for students whose post-secondary planning includes everything except a focus on mathematics and/or science-related fields. Essential Mathematics emphasizes consumer applications, problem-solving, decision

making, as well as number sense and number use. Students are expected to work both individually and in small groups on mathematical concepts and skills encountered.

**UNITS BY PROVINCIAL STRANDS:**

- Number Sense: Problem Analysis, Analysis of Games and Numbers
- Patterns & Relations: Interest and Credit, Managing Money, Relations and Patterns
- Shapes & Space: 3-D Geometry, Design Modeling
- Statistics & Probability: Statistics

EQUIPMENT / PERSONAL SUPPLIES: Students will be required to have a scientific calculator.

**SPECIAL NOTES:**

Essential Mathematics is accepted as a required Math credit for entry into some post-secondary programs, but not all. Please discuss your math choice with student services to ensure that it will be accepted by your chosen post-secondary institution.

**APPLIED MATHEMATICS 30S**

**1 credit**

**PREREQUISITE:** Introduction to Applied and Pre-Calculus Math 20S (minimum of 60% recommended)

Grade 11 Applied Mathematics is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. It builds upon the foundation knowledge and skills from Grade 10 Introduction to Applied and Pre-calculus Mathematics and prepares students for Grade 12 Applied Mathematics.

**UNITS BY PROVINCIAL STRANDS:**

- Number Sense – Logical Reasoning
- Patterns & Relations – Relations & Functions
- Shapes & Space – Geometry, Measurement, Trigonometry
- Statistics & Probability – Statistics

EQUIPMENT / PERSONAL SUPPLIES: Students will be required to have a Graphing Calculator. This can be borrowed from the school for the duration of the course or independently purchased. Please contact the teacher for the correct model before purchasing.

**SPECIAL NOTES:**

Applied Mathematics is accepted as a required Math credit for entry into some post-secondary programs, but not all. Please discuss your math choice with student services to ensure that it will be accepted by your chosen post-secondary institution.

**PRE-CALCULUS MATHEMATICS 30S**

**1 credit**

**PREREQUISITE:** Introduction to Applied and Pre-Calculus Math 20S (minimum of 75% recommended)

Grade 11 Pre-calculus mathematics (30S) is intended for students considering post-secondary studies that require a math prerequisite. This pathway provides students with the mathematical understanding and critical-thinking skills that have been identified for specific post-secondary programs of study. The topics studied form the foundation for topics to be studied in Grade 12 Pre-calculus Mathematics.

**UNITS BY PROVINCIAL STRANDS:**

- Patterns & Relations – Solving and Analyzing Quadratic Equations, Graphing Inequalities and System Equations, Rational Expressions and Equations, Sequences and Series
- Shapes & Space – Trigonometry

EQUIPMENT / PERSONAL SUPPLIES: Students will be required to have a scientific calculator.

**SPECIAL NOTES:**

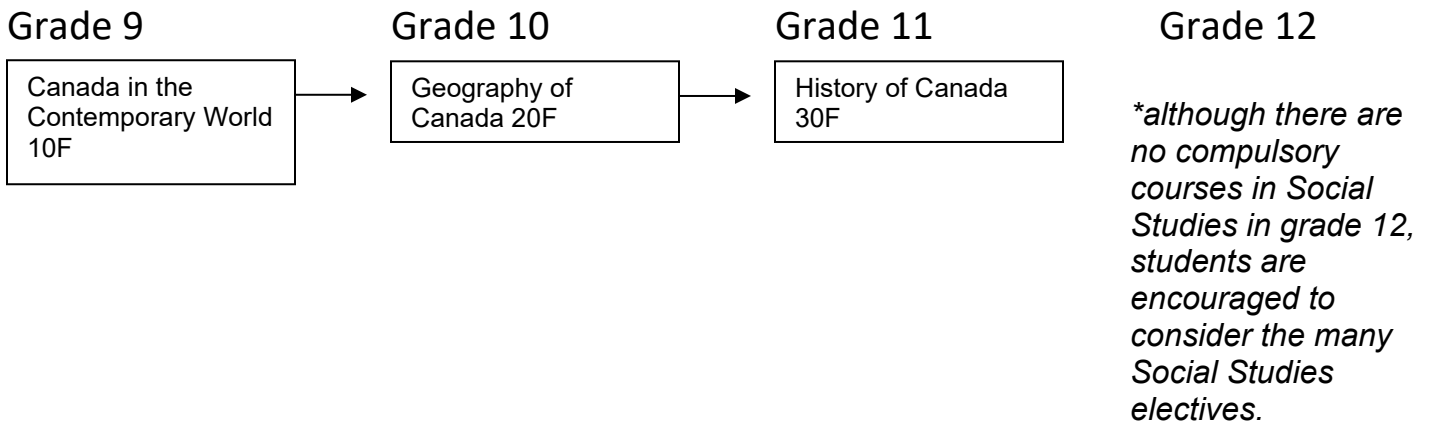
(70% in Grade 10 Intro to Applied and Pre-Cal is recommended)

<b>AP MATHEMATICS 42S 1 credit</b>		
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 one of the following schedules.		
Elective 1:		
<b>Grade</b>	<b>Semester One</b>	<b>Semester Two</b>
<i>Nine</i>	Math 10F (in either semester)	
<i>Ten</i>	Introduction to Pre-Calc and Applied (in either semester) **	
<i>Eleven</i>	Pre-Calc 30S***	Pre-Calc 40S***
<i>Twelve</i>	AP Calculus	
Elective 2:		
<b>Grade</b>	<b>Semester One</b>	<b>Semester Two</b>
<i>Nine</i>	Math 10F (in either semester) *	
<i>Ten</i>	Intro to Applied & Pre-Calc 20S	Pre-Calc 30S***
<i>Eleven</i>	Pre-Calc40S***	
<i>Twelve</i>	AP Calculus	
Elective 3: *this Elective will be extremely challenging as students will not have completed Grade 12 Pre-Calc before starting AP Calculus		
<i>Nine</i>	Math 10F (in either semester)	
<i>Ten</i>	Introduction to Pre-Calc and Applied (in either semester)	
<i>Eleven</i>	Pre-Calc30S (in either semester)***	
<i>Twelve</i>	Pre-Calc40S	Intro to Calculus
	Advanced Math 45S	AP Calculus
*A minimum mark of 75% is required in math 10F in order to take this track of 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:

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## Social Studies Flow Chart:



### **HISTORY OF CANADA 30F**

**1 credit**

**PREREQUISITE:** Geography 20F

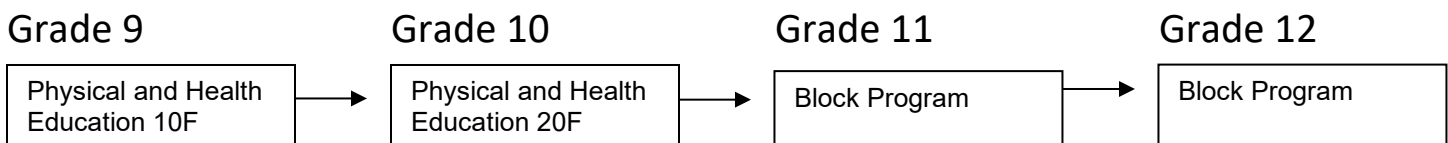
The Grade 11 History of Canada curriculum supports citizenship as a core concept and engages students in historical inquiry. Guided by **Essential Questions**, students focus on the history of Canada from pre-contact times to the present. Through this process students think historically and acquire **Enduring Understandings** related to the following five themes in Canadian history:

1. First Peoples and New France (to 1763)
2. British North America (1763-1867)
3. Becoming a Sovereign Nations (1867-1931)
4. Achievements and Challenges (1931-1982)
5. Defining Contemporary Canada (1982-present)

# Compulsory Courses: Physical and Health Education:

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## 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 30F (REGULAR)**

**1 credit**

**PREREQUISITE:** Physical Education and Health 20F



Students in Grade 11/12 have voice and choice with regards to earning their physical education credit. They do not have a physical education class assigned to their schedule. Instead, they will have a “spare” that would traditionally be their physical education class. They are required to attain 110 hours of physical activity to achieve their physical education credit. There are a few ways they can complete this credit. Students can sign up for 11 two weeklong activity blocks that occur during their spares. One block equates to 10 hours of physical activity. Activity blocks include orientation, low organizes games, volleyball, basketball, weight training, health, racquet sports, stick sports, outdoor activities, yoga, power walking and many more. Two of these blocks are mandatory: an orientation block at the beginning of the semester, and a health block. Students can also choose to accumulate practicum hours or flex blocks to use towards their credit. To accumulate blocks and hours, students may combine any of the following:

- A. In Class Blocks: 1 block = 10 hours
- B. Practicum hours: \*(MAX 50hrs): Practicum hours include moderate-vigorous physical activity that occurs outside of class time. Examples include involvement with extracurricular activities (basketball, hockey, volleyball, dance, gymnastics, etc.), exercising at the YMCA, and cycling or walking on evening and weekends. Students are required to discuss practicum hours with their physical education teacher and are reminded that 50 is the maximum amount of hours they can record towards their credit.
- C. Flex Blocks: 1 Flex Block=10hrs. These are offered periodically throughout the school year (evenings and/or weekends) and consist of activities such as: golfing, hiking, curling, biking, fishing, disc golf, referee clinics, skating, ski trips. 1 Flex Block = 10hrs
- D. A blend of all the above. For example, a student may complete 5 blocks (50 hours), 30 practicum hours (30 hours) and partake in 3 flex blocks (30 hours) for a total of 110 hours. Some students may do 6 activity blocks (60 hours) and 50 practicum hours (5 hours) for a total of 110 hours.

If a student is completing practicum hours, they are required to track them on an Excel document that will be provided to them during the orientation block. Students are required to participate in bi-weekly meetings with their assigned physical education teacher to ensure they are keeping up with their hours and blocks.

1 block contains 10 classes, and 10 hours total. If a student has more than 2 unexplained absences, they will not receive credit for that block. They will be responsible for signing up for a new block, or logging practicum hours if it fits with their schedule.

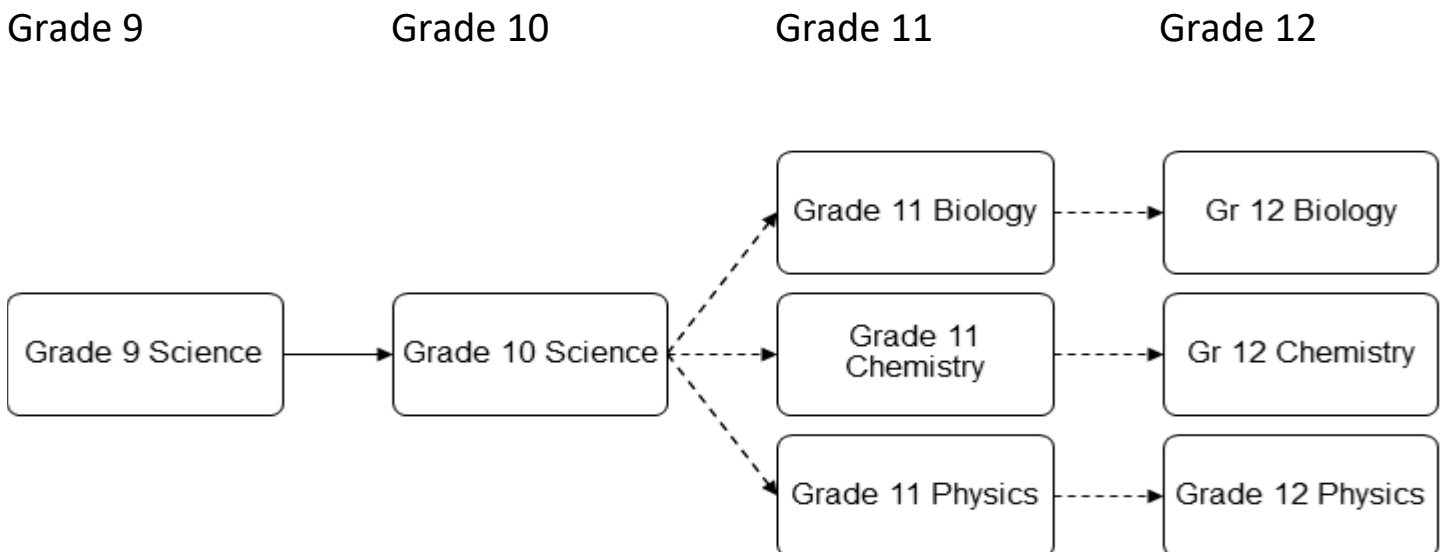
## Grade 11 Elective Courses:

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### SCIENCES

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#### Science Flow Chart:



NOTES:

- Dashed lines ----- indicate optional pathways.
- Grades 9 and 10 Science are compulsory. Science courses are optional in Grades 11 and 12.
- After graduation, students may wish to go to register in a post-secondary program. Some programs may have prerequisites courses. If you have not taken the required credits in high school, you will have to upgrade in post-secondary before beginning the program.

## **BIOLOGY 30S**

**1 credit**

**PREREQUISITE:** Science 20F

This is a course for students interested in continuing the “Study of Life”. The grade 11 biology course aims to familiarize students with the fundamental aspects of human biology. This course provides a good foundation for Grade 12 Biology and serves as an introduction to studies involving Human Anatomy.

**UNITS OF STUDY:**

- Wellness and Homeostasis – how the human body maintains itself.
- Digestion and Nutrition – structures of the Gastrointestinal system and their functions.
- Transportation and Respiration – structures of the Cardiovascular and Respiratory systems and their functions.
- Excretion and Waste management – structures of the Excretory system and their functions.
- Protection and Control – structures of the Immune and Nervous systems and their functions

## **CHEMISTRY 30S**

**1 credit**

**PREREQUISITE:** Science 20F and Introduction to Applied Math and Pre-Calculus Math 20S (Essential Math 20S (minimum 70%) can be used as a prerequisite for Chemistry 30S but if the student wishes to continue to Chemistry 40S, Pre-Calculus or Applied Math is required in grade 11).

This course builds on what was learned in the chemistry unit of Science 20F. The course focuses on theoretical and mathematical aspects of the interactions of matter. Students will also use experiments to further their understanding of the topics.

**UNITS:**

- Physical Properties of Matter – explains how matter behaves during physical changes.
- Gases and the Atmosphere – explains how gases behave during temperature and pressure changes.
- Chemical Reactions – quantitatively explores chemical reactions.
- Solutions – deals with solubility and concentration.
- Organic Chemistry – deals with naming and reactions of organic molecules.

**EQUIPMENT / PERSONAL SUPPLIES:** Students will be required to have a scientific calculator.

## **PHYSICS 30S**

**1 credit**

**PREREQUISITE:** Science 20F, Intro to Applied Math and Pre-Calculus Math 20S (Recommended)

This course is designed for students with stronger math skills. Many topics deal with problem solving with mathematical formulas as well as theoretical explanations. The units include:

- Waves – sound and mechanical waves.

- The Nature of Light – electromagnetic waves.
- Mechanics – further explores how and why objects move using graphs and equations.
- Fields – gravitational, electric, and magnetic fields.

#### EQUIPMENT / PERSONAL SUPPLIES

Students will be required to have a scientific calculator.

#### SPECIAL NOTES

Physics 30S is a demanding course and requires a strong mathematical background. Physics is required for students who intend to enroll in the faculties of Engineering and Dentistry and is strongly recommended for entrance into the faculties of Computer Science and Medicine in Manitoba.

## COMPUTER SCIENCE

### COMPUTER SCIENCE 30S

**1 credit**

**PREREQUISITE:** Computer Science 20S (Recommended)

This introductory course in computer science is intended for students who are interested in expanding their coding skills through problem solving and game design. Students will develop knowledge, attitudes, and skills applicable to coding and problem solving beyond computer science. Students will learn programming skills and apply them to game design from the approach of solving problems such as "how do you detect interactions between a player and an enemy?" and "how can you code realistic physics in a space-themed game?" . Students will focus on the Java programming language and use interactive software such as Greenfoot and Processing to produce original interactive games that can be shared with a global audience. Confidence in basic Math skills and spatial reasoning is strongly recommended for enrollment in Computer Science.

## ARTS

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### CONCERT BAND 30S

**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, composition, and application of skills are the primary focuses of this course. Students at this level are expected to exhibit a degree of musical independence with a particular focus on technique and ensemble skills. The band is highlighted through performative work such as concerts, in class presentations and playing tests. The intention of this course is to develop an appreciation for the fun of making and listening to music.

#### EQUIPMENT AND PERSONAL SUPPLIES

Students using division owned instruments will be charged a course fee of \$100, in addition to the \$20 general course fee. This is to account for the cost of maintenance, cleaning, repairs, and supplies. Students may rent or purchase their own instrument which must be pre-approved by the teacher.

### DRAMA 30S

**1 credit**

**PREREQUISITE:** None

This is a performance-based course. Drama students learn about theatre by engaging in warm-up games, improvisation, scene work, exercises, and formal productions. This course emphasizes group work and the

development of introspection. Class activities vary from year to year, with potential areas of study including theatre sports, stage make-up, tableaux, theatre history, stage combat, and the technical aspects of theatre.

Course fee: \$20

## **GUITAR 30S**

**1 credit**

**PREREQUISITE:** Music Guitar 20s recommended.

This is a performance-oriented course. Students will perform as part of the full Guitar Ensemble, in smaller groups and in solo presentations. More emphasis will be placed on small group work. Students will expand their familiarity with the entire fret board. An increasingly divergent range of styles and playing techniques will be studied.

### **EQUIPMENT / PERSONAL SUPPLIES**

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

## **MUSICAL THEATRE/ THEATRE PRODUCTION 30S**

**1 credit**

**PREREQUISITE:** None

These courses develop a stronger understanding of musical theatre through the performance and production of an annual school show. Note that this course is not offered during the regular school day. Rehearsals, performances, set up, and building often take place after school hours and on weekends.

### **PERFORMANCE STUDENTS**

Students from all grades will study characterization, vocal projection, blocking, storytelling, choreography, and performance while sharing a creative adventure with other members of the course. Although there is no prerequisite for this course, this class does require an audition. If not selected for an on-stage role, students are encouraged to participate in the production course.

### **PRODUCTION STUDENTS**

Theatre production students work on the technical requirements for the show. Students learn about stage management, lighting, sound operation, set design and construction, costume design and construction, and theatrical house management.

Course Fee: \$35.00

## **VISUAL ARTS 30S**

**1 credit**

**PREREQUISITE:** None

Whether you are continuing your artistic journey or starting a new one, this course has something for you. Initial projects are designed to lead students towards independent exploration which provides the opportunity for students to control their learning by designing their own projects and art medium choices. With the support of the teacher, you will build confidence and acquire skills to strengthen your artistic voice. Create art that is challenging and meaningful to you. Special support will be given to those compiling a portfolio for future pursuits.

Studio Fee: \$30

## **FRENCH**

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### **FRENCH – COMMUNICATION AND CULTURE 30S**

**1 credit**

**PREREQUISITE:** French 30F

This course is a participation-based course where students acquire French communication skills such as reading, writing, listening, and speaking while learning about French culture in Canada and around the world. A heavier emphasis is placed on the acquisition of spoken language. Be ready to speak and interact with your peers daily through small group activities, songs, and lots of games.

## **HUMAN ECOLOGY**

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### **GENERAL INFORMATION**

- All Home Economics courses are worth 1 credit.
- There are no prerequisites for any Home Economics 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.
- To offer as many choices as possible to students throughout their years at WPC, we may be offering courses on a rotational basis from year to year.

### **TEXTILE ARTS & DESIGN 30G**

**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 is one required project 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 30S**

**1 credit**

**PREREQUISITE:** None

This course involves the study of the physical, social, emotional, and intellectual development of an individual from toddler through to preschool and the factors that influence this development.

Specific topics include: Role of parenting and caregiving, Toilet training, Toys and play, Language and development, Feeding, Health and safety, Independence, Guiding Behavior, Day Care, Home Routines, Children with Special Needs, Child Abuse, Sex Roles and Sibling Relationships. Options for professions involving children will also be studied.

### **FOOD AND NUTRITION 30G**

**1 credit**

**PREREQUISITE:** None

This course promotes the development of personal health by exploring the psychology of food choices and self-assessment of eating habits. Students will participate in the Safe Food Handlers course and are able to achieve

the Manitoba Safe Food Handlers Certificate. Current trends in eating behaviours are analyzed and critiqued including eating disorders and fad diets. A unit on sports nutrition covers the basic nutritional needs of an athlete as well as the issues of food supplements. We celebrate cultural diversity within the various regions of Canada; the food industry unique to Manitoba and explore Indigenous food traditions.

A course highlight are the cooking classes where students develop recipe reading skills and general cooking abilities. A variety of recipes are created which challenge students' abilities, introduce them to a variety of kitchen tools and expand their repertoire.

## HUMANITIES

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### **Land-based Learning: Wahkohtowin 30S**

**1 credit**

**Prerequisite:** None

The Grade 11/12 Land-based Learning course supports the empowerment of students through hands-on and experiential learning opportunities provided on the land and in local community spaces. Students will participate in off-site activities including, wood-cutting, gathering and harvesting of plants and medicines, shoreline and ice fishing, berry picking, preparing and storing food from the land, historical and science-based walking tours, and Indigenous perspectives in community places and spaces. Learners will engage with various community members and teachers throughout the course with specific emphasis on storytelling, sharing, and relationships. Students will consider their identity in relation to their learning and will be provided opportunities to reflect upon concepts such as belonging, mastery, independence, and generosity as it relates to life and land.

### **EAL 11G/21G/31G**

**1 credit**

**Prerequisite:** None

Students will work towards improving their listening, speaking, reading, and writing skills for English as an Additional Language for academic purposes. Each course code represents one stage or level the student has achieved beginning with Stage 1 (11G) up to Stage 3 (31G) with the possibility of earning 3 credits for English. Multilanguage Learners (MLL) are encouraged to read and write to expand their vocabulary and are given the opportunity to practice oral skills through presentations to increase confidence. After students have completed the 3 stages (11G, 21G,31G), they are ready to function independently in all academic courses.

## INDUSTRIAL ARTS

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### **METALWORK TECHNOLOGY 30G**

**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. Small engine repair included and a strong focus of career explorations in related trades.

**Areas of study:** Oxy acetylene welding, Mig welding, Plasma cutting, CNC operations, Aluminum sublimation, Layout and design, Problem solving, General metal working

**Possible Projects:** Motorized go carts, power scooters, tree stands, mig cube, screwdrivers, skateboard rails, outdoor firepit, wood burning meat smokers, pizza cutters, magnetic pick-up tools to name a few.

## **WOODWORK TECHNOLOGY 30G**

**1 credit**

**PREREQUISITE:** None

The initial phase of this course zeroes in on the art of furniture design and cabinet making. Students will embark on creating a substantial project based on a set of detailed plans. This hands-on experience lays the foundation for mastering essential skills in crafting larger-scale wooden pieces. As we progress, the course takes an exciting turn towards student choice. In this phase, you are the architect of your woodworking journey. You get to decide and dive into projects that genuinely interest and excite you. The spotlight is on your creativity as you explore various areas within woodworking, honing in on the aspects you wish to learn or expand your knowledge on.

**Areas of study:** Safety, Layout and design, Project planning, Wood joinery, Fine measurement, Drawer and door creation, Career paths, Hand tools, Power Tools and Machinery, Finishing Techniques, CNC technologies and Measurement.

**Possible Projects:** Bedside cabinets, End tables, Guitars, Desks, Books shelves, Entertainment units, Storage systems, Wooden Paddles and Outdoor Furniture

## **GRAPHIC COMMUNICATION TECHNOLOGY 30S**

**1 credit**

**PREREQUISITE:** None

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

This course offers hands-on experiences and problem solving daily. Evaluation will be biased on individual assignments, projects, group problem-solving activities, and self reflection. This course will be of interest to students who are considering a career in commercial art, architecture, interior design, fine arts, drafting and design, electronic imagery, photography or other related fields.

**Areas of study:** Computer generated design, Desktop publishing, introduction to animation, introduction to practical photography, Basic house planning and layout, Advertising and design, Industry norms.

**Possible Projects:** Cartoon yourself, 3D Airbrushing, Photography challenges, 2 colour T-shirt design, Cyberpunk effects, and much more.

## **Electronics/Robotics 30S**

**1 credit**

**PREREQUISITE:** None

This course provides both theory and practical experiences, as well as 3D modeling and problem-solving opportunities.

For the robotics portion students will build various robots; both user controlled and autonomous (coded); for classroom-based competitions. Using an Engineering notebook to record data, game strategies and iterations to effectively reflect on their learning, students will exercise soft skills to share ideas and collaborate. Utilizing the Engineering design loop, students will adapt base robot builds to make the experience their own.

**Competitions Include:**

**Platform Placer:** Students will create manipulators to move, place and arrange balls, platforms and rings combining robot design and driver skills.

**Treasure Hunt:** Students will code robots with manipulators and optical sensors to collect red balls and hoard them for their team, while avoiding all other colors of balls.

**Skills Manitoba:** This competition changes yearly but as a Provincial competition it provides students the opportunity to show off their skills against other Manitoba schools. Winning students represent their province in Nationals which requires traveling to the hosting city that year.

The electronics portion has students working with coding and Arduino technology to create various complex circuits for projects including a traffic light controller and smart night lamp.

## **Engineering Design 30S**

**1 credit**

**PREREQUISITE:** None

This course builds upon Pre-Engineering 15G and 20G and is recommended but not a requirement. Students will be given objectives for each project, then tasked with creating a solution and with the use of our advanced machines and trial and error, they will construct their idea and make adaptations where needed. This course is all about self-guided learning, so be prepared to take the lead. An open mindset is key as you navigate through challenges, makes adaptations, and refine your creation. Get ready for a hands-on, advance experience in engineering!

**Areas of study:** Mechanical engineer, Structural Engineering, Electronics, and Pneumatics/Hydraulics, Alternative Energies

**Possible Projects:** Mouse trap cars with custom gears, product improvements, rube Goldberg machines, and much more

## **INFORMATION COMMUNICATION TECHNOLOGY**

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### **YEARBOOK 30S**

**1 credit**

**PREREQUISITE:** None

Yearbook 30S delves into DSLR photography, offering students tips to master the craft. Students capture diverse high school moments, from sports to classrooms. The course focuses on refining photography skills, layout, and design, teaching the artful arrangement of photos, color selection, and text integration for an appealing yearbook. The practicum project involves students collaboratively creating and publishing the school's yearbook.

## **Secondary Education Information**

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Graduating from high school does not automatically qualify students to attend university and/or college. Each Post-Secondary Institution has its own set of entrance requirements and criteria. Visit the websites for the most



up to date information on program entrance requirements. If you are unsure, about your course selection, make an appointment in the Academic Centre to go over your choices.

A general rule for schools in Manitoba – you will need 5, grade 12 level courses – not including Phys. Ed.

University of Manitoba – [www.umanitoba.ca](http://www.umanitoba.ca) – click on Future Students on the Home page.

University of Winnipeg – [www.uwinnipeg.ca](http://www.uwinnipeg.ca) - click on Future Students on the Home page.

Red River College – [www.rrc.mb.ca](http://www.rrc.mb.ca) – click on Programs & Courses on the Home page

Louis Riel Art and Technology Centre & Winnipeg Tech Centre: [www.lrsd.net/atc](http://www.lrsd.net/atc) click on Programs & Services