WELCOME

Congratulations and welcome to your first year at the University of Manitoba! This is an important and exciting year! As a first year student, you will need to make decisions about your course selection, choice of faculties, and career options.

To support your transition to university, we have designed this First Year Planning Guide to help you choose and register for courses in your first year.

This guide is interactive. You can click any underlined and bold words for more information. Click course codes **ex. BIOL 1020** for specific course descriptions.

**STEPS TO REGISTER FOR CLASSES**

1. **ACCEPT YOUR OFFER OF ADMISSION**
   Go back to your admission offer letter and click on the Accept button. This will take you to your online application portal, where you can follow the instructions to accept your offer.

2. **CLAIM YOUR UMNetID**
   Your UMNetID gives you access to Aurora, your student e-mail, Microsoft Teams, UM Learn, online library resources, campus WiFi, and more.

3. **CHOOSE YOUR TARGET DEGREE PROGRAM(S)**
   Use the First Year Planning Guide to review the degree and program options available at UM.

4. **CHOOSE YOUR COURSES**
   Review the program planning pages in the First Year Planning Guide to determine which courses to take in your first year and the requirements for your target degree program.

5. **CREATE YOUR TIMETABLE**
   Follow the step by step instructions in this guide to create a schedule for your classes.

6. **REGISTER FOR COURSES**
   You’re almost there! Once you’ve created a timetable, log in to Aurora and select Open Registration Dashboard to take the last step and register for courses.
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### QUICK LINKS

### Additional Resources
- New Student Checklist
- Get Ready to Register Sessions
- Popular Questions
- How Do I?
DEFINITIONS YOU NEED TO KNOW

University has a language all of its own! Knowing the terms and definitions will help you to make informed decisions. Here are some terms you may encounter as you prepare for your first year.

ACADEMIC CALENDAR – UM’s official publication containing course descriptions, program and graduation requirements, as well as UM and faculty/school specific rules, regulations and policies. Available at umanitoba.ca/calendar.

AURORA – single-sign on launch page used to access many UM systems and resources. Students will use Aurora cards to register for classes, check their fees, view their class schedule, and access their student records and final grades. Available at aurora.umanitoba.ca.

COREQUISITE – A course that must be completed in the same term as a second course.

COURSE ADD DEADLINE – The last day you can register/add a course in a term. Check the Important Dates and Deadlines to determine the deadline for each course.

COURSE DROP DEADLINE – The last day you can drop a course in a term. Courses dropped by this deadline do not appear on your academic record and you will not have to pay for the course. Check the Important Dates and Deadlines to determine the deadline for each course.

CREDIT HOURS – The hours of credit assigned to a course. 3 credit hour courses run over one term (ex. September-December, January-April). 6 credit hour courses run over two terms and are called ‘spanned’ courses.

DISTANCE AND ONLINE EDUCATION – Online courses that do not include a scheduled lecture time where you need to be logged in. Students complete course work independently, on their own time.

ELECTIVES – Most programs have a certain number of credit hours that you are free to choose. An elective may be any course from the Recommended Introductory Courses List.

GRADE POINT AVERAGE (GPA) – A number representing the average value of final grades.

INITIAL REGISTRATION TIME – The day and time when you are given access to Aurora to begin your registration.

LABS/TUTORIALS – Instructional teaching periods for practical hands-on learning in addition to lecture time.

LECTURE – Time spent in class for course instruction.

(M) MATHEMATICS REQUIREMENT – All students at UM are required to complete a minimum of one 3 credit hour course with significant content in mathematics. Some programs require a math course(s) for admission. Courses in the First Year Planning Guide that satisfy the mathematics requirement are noted with an (M) after the course code.

‘MAY NOT BE HELD WITH’ – Some courses have significant content overlap and may not be held for credit together. (ex. BIOL 1000 and BIOL 1020). Review a course’s description in the Academic Calendar.

PREREQUISITE – A course which must be satisfactorily completed before a more advanced course may be taken. When registering for courses, add the prerequisite course first.

REGULAR SESSION – The academic session when courses are offered between the months of September to April.

SPANNED COURSE – A class that is scheduled over multiple terms of study, usually Fall-Winter or Winter-Summer.

SUMMER TERM – The academic session when courses are offered in the months of May, June, July and August.

SYLLABUS – An outline of the entire course which includes all assignment and test dates as well as the grading scale used for the course.

TARGET DEGREE PROGRAM – Your faculty or school of choice.

UM LEARN – The University of Manitoba’s online learning management system where you can access course information and materials. Available at umanitoba.ca/umlearn.

UNDERGRADUATE DEGREE – The first degree program completed within university-level studies. For example, Bachelor of Arts (B.A.) or Bachelor of Science (B.Sc.).

VOLUNTARY WITHDRAWAL (VW) – VW is when you drop a course between the Course Drop Deadline and the VW Deadline. When you VW from a course, it will remain on your academic record, but you will not receive a final grade. You will still owe the full tuition fees (tuition is not refunded).

(W) WRITTEN REQUIREMENT – All students at UM are required to complete a minimum of one 3 credit hour course with significant content in written English. Some programs require a written course(s) for admission. Courses in the First Year Planning Guide that satisfy the written requirement are noted with a (W) after the course code.
HOW TO USE THIS GUIDE

1. Start by browsing the Faculties and Programs List.
   This list shows all the degree programs available at the University of Manitoba.

2. Read the degree program page for the specific program you’re interested in.
   Make sure to read all of the information included on each degree program page, as you will learn tips on how to choose your courses, high school prerequisites and more!

3. If you’re interested in more than one degree program, compare the program pages.
   See if there are any overlapping courses that can help you fulfill requirements for the different degree programs you’re interested in. Registering in these common courses is a great way to keep your options open.

4. Don’t forget to read the Minimum Admission Requirements and the Tips for Choosing Courses section.
   These sections will clarify what the minimum course load requirements are to be eligible to apply to your target degree program and make suggestions about which courses you should consider taking.

5. Continue reading the next few pages on Course Planning Basics, Timetabling, and Registration.
   These pages will help you take the information from a degree program page and create your own course plan and timetable. Make sure to attend or view the Get Ready to Register Sessions for more in-depth info from an Academic Advisor.

6. Connect with an Academic Advisor.
   After viewing a Get Ready to Register Session and completing a Course Planning Form, we strongly encourage you to meet with an Academic Advisor to review your courses before you register in Fall or Winter courses. An Academic Advisor can’t create your course plan for you, but they can review your plan and give you feedback or advice!

7. Keeping coming back to the First Year Planning Guide!
   We encourage students to return to this guide throughout their first year, especially if you’re making academic decisions like adding a course or applying to your target degree program.

8. Not sure which degree program is right for you?
   That’s OK! To help you choose courses for your first year, review the Undecided program page.

9. Clarify your career path!
   Explore your options with career planning resources or connect with Career Services to meet with a Career Consultant. Map out your career pathway from the start of your academic journey and see where you can go with your degree program using the Career Compass.

FACULTY OF SCIENCE
COMPUTER SCIENCE

COMPUTER SCIENCE, B.Sc.
Honours and Four Year Major degrees are available.

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1001 Introduction to Computer Science 1 or COMP 1002 Computer Programming for Scientists and Engineers</td>
<td>3</td>
</tr>
<tr>
<td>COMP 1020 Introductory Computer Science 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1240 Applied Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300 (W) Vector Geometry and Linear Algebra or MATH 1310 (W) Linear Algebra 1 or MATH 1320 (W) Linear Algebra 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300 (W) Techniques of Mathematical and Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 Introduction to Calculus 1 or MATH 1320 (W) Differential Calculus or MATH 2500 (W) Applied Calculus 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1720 (W) Calculus 2 or MATH 1322 (W) Vector Calculus or MATH 1722 (W) Applied Calculus 2</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1500 Introduction to Statistics and Computing</td>
<td>3</td>
</tr>
<tr>
<td>Faculty of Arts courses, including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Computer Science Honours or Major program, students must complete 24 credit hours, including:

- COMP 1001
- MATH 1300 (W) or MATH 1310 (W)
- or substitutions listed in the chart

Minimum grades in required courses are outlined in the Academic Calendar Computer Science Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES

- If you do not have any previous programming experience and/or you did not take Computer Science 42D in high school, you’re strongly encouraged to take the elective COMP 1001 before COMP 1012 or COMP 1022.
- COMP 1001, COMP 1012, or COMP 1022 is recommended as an elective in your first year.
- If you choose to take COMP 1001 or COMP 1012 as an elective, it must be taken before declaring your major.
- Include a Written (W) course as part of the Faculty of Arts course(s) as part of your elections, choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000 level courses, where applicable.
COURSE PLANNING BASICS

Here is some basic information about courses to help you in your planning:

- Courses are offered in two different terms during the Regular Session (September to April).
- Each course has a credit hour value: usually 3 or 6
- You may take anywhere from 1 course per term (3 credit hours) up to 5 courses per term (15 credit hours) during the Regular Session.
- Courses are also offered in summer. For more information, review the *Summer Term Planning Guide*.

<table>
<thead>
<tr>
<th>Course(s) per Term</th>
<th>Credit Hours for One Term</th>
<th>Credit Hours for Both Terms</th>
<th>Course Load (%)</th>
<th>Student Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 course</td>
<td>3 credit hours</td>
<td>6 credit hours</td>
<td>20%</td>
<td>Part-time</td>
</tr>
<tr>
<td>2 courses</td>
<td>6 credit hours</td>
<td>12 credit hours</td>
<td>40%</td>
<td>Part-time</td>
</tr>
<tr>
<td>3 courses</td>
<td>9 credit hours</td>
<td>18 credit hours</td>
<td>60%</td>
<td>Full-time</td>
</tr>
<tr>
<td>4 courses</td>
<td>12 credit hours</td>
<td>24 credit hours</td>
<td>80%</td>
<td>Full-time</td>
</tr>
<tr>
<td>5 courses</td>
<td>15 credit hours</td>
<td>30 credit hours</td>
<td>100%</td>
<td>Full-time</td>
</tr>
</tbody>
</table>

Review the *Faculties and Programs List* for your target degree program, then use this course planning form to plan your Fall and Winter Terms.

**FALL**
September to December

1. **MATH 1500 (M) + lab**
2. **HIST 1420 (W)**
3. **PSYC 1200 (Part A)**
4. 
5. 

**WINTER**
January to April

1. **MATH 1700 (M) + lab**
2. **PHIL 1290**
3. **PSYC 1200 (Part B)**
4. 
5. 

3 credit hour courses run over one term.
6 credit hour courses run over both terms and are called ‘spanned courses’.

Review the *Faculties and Programs List* for your target degree program, then use this course planning form to plan your Fall and Winter Terms.
DETERMINE YOUR COURSE LOAD

Deciding the number of courses you will take in your first year will depend on many factors, and it differs for every student. After reviewing the program pages for each degree program you are interested in, you should then review the considerations about course load below:

1-2 Courses Per Term (Part-Time)

- Can be a good option if you have significant commitments outside of school (ex. a job or sports commitment).
- Taking 1-2 courses (3 or 6 credit hours per term) means your student status is "part-time." This may make you ineligible for certain types of funding (ex. certain scholarships, student loans, sponsorships) or student benefits (ex. Health coverage, U-Pass).
- Contact the Financial Aid and Awards office to confirm what course load meets your specific situation.
- If you are an international student, please contact the International Centre to determine if you are required to be a full-time student during the Fall and Winter Terms.
- You may not have enough credit hours to apply for your target degree program after your first year.

3 Courses Per Term (Full-Time)

- 3 courses per term (9 credit hours per term) means your student status is "full-time."
- This if often a minimum requirement for government student loans, study permits for international students or sponsorships.
- You are eligible for certain student benefits (ex. UMSU Health and Dental).
- You may not have enough credit hours to apply for your target degree program after your first year.

4 Courses Per Term (Full-Time)

- 4 courses per term (12 credit hours per term) means your student status is “full-time.”
- Many degree programs at UM require that students complete a minimum of 24 credit hours to be eligible to apply.
- Some scholarships (including Entrance Scholarships) require that students must take an 80% course load, which is 4 courses per term.

5 Courses Per-Term (Full-Time)

- 5 courses per term (15 credit hours per term) means your student status is “full-time.”
- 5 courses per term is the maximum most first year students can register in.
- If you register in 5 courses per term, we recommended that other commitments (ex. employment, social commitments etc) be kept to a bare minimum.
- It can be challenging to balance this course load while also adjusting to the new expectations of university.
- There are some degree programs at UM where you must take 5 courses/15 credit hours per term if you would like to apply by the end of your first year.

If you have any questions about determining your course load, contact an Academic Advisor in the First Year Centre.
STEPS TO CREATING YOUR TIMETABLE

After you decide which courses you want to take, you will need to create a timetable. Courses are offered at various times throughout the week. It is up to you to make a schedule that best suits your lifestyle and commitments.

1 DOWNLOAD OR PRINT A TIMETABLE PLANNING FORM

In Aurora, days of the week are listed as:

- M = MONDAY
- T = TUESDAY
- W = WEDNESDAY
- R = THURSDAY
- F = FRIDAY

Lectures are usually three hours a week:

- Mondays/Wednesdays/Fridays (MWF) 50 minutes (10 minute break in between class times)
- Tuesdays/Thursdays (TR) 75 minutes (15 minute break in between class times)
- Evening classes 3 hours, once a week

Some courses also have a lab component:

- Labs for Science courses
  - Generally 3 hours, once a week (ex. Biology, Chemistry, Physics)

- Labs for Mathematics or Arts courses
  - Generally 1 hour, once a week (ex. Mathematics, Languages)

Distance and Online Education sections of a course (ex. D01, D02) have no scheduled class time, so you can do the coursework on your own time.
2 IDENTIFY WHEN CLASSES ARE OFFERED

You will need to plan your timetable using information found in Aurora, the University of Manitoba’s online registration and student information system.

Watch How to Register Using Aurora

In Aurora, use the Look Up Classes function to search for courses you’d like to register in. Make sure to carefully read all the text in the course entry on Aurora, as this includes essential information.

Sec = Sections:
- Lecture (A)
- Labs/tutorials (B)
- Distance and Online Education courses (D)
- Lecture sections that include a field trip/field work start with K (ex. K01)

Days and times the course is offered:
- M = Monday
- T = Tuesday
- W = Wednesday
- R = Thursday
- F = Friday

CRN:
- 4 or 5 digit Course Reference Number

Cap = Capacity:
- Maximum number of students that can be enrolled in this section

Act = Actual:
- Number of students actually enrolled

Rem = Remaining:
- Number of remaining spots

WL Act = Waitlist Actual:
- Number of students on the waitlist
- For more info on waitlists, review How to Register Using Aurora at the top of this page

Other important info (often in bold)
Plan your timetable by adding each course to the Timetable Planning Form.

Courses are offered in two different formats:

- **In-Person** sections of a course have specific meeting times and locations.
- **Distance and Online Education** sections of a course (ex. D01, D02) do not have a scheduled lecture time when you need to be logged in. This allows you to go through the course material independently on your own time.
  - Term tests and the final exam will be at a set day and time scheduled in the Central Standard time (CDT/CST) time zone.

When building a timetable, it is critical to prioritize which courses to add to your timetable first.

Prioritize:

- Courses that are offered with the least number of sections, as these offer less flexibility and may fill up more quickly
- Courses that require both a lecture and a lab section, as these can be challenging to fit into a timetable.
- Required courses, as these are higher priority than those you are choosing as electives
- Spanned courses, as these will take up the same day and time in both Fall and Winter Terms (ex. PSYC 1200)

### TIMETABLE PLANNING FORM

#### FALL TERM

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<tbody>
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#### WINTER TERM

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<tr>
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<tr>
<td>15:00</td>
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</tbody>
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**DISTANCE AND ONLINE EDUCATION COURSES**

- PHIL 1290 D01
STEPS TO REGISTERING FOR CLASSES

By the time you are ready to register for courses, your timetable should be planned. If you have not already done so, watch How to Register Using Aurora.

1  DETERMINE YOUR INITIAL REGISTRATION TIME

• All students are given a specific date and time to begin registering for Fall and Winter Term courses. This is called your Initial Registration Time and it is the earliest date that you can register. It is your best chance of getting into the courses you have chosen.
• Check your assigned Initial Registration Time in Aurora on or after June 28.
• In Aurora, select  Open Registration Dashboard  Registration Time and Status
• New students are assigned an Initial Registration Time between July 9-15
• Returning students are assigned an Initial Registration Time between July 18–August 6

2  REGISTER FOR CLASSES USING AURORA

• Please view How to Register Using Aurora before your initial registration time.
• If the course you want to register for is full, you may be able to add yourself to a waitlist. Please view the Aurora video for details on how to add yourself to a waitlist.
• Make adjustments to your registration before the Course Add and Course Drop Deadlines.
• Be sure to plan and register for both Fall and Winter terms during your initial registration time.

3  CONFIRM YOUR REGISTRATION

• Confirm your registration by checking your Student Detail Schedule.
• In Aurora, select  Open Registration Dashboard  Student Detail Schedule

4  CHECK YOUR FEES

• Check Aurora for a fee balance, also called your account summary.
• In Aurora, select  View Account Summary by Term
• Be sure to confirm your account summary whenever you make changes to your registration.

5  GET YOUR BOOK LIST

• A book list for the courses you are registered in will be available through Aurora before your classes begin.
• In Aurora, select  Open Registration Dashboard  Enrolment and Academic Records  Student Records  View Booklist

?  NEED SOME ADDITIONAL GUIDANCE?

• Attend or watch a recording of the Get Ready to Register Session offered by the First Year Centre.
• Connect with an Academic Advisor in the First Year Centre if you have questions during the course planning process.

If you receive a registration error, consult Registration Errors for instructions on how to resolve it.
WHICH COURSES DO I TAKE IN FIRST YEAR?

FACILITIES AND PROGRAMS LIST

Find your target degree program on this index page, which links directly to the appropriate program planning page.

UNDECIDED?

See Tips for Choosing Courses if you are Undecided

FACULTY OF ARTS

Anthropology
Art History
Asian Studies
Canadian Studies
Central & East European Studies
Classical Studies
Criminology
Economics
Economics and Econometrics
Economics and Society
Economics-Statistics
Economics-Mathematics
English
Film Studies
French
German
Global Political Economy
Greek
History
Indigenous Governance
Indigenous Studies
Italian Studies
Labour Studies
Latin
Latin American Studies
Linguistics
Mathematics
Medieval and Early Modern Studies
Philosophy
Political Studies
Psychology
Religion
Russian
Sociology
Spanish
Theatre
Ukrainian
Ukrainian Canadian Heritage Studies
Women's and Gender Studies

FACULTY OF AGRICULTURAL AND FOOD SCIENCES

Agribusiness Agronomy Human Nutritional Sciences
Agriculture Animal Systems Plant Biotechnology
Agroecology Food Science Pre-Veterinary Medicine

FACULTY OF ARCHITECTURE

Environmental Design

SCHOOL OF ART

Art History Fine Arts (Studio) Fine Arts, Diploma (Studio)

ASPER SCHOOL OF BUSINESS

Accounting Human Resource Management/Industrial Relations
Actuarial Mathematics Indigenous Business Studies
Business Analytics Marketing
Entrepreneurship/Innovation Strategy and Global Management
Finance Supply Chain Management and Logistics
Generalist

FACULTY OF EDUCATION

Early, Middle, and Senior Years (After 1st degree)

PRICE FACULTY OF ENGINEERING

Biosystems Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Mechanical Engineering
You can click on any program in the chart ex. Nursing to view the required courses.
UNDECIDED?

NOT SURE WHICH DEGREE IS RIGHT FOR YOU? DON’T WANT TO RUSH INTO SELECTING A DEGREE?

THAT’S OK!

You can use your first year to test out courses, explore your interests, and research careers. By the time you register for your second year, you should know which degree you want and will pick your courses based on the requirements for that program.

What courses should I take in my first year?

• If you haven’t chosen a degree, you won’t have a list of specific courses to choose from when registering for your first year. Instead, you can use the Recommended Introductory Courses List to identify courses you are interested in and you can register in those courses.
• You can also view the Faculties and Programs List to see all the degree programs offered by the University of Manitoba.

What is the Recommended Introductory Courses List?

• The Recommended Introductory Courses List contains all of the courses that new students have access to. Some of the subjects are similar to those available in high school, while others will be completely new.
• The courses in the Recommended Introductory Courses List are grouped by the faculty that offers them.

How do I use the Recommended Introductory Courses List to pick courses?

• Browse through the courses in the Recommended Introductory Courses List (even the ones you are not familiar with). If you are interested in taking a specific course, click on its course code ex. BIOL 1020 to view essential information such as a course description, prerequisites, and restrictions.
• Make a list of the courses that sound interesting to you and write the name of the faculty that offers the course beside it. Be sure to include the course codes! You’ll need that information when it’s time to register.
• When it’s time to register, pick your courses from the list of courses you created.

What’s next for me?

• Explore degrees that contain the courses you find most interesting and research the careers related to those degrees.
• If you find that you are interested in several courses from a specific faculty, go to the Faculties and Programs List. You can see all the degrees offered by that faculty, and review a degree’s specific program page for more information.

Things to consider when using your first year to explore

• Exploring courses and taking time to research degrees and careers can help you feel confident and excited about your degree choice, but it can add time to your studies. Depending on the degree you choose and the number of credit hours you take, you might not be able to apply to the degree after your first year of studies.
• Don’t forget to dedicate time during your first year to research degrees and careers. Taking a variety of courses you are interested in is only the first step.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Specific 40S courses may be required as prerequisites depending on the courses you choose. In the Recommended Introductory Courses List, click the course code ex. BIOL 1020 of a specific course to view prerequisites.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

NEED MORE INFORMATION?

CAREER SERVICES  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  IMPORTANT DATES
FACULTY OF AGRICULTURAL AND FOOD SCIENCES

AGRIBUSINESS, B.Sc.

MINIMUM ADMISSION REQUIREMENTS
All courses listed in the chart are required in the degree program, but are not required for admission.

Admission to Agribusiness requires any 24 graded credit hours of university-level courses.

TIPS FOR CHOOSING COURSES

- AGRI 1600, ECON 1010, MATH 1300 (M), and MATH 1524 (M) (or substitutes listed in the chart) are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.

- BIOL 1020 and BIOL 1030 are recommended for students who are undecided on which Agriculture degree to pursue or if they want to take advanced Plant Science (PLNT) courses as electives.

- The Written (W) course is not required for admission. The Written (W) course requirement will be met by AGRI 2030 (W) in Year 2 of the program.

- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by a MATH course in the chart.

- Choose an elective from the Recommended Introductory Courses List.

- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ABIZ 1000</td>
<td>Introduction to Agribusiness Management</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1600</td>
<td>Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1000</td>
<td>Foundations of Life (3) or</td>
<td></td>
</tr>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes (3 + lab)</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 1010</td>
<td>Biological Diversity and Interaction (3) or</td>
<td></td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interactions (3 + lab)</td>
<td></td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1020</td>
<td>Introduction to Macroeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1200</td>
<td>Food: Facts and Fallacies or</td>
<td></td>
</tr>
<tr>
<td>HNSC 1210</td>
<td>Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300 (M)</td>
<td>Vector Geometry and Linear Algebra or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1210 (M)</td>
<td>Techniques of Classical and Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 1524 (M)</td>
<td>Mathematics for Management and Social Sciences or</td>
<td></td>
</tr>
<tr>
<td>MATH 1500 (M)</td>
<td>Introduction to Calculus or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1510 (M)</td>
<td>Applied Calculus 1</td>
<td></td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 60% required in:
  • Math 40S (Pre-Calculus)
Minimum 50% required in:
  • Biology 40S and one of Chemistry 40S or Physics 40S - if taking BIOL 1020
If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
Please refer to the Admissions page to:
  • Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
  • Submit your application for admission.
Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
  • 4 years (120 credit hours), Co-op may extend your studies by an additional term or year.
FACULTY OF AGRICULTURAL AND FOOD SCIENCES

AGRICULTURE, B.Sc.
AGRONOMY, ANIMAL SYSTEMS, OR PLANT BIOTECHNOLOGY

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABIZ 1000 Introduction to Agribusiness Management</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1600 Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties or CHEM 1130 Introduction to Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1200 Food: Facts and Fallacies or HNSC 1210 Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td><strong>Choose one of the following:</strong></td>
<td></td>
</tr>
<tr>
<td>MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 1510 (M) Applied Calculus 1</td>
<td></td>
</tr>
<tr>
<td>MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td></td>
</tr>
<tr>
<td><strong>Elective (see Tips for Choosing Courses)</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Agribusiness requires any 24 graded credit hours of university-level courses.

TIPS FOR CHOOSING COURSES

- AGRI 1600, BIOL 1020, BIOL 1030, CHEM 1100, CHEM 1110 (or CHEM 1130), and ECON 1010 are prerequisites for required second year courses in the program, depending on the major selected. It is recommended to complete these in first year, before admission.

- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by AGRI 2030 (W) in Year 2 of the program.

- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by a MATH course in the chart.

- Choose an elective from the **Recommended Introductory Courses List**.

- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S

Minimum 60% required in:
- Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional term or year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW | CAREER COMPASS | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
FACULTY OF AGRICULTURAL AND FOOD SCIENCES

AGROECOLOGY, B.Sc.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABIZ 1000 Introduction to Agribusiness Management</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1600 Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
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</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 1130 Introduction to Organic Chemistry</td>
<td></td>
</tr>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1200 Food: Facts and Fallacies or</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1210 Nutrition for Health and Changing Lifestyles</td>
<td></td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Agroecology requires any 24 graded credit hours of university-level courses.

TIPS FOR CHOOSING COURSES

- AGRI 1600, BIOL 1020, BIOL 1030, and ECON 1010 are prerequisites for required second year courses in the program. These courses, along with CHEM 1100, and CHEM 1110 (or CHEM 1130) are recommended to complete in first year, before admission.
- The Written (W) course is not required for admission. The Written (W) course requirement will be met by AGRI 2030 (W) in Year 2 of the program.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by AGRI 2400 (M) in year 2 of the program.
- Choose electives from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:

- Biology 40S
- Chemistry 40S
- Math 40S (Pre-Calculus or Applied)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:

- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional term or year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW | CAREER COMPASS | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
FOOD SCIENCE, B.Sc.
Options in Science and Business are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 1600 Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties or CHEM 1130 Introduction to Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1200 Food: Facts and Fallacies</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1210 Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Food Science requires any 24 graded credit hours of university-level courses.

TIPS FOR CHOOSING COURSES
- BIOL 1020, BIOL 1030, CHEM 1100, and CHEM 1110 (or CHEM 1130) are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.
- AGRI 1600, HNSC 1200, or HNSC 1210 is a prerequisite for AGRI 2400 (M) in the second year. It is recommended to complete one of these in first year, before admission.
- The Written (W) course is not required for admission. The Written (W) course requirement will be met by AGRI 2030 (W) in Year 2 of the program.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by a MATH course in the chart.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S

Minimum 60% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional term or year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
## FACULTY OF AGRICULTURAL AND FOOD SCIENCES

### HUMAN NUTRITIONAL SCIENCES, B.Sc.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNSC 1200 Food: Facts and Fallacies</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1210 Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 1600 Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1410 Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412 Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties or CHEM 1130 Introduction to Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1200 Introduction to Psychology or SOC 1000 Introduction to Sociology</td>
<td>6-3</td>
</tr>
<tr>
<td>Elective(s) <em>(see Tips for Choosing Courses)</em></td>
<td>3-6</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 30

### MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Human Nutritional Sciences requires any 24 graded credit hours of university-level courses.

### TIPS FOR CHOOSING COURSES

- HNSC 1200, HNSC 1210, CHEM 1100 and CHEM 1110 (or CHEM 1130), 6 credit hours of BIOL, and PSYC 1200 or SOC 1000 are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.
- BIOL 1020 and BIOL 1030 (minimum grade of C) may be used instead of BIOL 1410. In this case, BIOL 1412 will be taken in Year 2.
- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by HNSC 2000 (W) in Year 2 of the program.
- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by AGRI 2400 (M) in Year 2 of the program.
- Choose elective(s) from the **Recommended Introductory Courses List**.
- **Advanced Placement (AP) or International Baccalaureate (IB) credit** may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 50% required in:
• Chemistry 40S
• Math 40S (Pre-Calculus or Applied)
• Biology 40S if taking BIOL 1020

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
• 4 years (120 credit hours), Co-op may extend your studies by an additional term or year.

NEED MORE INFORMATION?
## RECOMMENDED PROGRESSION OF PRE-VET COURSES

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1130 Introduction to Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1020 (M) General Physics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>INDG 1220 Indigenous Peoples in Canada, Part 1 (3) or INDG 1240 Indigenous Peoples in Canada, Part 2 (3) or INDG 1200 Indigenous Peoples in Canada (6)</td>
<td>3-6</td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
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<tr>
<td>Total Credit Hours</td>
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<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>CREDIT HOURS</th>
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</thead>
<tbody>
<tr>
<td>AGRI 2030 (W) Technical Communications (3) or ENGL 1340 (W) Introduction to Literary Analysis (3) or ENGL 1400 (W) Thematic Approaches to the Study of Literature (3) or</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 2400 (M) Experimental Methods in Agricultural and Food Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2730 / MBIO 2730 Elements of Biochemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>MBIO 1010 Microbiology 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PLNT 2520 Genetics or BIOL 2500 Genetics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>12</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

### MINIMUM ADMISSION REQUIREMENTS

Admission to the Western College of Veterinary Medicine (WCVM) requires at least 60 credit hours of university-level study, including specific courses listed in the chart.

- CHEM 1120 is not included in the 60 credit hours required admission. UM applicants will apply to WCVM with at least 63 credit hours, including CHEM 1120.
- All applicants must complete at least two full years of university courses. The definition of a “full year” for this purpose is 24 credit hours in each of two Regular Sessions (i.e., September-April).
- CHEM 1120 will not count as part of the 24 credit hours for a full year of university courses. If a student wishes to take CHEM 1120 during a Regular Session, they must take 27 credit hours total during a Regular Session to meet the requirement of a full year of university courses.
- WCVM strongly recommends that applicants complete 30 credit hours a year to ensure applicants’ preparedness and future success.
- See the WCVM for full admission requirements for Fall 2025 applicants.
**TIPS FOR CHOOSING COURSES**

- BIOL 1020, BIOL 1030, CHEM 1100, and CHEM 1130 are prerequisites for required Year 2 courses. It is recommended to complete these in first year.
- AGRI 1600, HNSC 1200, or HNSC 1210 is a prerequisite for AGRI 2400 (M) in the second year. It is recommended to complete one of these in first year as part of your electives.
- In lieu of AGRI 2400 (M), you may take STAT 1000 (M) to meet the statistics requirement for admission to the WCVM. However, AGRI 2400 (M) is required for all degree programs in the Faculty of Agricultural and Food Sciences.
- AGRI 2030 (W) meets the 3 credit hour English requirement. Students may elect to take ENGL 1340 (W) or ENGL 1400 (W) for the Pre-Veterinary program. AGRI 2030 (W) is required for all degree programs in the Faculty of Agriculture and Food Sciences.
- If you are not admitted to Veterinary Medicine after 63 credit hours, you may decide to complete a degree in the Faculty of Agricultural and Food Sciences.
- Choose electives from the [Recommended Introductory Courses List](#).
- The following courses are recommended electives for those planning to complete Pre-Vet in parallel with the [Animal Systems Degree Program](#):
  - ABIZ 1000 • AGRI 1600 • ECON 1010 • ANSC 2500 • ANSC 2510 • ANSC 2520 • HNSC 1200 or HNSC 1210
  - MATH 1300 (M) or MATH 1210 (M) or MATH 1500 (M) or MATH 1510 (M) or MATH 1524 (M)
- If you plan on completing all the courses in the charts in your first two years of university studies, you must take courses during the Summer Term between your first and second year or take 33 credit hours during the Regular Session in Year 2. Consider taking CHEM 1120 during the Summer Term, as this course will not count towards the requirement of 24 credit hours in a Regular Session (i.e., September-April).

**HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES**

Minimum 50% required in:
- Biology 40S
- Chemistry 40S
- Physics 40S (for Physics in Year 1)

Minimum 60% required in:
- Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

**HOW TO APPLY**

- For full admission details, see the [WCVM Admissions](#) page.
- All applicants must complete the [English Casper® test](#) (online, open-response situational judgment test).

**MINIMUM TIME TO GRADUATION**

- 6 years – 2 years (63 credit hours) of university study, plus 4 years in Veterinary Medicine at the University of Saskatchewan.

**NEED MORE INFORMATION?**

[PROGRAM OVERVIEW](#) [PROGRESSION PLAN](#) [FACULTY WEBSITE](#) [IMPORTANT DATES](#)
FACULTY OF ARCHITECTURE

ENVIRONMENTAL DESIGN, B.Env.D.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
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<tr>
<td>EVDS 1602 Visual Literacy</td>
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<td>EVDS 1660 History of Culture, Ideas and Environment 1</td>
<td>3</td>
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<td>EVDS 1670 History of Culture, Ideas and Environment 2</td>
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<td>EVDS 1680 Environmental Technology</td>
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<td>Written (W) course (see Tips for Choosing Courses)</td>
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<td>Electives (see Tips for Choosing Courses)</td>
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<td><strong>Total Credit Hours</strong></td>
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MINIMUM ADMISSION REQUIREMENTS

Admission to Environmental Design requires 30 graded credit hours of university-level courses, which must include:

- EVDS 1600
- EVDS 1602
- EVDS 1660
- Written (W) course
- Mathematics (M) course
- Open electives

All courses must be at the 1000-level or higher.

Minimum grades in required courses are outlined in the Academic Calendar.

It is strongly recommended to complete EVDS 1660 and EVDS 1670 in your first year, before admission, as part of the open electives. They are prerequisites for 2000-level courses in the program.

TIPS FOR CHOOSING COURSES

- EVDS 1660 and EVDS 1670 are required as part of the degree program, and are strongly recommended to be completed before admission. Minimum grades are outlined in the Academic Calendar.
- Choose electives, including a Written (W) course and a Mathematics (M) course, from the Recommended Introductory Courses List. All courses must be at the 1000-level or higher.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and as a prerequisite to 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

- A specific Math 40S course may be required, depending on the Mathematics (M) course you choose.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 4 years (129 credit hours).

NEED MORE INFORMATION?

- Program Overview
- Career Compass
- Academic Calendar
- UM Achieve
- Faculty Website
- Important Dates
**SCHOOL OF ART**

**FINE ARTS, B.F.A. (STUDIO)**

Honours and General degrees are available.

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<tr>
<th>FIRST YEAR COURSES</th>
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<td>STDO 1410 Visual Language</td>
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<td>FAAH 1030 Introduction to Art 1A or EVDS 1660 History of Culture, Ideas and Environment 1</td>
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<td>FAAH 1040 Introduction to Art 2A or EVDS 1670 History of Culture, Ideas and Environment 2</td>
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**MINIMUM ADMISSION REQUIREMENTS**

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to a Studio degree program requires 24 graded credit hours of university-level courses and a **portfolio submission**. No specific courses are required.

**TIPS FOR CHOOSING COURSES**

- Consider registering for all STDO and FAAH courses listed. This will ensure that you have the necessary prerequisites for Year 2 Studio and Art History courses if you are admitted to the Fine Arts Studio Program.
- Consider taking FA 1020 (M) / MATH 1020 (M) Mathematics in Art to meet the **Mathematics (M) course** requirement.
- Consider taking FAAH 2930 (W) Writing About Art in Year 2 to meet the **Written (W) course** requirement.
- School of Art Direct Entry students should also register in FA 1990 in their first year.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
• Art 40S

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• General: 3 years (93 credit hours).
• Honours: 4 years (123 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
## SCHOOL OF ART

### FINE ARTS, DIPLOMA (STUDIO)

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<td>STDO 1510 Art Now</td>
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<td>FAAH 1030 Introduction to Art 1A or EVDS 1660 History of Culture, Ideas and Environment 1</td>
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<tr>
<td><strong>Total Credit Hours</strong></td>
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## MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the diploma program, but may not be required for admission. Admission to the Diploma in Art requires a portfolio submission. No specific courses are required.

## TIPS FOR CHOOSING COURSES

- Consider registering for all STDO and FAAH courses listed. This will ensure that you have the necessary prerequisites for Year 2 Studio and Art History courses required for the Diploma in Art.
- School of Art Direct Entry students should also register in FA 1990 in their first year.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
• Art 40S

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• Diploma in Art: 2 years (48 credit hours) in the School of Art.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
SCHOOL OF ART

ART HISTORY, B.F.A.

Honours and General degrees are available.

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<th>FIRST YEAR COURSES</th>
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<tr>
<td>ENGL 1200 (W) Representative Literary Works (6) or</td>
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<td>ENGL 1400 (W) Thematic Approaches to the Study of Literature (3)</td>
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<td>Electives <em>(see Tips for Choosing Courses)</em></td>
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MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Art History (School of Art) requires 24 graded credit hours of university-level courses, which must include 12 credit hours of the courses listed in the chart.

TIPS FOR CHOOSING COURSES

- Consider taking FA 1020 (M) / MATH 1020 (M) Mathematics in Art to meet the Mathematics (M) course requirement. The Mathematics (M) course is not required for admission to the program.
- The following course subjects may be used to fulfill Social Sciences or Science electives. Choose specific courses from these subjects using the Recommended Introductory Courses List.

APPROVED LIST OF SOCIAL SCIENCES AND SCIENCE SUBJECTS

Faculty of Arts
- Anthropology (ANTH)
- Economics (ECON)
- Global Political Economy (GPE)
- Labour Studies (LABR)
- Linguistics (LING)
- Political Studies (POLs)
- Psychology (PSYC)
- Sociology (SOC)
- Women’s and Gender Studies (WOMN)

Faculty of Agricultural and Food Sciences
- Agriculture (AGRI)
- Entomology (ENTM)
- Plant Science (PLNT)
- Soil Science (SOIL)

Clayton H. Riddell Faculty of Environment, Earth, and Resources
- Environment (ENVR)
- Geography (GEOG)
- Geological Sciences (GEOL)

Faculty of Science
- Any course offered by the Faculty of Science

- Academic electives may be fulfilled by any course outside of the School of Art. Choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
• Art 40S

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
• General: 3 years (90 credit hours).
• Honours: 4 years (120 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
FACULTY OF ARTS
DEGREES OFFERED IN THE FACULTY OF ARTS

B.A. GENERAL – (90 CREDIT HOURS)
A three year (90 credit hour) degree which provides a general education in the Humanities and Social Sciences with a concentration in at least two subject areas (the Major and Minor or a Double Major with no Minor). Choose the B.A. General if you need a degree as an employment requirement, or if you plan to enter an academic program that requires a three year degree such as Education, Occupational Therapy, or Medicine.

B.A. ADVANCED – (120 CREDIT HOURS)
A four year (120 credit hour) degree which provides a general education in the Humanities and Social Sciences with a concentration in at least two subject areas (the Major and Minor or a Double Major with no Minor). Choose the B.A. Advanced if you want to develop a greater degree of specialization in one area of study or if you plan to enter an academic program that requires a four year degree.

B.A. HONOURS – FOUR-YEAR DEGREE
A four year (120 credit hour) degree, which provides a rigorous examination of a particular subject area. It requires more courses in the Honours field and provides a greater intensity and depth of study. A Minor is optional in this program. Choose the B.A. Honours if you plan on continuing your education at the graduate level. Double Honours programs are available in some areas.

CO-OPERATIVE EDUCATION (CO-OP)
Arts students majoring in Anthropology, Central and East European Studies, Economics, German and Slavic Studies, History, Labour Studies, Linguistics, Political Studies, or Psychology can alternate regular academic terms with paid, full-time employment. It is an excellent way to enhance classroom learning with on-the-job experience.

For more information, review the Faculty of Arts Co-operative Education Program page.

MAJOR AND MINOR
Your major is your main area of in-depth study within your degree program. Many of the courses in your degree program will focus on your major.

In contrast, your minor is a second, smaller area of study. A minor takes up 18 credit hours of your degree program, and can be in an area that is unrelated to your major. For example, you can major in Psychology and minor in Biology.

TRAVEL STUDY AND EXCHANGE PROGRAMS
The Faculty of Arts recognizes the value that international experience brings to your degree program and will grant university credit for a number of different types of programs abroad.

You can partake in exchange programs, travel study courses, and field study courses in over 18 countries that provide you with hands-on experience, travel, and even work abroad.
## Arts Degrees and Programs

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<th>Minor</th>
<th>General Major</th>
<th>Single Advanced Major</th>
<th>Double Advanced Major</th>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Polish</td>
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</tr>
<tr>
<td>Ukrainian Canadian Heritage Studies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Ukrainian</td>
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<td>✓</td>
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<td>✓</td>
</tr>
<tr>
<td>Women’s and Gender Studies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

You can click on any subject in the chart ex. **Spanish**, to view the Introductory Course Requirements.
BACHELOR OF ARTS

Review the Arts Degrees and Programs Chart to see available majors and minors.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choose from Introductory Course Requirements:</strong></td>
<td></td>
</tr>
<tr>
<td>Introductory Course(s) for Major (see the Faculty of Arts Introductory Course Requirements section starting on page 40)</td>
<td>3-6</td>
</tr>
<tr>
<td>Introductory Course(s) for Minor (see the Faculty of Arts Introductory Course Requirements section starting on page 40)</td>
<td>3-6</td>
</tr>
<tr>
<td><strong>Choose from Recommended Introductory Courses List:</strong> (see Tips for Choosing Courses)</td>
<td></td>
</tr>
<tr>
<td>18 credit hours of electives or</td>
<td></td>
</tr>
<tr>
<td>Choose additional courses that will help you fill Arts degree requirements:</td>
<td></td>
</tr>
<tr>
<td>6 credit hours of Social Sciences SS and 6 credit hours of Humanities H including:</td>
<td></td>
</tr>
<tr>
<td>3 credit hours of a Written (W) course and</td>
<td>18-24</td>
</tr>
<tr>
<td>3 credit hours of Indigenous Content Requirement ICR</td>
<td></td>
</tr>
<tr>
<td>6 credit hours of Science including:</td>
<td></td>
</tr>
<tr>
<td>3 credit hours of a Mathematics (M) course* (see Tips for Choosing Courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

Admission to the Faculty of Arts requires 24 credit hours.

To declare your major for your Arts degree, you must complete 24 credit hours, including the credit hours of Introductory Course Requirements for your chosen major.

TIPS FOR CHOOSING COURSES

- Choose your introductory major and minor courses from the Faculty of Arts Introductory Course Requirements section starting on page 40.
- Choose your electives from the Recommended Introductory Courses List.
- Refer to the Science Requirements for Arts chart. You can choose 6 credit hours of courses from this chart, or you can choose any Faculty of Science courses from the Recommended Introductory Courses List. If you do not have a strong background in Science, consider taking a Science interest course, marked with SCI in the Recommended Introductory Courses List.
  - If you major in Psychology, PSYC 2260 (M) will fill the Math requirement for your degree. Your Science courses do not have to include an (M) course.
  - If you major in Criminology or Sociology, SOC 2294 (M) will fill the Math requirement for your degree. Your Science courses do not have to include an (M) course.
- Subject field requirement (15 credit hours): Throughout your Arts degree, you will have to complete at least one course (3 credit hours) from five different Arts subjects.
  - Introductory courses for your major and minor will count as your first and second subject.
  - Choose your remaining three subjects from the Faculty of Arts section of the Recommended Introductory Courses List.
  - MATH and FAAH courses will count as an Arts subject.
- Arts students may complete minor programs offered by other Faculties/Schools. For example, you can major in Psychology and minor in Biology.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
### Science Requirement for Arts

**Faculty of Science**
- See the [Recommended Introductory Courses List](#) for specific courses.
  - Astronomy (ASTR)
  - Biological Sciences (BIOL)
  - Chemistry (CHEM)
  - Computer Science (COMP)
  - Mathematics (MATH)
  - Microbiology (MBIO)
  - Physics (PHYS)
  - Statistics (STAT)

**Faculty of Agricultural and Food Sciences**
- Agriculture - AGRI 1600
- Entomology -ENTM 1000
- Plant Science - PLNT 1000

**School of Art**
- Fine Art, General - FA 1020 (M)

**Clayton H. Riddell Faculty of Environment, Earth, and Resources**
- Environment - ENVR 1000, ENVR 2000
- Geography - GEOG 1290
- Geological Sciences - GEOL 1340, GEOL 1400, GEOL 1410, GEOL 1420

**Price Faculty of Engineering**
- Engineering - ENG 1440, ENG 1450, ENG 1460

---

### High School Prerequisites for University-Level Courses

Introductory science courses in Astronomy, Biology, Chemistry, Computer Science, Mathematics, Microbiology, Physics, and Statistics have 40S level prerequisites. Click the course code for a specific course ex. *BIOL 1020* to view more detailed prerequisites.

### How to Apply
- To move from University 1 to the Faculty of Arts, students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is available in June.
- After you transit to Arts, you can declare your major by using the Declarations menu in Aurora or submitting a declaration form to the Faculty of Arts.

### Minimum Time to Graduation
- B.A. General Major: 3 years (90 credit hours).
- B.A. Advanced Major: 4 years (120 credit hours).
- B.A. Honours: 4 years (120 credit hours).
- **Co-op** may extend your studies by an additional year.

### Need More Information?

[PROGRAM OVERVIEW](#)
[ACADEMIC CALENDAR](#)
[UM ACHIEVE](#)
[FACULTY WEBSITE](#)
[IMPORTANT DATES](#)
# FACULTY OF ARTS
## INTRODUCTORY COURSE REQUIREMENTS

### AVAILABLE DEGREE OPTIONS

<table>
<thead>
<tr>
<th>HONS.</th>
<th>ADV.</th>
<th>GEN.</th>
<th>MINOR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ANTHROPOLOGY</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
</table>

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1210</td>
<td>Ancient Peoples and Places</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 1220</td>
<td>Socio-Cultural Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#)) 24

Total Credit Hours 30

Co-op Education Program available for the Anthropology Single Advanced Major and Single Honours.

### ART HISTORY

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAAH 1030</td>
<td>Introduction to Art 1A</td>
<td>3</td>
</tr>
<tr>
<td>FAAH 1040</td>
<td>Introduction to Art 2A</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#)) 24

Total Credit Hours 30

Review these resources to learn more about the Art History degree and related careers

- [Art History program page](#)
- [Academic Calendar](#)
- Alternatively offered through the [School of Art](#)

### ASIAN STUDIES

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any combination of 6 credit hours from List A or List B in the Asian Studies section of the Academic Calendar</td>
<td>6</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#)) 24

Total Credit Hours 30

Review these resources to learn more about the Asian Studies degree and related careers

- [Asian Studies program page](#)
- [Career Compass](#)
- [Academic Calendar](#)

### CANADIAN STUDIES

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 credit hours at the 1000 or 2000-level from the list of approved courses in the Canadian Studies section of the Academic Calendar</td>
<td>6</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#)) 24

Total Credit Hours 30

Review these resources to learn more about the Canadian Studies degree and related careers

- [Canadian Studies program page](#)
- [Career Compass](#)
- [Academic Calendar](#)

If you are interested in taking a specific course, click on its course code ex. [CLAS 1270](#) to view essential information such as a course description, prerequisites, and restrictions.
### Catholic Studies

<table>
<thead>
<tr>
<th>First Year Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATH 1190 (W) Introduction to Catholic Studies</td>
<td>3</td>
</tr>
<tr>
<td>3 credit hours (minimum) from the list of approved courses in the Catholic Studies section of the Academic Calendar</td>
<td>3</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Catholic Studies minor and related careers:
- Catholic Studies program page
- Academic Calendar

### Central and East European Studies

<table>
<thead>
<tr>
<th>First Year Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours in a language at the 1000 or 2000-level in Russian (RUSN), German (GRMN), Ukrainian (UKRN), Polish (POL), Hungarian (HUNG) or Yiddish (YDSH)</td>
<td>6</td>
</tr>
<tr>
<td>6 credit hours from the list of approved courses in the Central and East European Studies section of the Academic Calendar</td>
<td>6</td>
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<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**Co-op Education Program** available for the Central and East European Studies Single Advanced Major.

Review these resources to learn more about the Central and East European Studies degree and related careers:
- Central and East European Studies program page
- Academic Calendar

### Classical Studies

<table>
<thead>
<tr>
<th>First Year Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAS 1270 Introduction to Ancient Greek Culture</td>
<td>3</td>
</tr>
<tr>
<td>CLAS 1280 Introduction to Ancient Roman Culture</td>
<td>3</td>
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<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Classical Studies degree and related careers:
- Classics program page
- Career Compass
- Academic Calendar

### Criminology

<table>
<thead>
<tr>
<th>First Year Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1000 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>27</td>
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<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
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</tbody>
</table>

Review these resources to learn more about the Criminology degree and related careers:
- Criminology program page
- Career Compass
- Academic Calendar

The Mathematics (M) course requirement will be met by SOC 2294 (M) in Year 2 of the program. Sociology and Criminology may not be used together in a Major/Minor combination.
# FACULTY OF ARTS
## INTRODUCTORY COURSE REQUIREMENTS

### ECONOMICS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles and ECON 1020 Introduction to Macroeconomic Principles, or both</td>
<td>6</td>
</tr>
<tr>
<td>ECON 1210 Introduction to Canadian Economic Issues and Policies and ECON 1220 Introduction to Global Environmental Economic Issues and Policies</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

The Mathematics (M) course requirement will be met by ECON 2040 (M) in Year 2 of the program.

### ECONOMICS - ECONOMICS AND ECONOMETRICS STREAM

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles and ECON 1020 Introduction to Macroeconomic Principles, or both</td>
<td>6</td>
</tr>
<tr>
<td>ECON 1210 Introduction to Canadian Economic Issues and Policies and ECON 1220 Introduction to Global Environmental Economic Issues and Policies</td>
<td>6</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Co-op Education Program available for the Economics Single Advanced Major and Single Honours.

### ECONOMICS - ECONOMICS AND SOCIETY STREAM

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles and ECON 1020 Introduction to Macroeconomic Principles, or both</td>
<td>6</td>
</tr>
<tr>
<td>ECON 1210 Introduction to Canadian Economic Issues and Policies and ECON 1220 Introduction to Global Environmental Economic Issues and Policies</td>
<td>6</td>
</tr>
<tr>
<td>Choose one of the following for the Honours program only: MATH 1500 (M) Introduction to Calculus or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

The Mathematics (M) course requirement will be met by ECON 2040 (M) in Year 2 of the program.

Co-op Education Program available for the Economics Single Advanced Major and Single Honours.
### ECONOMICS-MATHEMATICS OR ECONOMICS-STATISTICS

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles and</td>
<td></td>
</tr>
<tr>
<td>ECON 1020</td>
<td>Introduction to Macroeconomic Principles, or both</td>
<td></td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Introduction to Canadian Economic Issues and Policies</td>
<td>6</td>
</tr>
<tr>
<td>ECON 1220</td>
<td>Introduction to Global Environmental Economic Issues and Policies</td>
<td></td>
</tr>
<tr>
<td>COMP 1010</td>
<td>Introductory Computer Science 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1220</td>
<td>(M) Linear Algebra 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230</td>
<td>(M) Differential Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232</td>
<td>(M) Integral Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240</td>
<td>(M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150</td>
<td>(M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
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</table>

6 credit hours of electives, including a **Written (W) course**

Total Credit Hours: 30

---

### ENGLISH

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1200</td>
<td>(W) Representative Literary Works (6), or both</td>
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</tr>
<tr>
<td>ENGL 1340</td>
<td>(W) Introduction to Literary Analysis (3)</td>
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</tr>
<tr>
<td>ENGL 1400</td>
<td>(W) Thematic Approaches to the Study of Literature (3)</td>
<td></td>
</tr>
</tbody>
</table>

Other courses (see **Arts first year courses chart**)

Total Credit Hours: 24

---

### FILM STUDIES

#### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILM 1290</td>
<td>Art of Film 1</td>
<td>3</td>
</tr>
<tr>
<td>FILM 1310</td>
<td>Film History</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see **Arts first year courses chart**)

Total Credit Hours: 24

---

**AVAILABLE DEGREE OPTIONS**

**HONS.**

- Review these resources to learn more about the Economics-Mathematics degree and related careers
  - Economics program page
  - Academic Calendar
  - Alternatively offered through the Faculty of Science

**ENGLISH**

**HONS. ADV. GEN. MINOR**

- Review these resources to learn more about the English degree and related careers
  - English program page
  - Career Compass
  - Academic Calendar

**FILM STUDIES**

**ADV. GEN. MINOR**

- Review these resources to learn more about the Film Studies degree and related careers
  - Film Studies program page
  - Career Compass
  - Academic Calendar

---

ℹ️ If you are interested in taking a specific course, click on its course code ex. FILM 1290, to view essential information such as a course description, prerequisites, and restrictions.
**FACULTY OF ARTS**
**INTRODUCTORY COURSE REQUIREMENTS**

### FRENCH

**FIRST YEAR COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 1192</td>
<td>Français pour bilingues et francophones 1</td>
<td>3</td>
</tr>
<tr>
<td>FREN 1194</td>
<td>Français pour bilingues et francophones 1, or both</td>
<td>3</td>
</tr>
<tr>
<td>FREN 1202</td>
<td>Intermediate French 1</td>
<td>3</td>
</tr>
<tr>
<td>FREN 1204</td>
<td>Intermediate French 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#))

**Total Credit Hours** 30

**Review these resources to learn more about the French degree and related careers**

- French program page
- Career Compass
- Academic Calendar

### GERMAN

**FIRST YEAR COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 1122</td>
<td>Introductory German 1 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 1124</td>
<td>Introductory German 2 (3 + lab), or both</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 2102</td>
<td>Intermediate German 1 (3)</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 2104</td>
<td>Intermediate German 2 (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#))

**Total Credit Hours** 30

**Co-op Education Program** available for the German Single Advanced Major and Single Honours.

### GLOBAL POLITICAL ECONOMY

**FIRST YEAR COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles and</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1020</td>
<td>Introduction to Macroeconomic Principles, or both</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Introduction to Canadian Economic Issues and Policies and</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1220</td>
<td>Introduction to Global Environmental Economic Issues and Policies</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 6 credit hours from the following:

- HIST 1370 (W) An Introduction to Modern World History: 1500 – 1800
- HIST 1380 (W) An Introduction to Modern World History: 1800 – Present
- HIST 2730 (W) Modern World History, 1914-1945: The 30 Years’ Crisis
- HIST 2734 (W) Modern World History, 1914-Present: New World Order?

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPE 1700 / GEOG 1700</td>
<td>Social Justice in the 21st Century: Global Political Economy and Environment Change</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see [Arts first year courses chart](#))

**Total Credit Hours** 30

**Review these resources to learn more about the Global Political Economy degree and related careers**

- Global Political Economy program page
- Career Compass
- Academic Calendar

Additional suggested electives are listed in the [Global Political Economy section of the Academic Calendar](#).

The Mathematics (M) course requirement will be met by SOC 2294 (M) or STAT 1000 (M) in Year 2 of the program.
## Global Political Economy

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles and ECON 1020 Introduction to Macroeconomic Principles, or both ECON 1210 Introduction to Canadian Economic Issues and Policies and ECON 1220 Introduction to Global Environmental Economic Issues and Policies</td>
<td>6</td>
</tr>
</tbody>
</table>

Choose 6 credit hours from the following:
- HIST 1370 (W) An Introduction to Modern World History: 1500 – 1800
- HIST 1380 (W) An Introduction to Modern World History: 1800 – Present
- HIST 2730 (W) Modern World History, 1914-1945: The 30 Years’ Crisis
- HIST 2734 (W) Modern World History, 1914-Present: New World Order?

GPE 1700 / GEOG 1700 Social Justice in the 21st Century: Global Political Economy and Environment Change
- 3

POLS 2602 Introduction to Comparative Politics
- 3

Other courses (see Arts first year courses chart)
- 12

Total Credit Hours
- 30

Additional suggested electives are listed in the Global Political Economy section of the Academic Calendar. The Mathematics (M) course requirement will be met by SOC 2294 (M) or STAT 1000 (M) in Year 2 of the program.

## Greek

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRK 1010</td>
<td>Introduction to the Reading of Ancient Greek 1</td>
<td>3</td>
</tr>
<tr>
<td>GRK 1020</td>
<td>Introduction to the Reading of Ancient Greek 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart)
- 24

Total Credit Hours
- 30

Review these resources to learn more about the Greek degree and related careers
- Greek program page
- Academic Calendar

## History

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of 1000 or 2000-level History (HIST), or 3 credit hours at the 1000-level and 3 credit hours at the 2000-level.</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart)
- 24

Total Credit Hours
- 30

Co-op Education Program available for the History Single Advanced Major and Single Honours.

Review these resources to learn more about the History degree and related careers
- History program page
- Career Compass
- Academic Calendar

If you are interested in taking a specific course, click on its course code ex. FREN 1192 to view essential information such as a course description, prerequisites, and restrictions.
FACULTY OF ARTS
INTRODUCTORY COURSE REQUIREMENTS

ICELANDIC

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
<th>HONS.</th>
<th>GEN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICEL 1200 Introduction to Icelandic or</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICEL 2200 Intermediate Icelandic 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students with superior language ability will not be required to complete ICEL 1200 upon successful completion of a written test administered by the department.

ICELANDIC

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
<th>MINOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICEL 1200 Introduction to Icelandic (6 + lab) or</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>ICEL 1400 Introduction to Contemporary Culture in Iceland (3) and</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>ICEL 1410 Introduction to Culture in Medieval Iceland (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Students with superior language ability will not be required to complete ICEL 1200 upon successful completion of a written test administered by the department.

INDIGENOUS STUDIES

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
<th>ADV.</th>
<th>GEN.</th>
<th>MINOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDG 1200 Indigenous Peoples in Canada (6), or both</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDG 1220 Indigenous Peoples in Canada, Part 1 (3) and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDG 1240 Indigenous Peoples in Canada, Part 2 (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are three options available for the General Major depending on your area of interest.

If you are interested in taking a specific course, click on its course code ex. INDG 1220, to view essential information such as a course description, prerequisites, and restrictions.
## Indigenous Governance

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDG 1200</td>
<td>Indigenous Peoples in Canada (6), or both</td>
<td>6</td>
</tr>
<tr>
<td>INDG 1220</td>
<td>Indigenous Peoples in Canada, Part 1 (3)</td>
<td></td>
</tr>
<tr>
<td>INDG 1240</td>
<td>Indigenous Peoples in Canada, Part 2 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Consider taking the following courses in your first year, as they will be required for degree completion:

- ACC 1100 Introductory Financial Accounting (3 + lab)
- ECON 1010 Introduction to Microeconomic Principles (3) or ECON 1210 Introduction to Canadian Economic Issues and Policies (3) or ECON 1220 Introduction to Global Environmental Economic Issues and Policies (3)
- GGMT 2060 Management and Organizational Theory (3)
- HRIR 2440 Human Resource Management (3)
- MKT 2210 Fundamentals of Marketing (3)
- STAT 1000 (M) Basic Statistical Analysis 1 (3 + lab)

Total Credit Hours: 30

## Indigenous Languages

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDG 1250</td>
<td>Introductory Cree 1 (3 + lab) and</td>
<td>6</td>
</tr>
<tr>
<td>INDG 1260</td>
<td>Introductory Cree 2 (3 + lab), or both</td>
<td></td>
</tr>
<tr>
<td>INDG 1270</td>
<td>Introductory Anishinaabemowin (Ojibwe) 1 (3) and</td>
<td></td>
</tr>
<tr>
<td>INDG 1280</td>
<td>Introductory Anishinaabemowin (Ojibwe) 2 (3)</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDG 2252</td>
<td>Intermediate Cree 1 (3 + lab) and</td>
<td>6</td>
</tr>
<tr>
<td>INDG 2254</td>
<td>Intermediate Cree 2 (3 + lab), or both</td>
<td></td>
</tr>
<tr>
<td>INDG 2272</td>
<td>Intermediate Anishinaabemowin (Ojibwe) 1 (3) and</td>
<td></td>
</tr>
<tr>
<td>INDG 2274</td>
<td>Intermediate Anishinaabemowin (Ojibwe) 2 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart)

Total Credit Hours: 30

## Italian and Italian Studies

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITLN 1080</td>
<td>Introductory Italian</td>
<td>6</td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart)

Total Credit Hours: 30
# Judaic Studies

### First Year Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours from Judaic Studies courses (Arabic ARA; Hebrew HEB; Judaic Civilization JUD; Yiddish YDSH) or courses from List A found in the Judaic Studies section of the Academic Calendar.</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
</tbody>
</table>

Total Credit Hours: 30

*Review these resources to learn more about the Judaic Studies minor and related careers*

- Judaic Studies program page
- Academic Calendar

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# Labour Studies

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LABR 1260</td>
<td>(W) Working for a Living</td>
<td>3</td>
</tr>
<tr>
<td>LABR 1290</td>
<td>(W) Labour Unions and Workers' Rights in Canada</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart) 24

Total Credit Hours: 30

Co-op Education Program available for the Labour Studies Single Advanced Major.

*Review these resources to learn more about the Labour Studies degree and related careers*

- Labour Studies program page
- Career Compass
- Academic Calendar

---

# Latin

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN 1080</td>
<td>Introduction to the Reading of Latin 1</td>
<td>3</td>
</tr>
<tr>
<td>LATN 1090</td>
<td>Introduction to the Reading of Latin 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Other courses (see Arts first year courses chart) 24

Total Credit Hours: 30

*Review these resources to learn more about the Latin degree and related careers*

- Latin program page
- Academic Calendar

---

# Latin American Studies

### First Year Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours from the list of approved courses in the Latin American Studies section of the Academic Calendar</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
</tbody>
</table>

Total Credit Hours: 30

*Review these resources to learn more about the Latin American Studies minor and related careers*

- Latin American Studies program page
- Academic Calendar

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If you are interested in taking a specific course, click on its course code (e.g. LING 1000) to view essential information such as a course description, prerequisites, and restrictions.
### LINGUISTICS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 1000 Introduction to Linguistics 1: Foundations of Language</td>
<td>3</td>
</tr>
<tr>
<td>LING 1010 Introduction to Linguistics 2: Language in Context</td>
<td>3</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Co-op Education Program available for the Linguistics Single Advanced Major and Single Honours.

### MANAGEMENT

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours offered by the Asper School of Business.</td>
<td>6</td>
</tr>
<tr>
<td>The following courses are recommended:</td>
<td></td>
</tr>
<tr>
<td>GMGT 1010 (W) Business and Society</td>
<td></td>
</tr>
<tr>
<td>GMGT 2060 Management and Organizational Theory</td>
<td></td>
</tr>
<tr>
<td>GMGT 2070 Introduction to Organizational Behaviour</td>
<td></td>
</tr>
<tr>
<td>ENTR 2010 Managing the Smaller Business</td>
<td></td>
</tr>
<tr>
<td>ENTR 2020 Starting a New Business</td>
<td></td>
</tr>
<tr>
<td>MKT 2210 Fundamentals of Marketing</td>
<td></td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

A grade of C or better in the first 6 credit hours of Business courses is required for entry into the minor. Limited space is reserved for non-Asper students in Business courses during Initial Registration. Further space may be available when the reserves expire. Reserve information, including the release date of reserved space, is listed for each course in the Class Schedule in Aurora.

### MATHEMATICS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1220 (M) Linear Algebra 1 or</td>
<td></td>
</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra or</td>
<td></td>
</tr>
<tr>
<td>MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M) Differential Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1510 (M) Applied Calculus 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232 (M) Integral Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1700 (M) Calculus 2 or</td>
<td></td>
</tr>
<tr>
<td>MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240 (M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Mathematics degree and related careers

- **Mathematics program page**
- **Career Compass**
- **Academic Calendar**

Alternatively offered through the **Faculty of Science**
### MEDIEVAL AND EARLY MODERN STUDIES

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2390 (W) Early Modern Europe 1450-1789 or HIST 2420 (W) The Medieval World</td>
<td>6</td>
</tr>
<tr>
<td>6 credit hours from Greek (GRK) or Latin (LATN) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Medieval and Early Modern Studies degree and related careers
- Medieval and Early Modern Studies program page
- Academic Calendar

### MEDIEVAL AND EARLY MODERN STUDIES

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2390 (W) Early Modern Europe 1450-1789 or HIST 2420 (W) The Medieval World</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Medieval and Early Modern Studies minor and related careers
- Medieval and Early Modern Studies program page
- Academic Calendar

### PHILOSOPHY

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1200 Introduction to Philosophy or Choose 6 credit hours from:</td>
<td>6</td>
</tr>
<tr>
<td>PHIL 1290 Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>PHIL 1300 (M) Introduction to Logic</td>
<td></td>
</tr>
<tr>
<td>PHIL 1420 Philosophy as a Way of Life</td>
<td></td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Philosophy degree and related careers
- Philosophy program page
- Career Compass
- Academic Calendar

### POLISH

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Polish (POL) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Polish minor and related careers
- Polish program page
- Academic Calendar

### POLITICAL STUDIES

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Political Studies (POLS) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Review these resources to learn more about the Political Studies degree and related careers
- Political Studies program page
- Career Compass
- Academic Calendar

**Co-op Education Program** available for the Political Studies Single Advanced Major and Single Honours.
# Psychology

<table>
<thead>
<tr>
<th><strong>FIRST YEAR COURSES</strong></th>
<th><strong>CREDIT HOURS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1200 Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

The Mathematics (M) course requirement will be met by PSYC 2260 (M) in Year 2 of the program. Entry to the Honours program is in Year 3, after completing PSYC 2260 (M) with a grade of B or higher in addition to other Honours admission requirements.

Co-op Education Program available for the Psychology Single Advanced Major.

If you are interested in Psychology and want to know what degree may be right for you, please contact the Psychology Undergraduate Advisor at psychugadvisor@umanitoba.ca.

# Religion

<table>
<thead>
<tr>
<th><strong>FIRST YEAR COURSES</strong></th>
<th><strong>CREDIT HOURS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Religion (RLGN) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

# Russian

<table>
<thead>
<tr>
<th><strong>FIRST YEAR COURSES</strong></th>
<th><strong>CREDIT HOURS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours from: RUSN 1302 Introductory Russian 1 (3 + lab) and RUSN 1304 Introductory Russian 2 (3 + lab), or both RUSN 2812 Intermediate Russian 1 (3) and RUSN 2814 Intermediate Russian 2 (3)</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

# Russian Minor

<table>
<thead>
<tr>
<th><strong>FIRST YEAR COURSES</strong></th>
<th><strong>CREDIT HOURS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Russian (RUSN) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

If you are interested in taking a specific course, click on its course code ex. PHIL 1290, to view essential information such as a course description, prerequisites, and restrictions.
FACULTY OF ARTS
INTRODUCTORY COURSE REQUIREMENTS

### SOCIOLOGY

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1000 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>27</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

The Mathematics (M) course requirement will be met by SOC 2294 (M) in Year 2 of the program. Sociology and Criminology may not be used together in a Major/Minor combination.

### SPANISH

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1: SPAN 1182 Introductory Spanish 1 (3 + lab) and SPAN 1184 Introductory Spanish 2 (3 + lab)</td>
<td>6</td>
</tr>
<tr>
<td>Or Option 2: SPAN 1184 Introductory Spanish 2 (3 + lab) and SPAN 1262 Intermediate Spanish Grammar 2 (3 + lab)</td>
<td>6</td>
</tr>
<tr>
<td>Or Option 3: SPAN 1280 Spanish for Native Speakers (3) and 3 credit hours from Spanish courses numbered at the 2000-level</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

### THEATRE

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>THTR 1220 Introduction to Theatre</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

### THEATRE

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>THTR 1220 Introduction to Theatre</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1200 (W) Representative Literary Works (6) or both ENGL 1340 (W) Introduction to Literary Analysis (3) and ENGL 1400 (W) Thematic Approaches to the Study of Literature (3)</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>18</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

Available Degree Options:
- **HONS.**
- **ADV.**
- **GEN.**
- **MINOR**

Review these resources to learn more about the degree and related careers:
- Sociology program page
- Career Compass
- Academic Calendar

Review these resources to learn more about the Spanish degree and related careers:
- Spanish program page
- Career Compass
- Academic Calendar

Review these resources to learn more about the Theatre degree and related careers:
- Theatre program page
- Career Compass
- Academic Calendar
### Ukrainian

**First Year Courses**

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours from: UKRN 1312 Introductory Ukrainian 1 (3 + lab) and UKRN 1314 Introductory Ukrainian 2 (3 + lab), or both UKRN 2722 Intermediate Ukrainian 1 (3) and UKRN 2724 Intermediate Ukrainian 2 (3)</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

### Ukrainian Minor

**First Year Courses**

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Ukrainian (UKRN) courses</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

### Ukrainian Canadian Heritage Studies

**First Year Courses**

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours from List A found in the Ukrainian Canadian Heritage Studies section of the Academic Calendar</td>
<td>6</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

### Women's and Gender Studies

**First Year Courses**

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMN 1500 (W) Introduction to Women's and Gender Studies in the Humanities or WOMN 1600 (W) Introduction to Women's and Gender Studies in the Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Other courses (see Arts first year courses chart)</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

All recognized minors in other faculties and schools are acceptable for credit in the Faculty of Arts. Please see the appropriate faculty or school sections of the Academic Calendar for details.
MINIMUM ADMISSION REQUIREMENTS
Admission to the Asper School of Business under Track 1 requires 24 graded credit hours of university-level courses listed in the chart above.

Admission to the Asper School of Business under Track 2 requires 24 graded credit hours of courses.

- Track 2 is intended for students who are missing one or more of the courses listed in the chart above, but who have completed a minimum of 24 graded credit hours of university-level courses.
- Admission under Track 2 is limited and more competitive than admission under Track 1.

TIPS FOR CHOOSING COURSES

- MATH 1524 (M) is the preferred MATH course for Asper students; if MATH 1524 (M) is not chosen, then students must present:
  - MATH 1230 (M), or MATH 1500 (M), or MATH 1510 (M), and one of
  - MATH 1300 (M), or MATH 1210 (M), or MATH 1220 (M)
- Choose your Written (W) course from the Recommended Introductory Courses List.
- In the Asper School of Business, a Non-Business elective is any course at the 1000-level or higher, taught in a faculty other than Asper. Choose your Non-Business elective(s) from the Recommended Introductory Courses List.
- Choose your Written (W) course from the Recommended Introductory Courses List.
- Students taking a full course load (30 credit hours) are recommended to also take the following 6 credit hours of core courses:
  - GMGT 2070 Introduction to Organizational Behaviour (3)
  - MKT 2210 Fundamentals of Marketing (3)
- Students interested in Actuarial Mathematics should complete MATH 1700 (M) as a Non-Business elective.
- Students interested in Finance should complete STAT 1150 (W) in their first year.
- Students interested in Indigenous Business Studies should complete INDG 1220 and/or INDG 1240 as Non-Business elective(s).
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 60% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional term(s).

NEED MORE INFORMATION?
FACULTY OF EDUCATION

BACHELOR OF EDUCATION, B.Ed. (AFTER DEGREE)

Students must complete an undergraduate degree, including stream-specific requirements, before applying to the Faculty of Education. Please refer to the Education Planning Chart on page 57 for recommended first degrees and browse the Faculties and Programs List to see undergraduate degrees available at UM.

TIPS FOR CHOOSING COURSES

- Consider taking EDUA 1790 Introduction to Education: What Does it Mean to Teach, as an elective in your first year.
- Use the Education Planning Chart found on the following page to complete the steps below:
  1. Choose your teaching stream
     - Early Years (Kindergarten-Grade 4) | Middle Years (Grade 5-8) | Senior Years (Grade 9-12)
  2. Choose your Teachable Subjects
     - Refer to the Education Planning Chart for subjects you can teach in your chosen stream.
  3. Choose your first degree and courses based on teaching stream and teachable subjects
     - Choose courses from the Recommended Introductory Courses List.
- If you selected Early or Middle Years streams, you must fulfill the following course work in your first degree:

<table>
<thead>
<tr>
<th>EARLY OR MIDDLE YEARS COURSEWORK REQUIREMENTS</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachable Major</td>
<td>18</td>
</tr>
<tr>
<td>Teachable Minor</td>
<td>12</td>
</tr>
<tr>
<td><strong>Breadth coursework:</strong></td>
<td></td>
</tr>
<tr>
<td>English Literature (ENGL) or French Literature (FREN)</td>
<td>6</td>
</tr>
<tr>
<td>Social Studies: History (HIST) or Geography (GEOG)</td>
<td>6</td>
</tr>
<tr>
<td>Math: Mathematics (MATH) and/or Statistics (STAT)</td>
<td>6</td>
</tr>
<tr>
<td>Science: Biology (BIOL), Chemistry (CHEM), Physics (PHYS), Geological Science (GEOL), and/or Environmental Science (ENVR)</td>
<td>6</td>
</tr>
</tbody>
</table>

  - See the Approved Breadth Courses page for full details.
- If you selected Senior Years, you must fulfill the following course work in your first degree:

<table>
<thead>
<tr>
<th>SENIOR YEARS COURSEWORK REQUIREMENTS</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachable Major</td>
<td>30</td>
</tr>
<tr>
<td>Teachable Minor</td>
<td>18</td>
</tr>
</tbody>
</table>

HOW TO APPLY

Please refer to the Admissions page to:

- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 5 years - Completion of a first degree (minimum 90 credit hours) plus 2 years (60 credit hours) in Education.
<table>
<thead>
<tr>
<th>TEACHABLE SUBJECT</th>
<th>EARLY YEARS K-Grade 4</th>
<th>MIDDLE YEARS Grade 5-8</th>
<th>SENIOR YEARS Grade 9-12</th>
<th>Recommended First Degree (based on teachable major)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Art*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.F.A. / B.A.</td>
</tr>
<tr>
<td>Biology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc.</td>
</tr>
<tr>
<td>Classics</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc.</td>
</tr>
<tr>
<td>Dance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Developmental Studies*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Drama/Theatre</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
<tr>
<td>Earth Sciences (Geological Sciences)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
<tr>
<td>General Science*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc. / B.Env.Sc.</td>
</tr>
<tr>
<td>Geography</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
<tr>
<td>History</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Indigenous Studies*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
<tr>
<td>Law</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Math*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc. / B.A.</td>
</tr>
<tr>
<td>Music*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Mus.</td>
</tr>
<tr>
<td>Philosophy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Physical Education*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.P.E.</td>
</tr>
<tr>
<td>Physics</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.Sc.</td>
</tr>
<tr>
<td>Political Science</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Religious Studies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Second Language*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>B.A.</td>
</tr>
</tbody>
</table>

* Review the specific additional requirements for teachable major/minor in the [2025-2026 admission requirements](#).

**NEED MORE INFORMATION?**

- **PROGRAM OVERVIEW**
- **FACULTY WEBSITE**
- **IMPORTANT DATES**
ENGINEERING, B.Sc.

Biosystems, Civil, Computer, Electrical, and Mechanical Engineering are available.

### PRELIMINARY YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1430</td>
<td>Design in Engineering</td>
<td>3 + lab</td>
</tr>
<tr>
<td>ENG 1440</td>
<td>Introduction to Statics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Introduction to Electrical and Computer Engineering</td>
<td>3 + lab</td>
</tr>
<tr>
<td>ENG 1460</td>
<td>Introduction to Thermal Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>COMP 1012</td>
<td>Computer Programming for Scientists and Engineers</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1210</td>
<td>(M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1510</td>
<td>(M) Applied Calculus 1 or MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1710</td>
<td>(M) Applied Calculus 2 or MATH 1700 (M) Calculus 2 or MATH 1232 (M) Integral Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHIL 1290</td>
<td>Critical Thinking or Complementary Studies elective (see Tips for Choosing Courses)</td>
<td>3-0</td>
</tr>
<tr>
<td>Price Faculty of Engineering Written (W) course (see Tips for Choosing Courses)</td>
<td>3-6</td>
<td></td>
</tr>
</tbody>
</table>

### MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Engineering departments requires at least 8 courses (24 graded credit hours of university-level courses) selected from the Preliminary Year Courses chart. All courses must be at the 1000-level or higher.

### TIPS FOR CHOOSING COURSES

- Students intending to obtain a degree in Engineering are strongly advised to complete MATH 1510 (M) and MATH 1710 (M). However, MATH 1500 (M) or MATH 1230 (M) may be taken in lieu of MATH 1510 (M); MATH 1700 (M) or MATH 1232 (M) may be taken in lieu of MATH 1710 (M).
- PHIL 1290 is the recommended Complementary Studies elective. Students may, however, select any course from the Faculty of Arts or Asper School of Business at the 1000-level or higher, except ARTS 1110 (W). Choose your Complementary Studies elective from the Recommended Introductory Courses List.
- The Written (W) course must be chosen from the Price Faculty of Engineering Written (W) Course list. Note that a 6 credit hour Written (W) course from the list will satisfy both the Written (W) course requirement, as well as the 3 credit hour Complementary Studies elective.
- Note: ARTS 1110 (W) cannot be used as the Complementary Studies elective or the Written (W) course for Engineering.
- If you are interested in Engineering or are already in Engineering, please contact the Engineering Advisor at eng.info@umanitoba.ca.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 60% required in:

• Chemistry 40S
• Math 40S (Pre-Calculus)
• Physics 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:

• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• 4 years (153-166 credit hours), Co-op may extend your studies by an additional term(s).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES

PROGRAMS OFFERED  ENGINEERING WRITTEN (W) LIST
ENVIROMENTAL SCIENCE, B.Env.Sc.

This program is accredited to the National Standard of Environmental Programs in Canada by ECO Canada. Honours, Major, and General degrees are available.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVR 1000 Environmental Science 1: Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 2000 Environmental Science 2: Issues</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M) Differential Calculus</td>
<td></td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1 (see Tips for Choosing Courses) or STAT 1150 (M) Introduction to Statistics and Computing (see Tips for Choosing Courses)</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

### MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Environmental Science requires 24 graded credit hours, including at least 12 credit hours of the following courses:

- ENVR 1000
- BIOL 1030
- MATH 1500 (M) or MATH 1510 (M)
- STAT 1000 (M) or STAT 1150 (M)
- GEOL 1340 or GEOG 1290
- PHYS 1030 (M) or PHYS 1070 or MATH 1300 (M)

### TIPS FOR CHOOSING COURSES

- **ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, and ECON 1010** are prerequisites for upper level courses in the program. It is recommended to complete these in first year, before admission.
- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by ENVR 2810 (W) in Year 2 of the program.
- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by MATH 1500 (M) (or substitutes listed in the chart).
- If you intend to take STAT 2000 (M) in the future, take STAT 1000 (M) as the prerequisite. If you intend to take STAT 2150 (M) in the future, take STAT 1150 (M) as the prerequisite.
- Students interested in Environmental Science are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early on.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
  • Biology 40S
  • Chemistry 40S
  • Physics 40S (for Year 2 courses)
Minimum 60% required in
  • Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
  • Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
  • Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• Honours/Major: 4 years (120 credit hours), Co-op may extend your studies by an additional term(s).
• General: 3 years (90 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES

AVAILABLE FOCUS AREAS
# ENVIRONMENTAL STUDIES, B.Env.St.

Honours, Major, and General degrees are available.

## FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVR 1000</td>
<td>Environmental Science 1: Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 2000</td>
<td>Environmental Science 2: Issues</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1010</td>
<td>Biological Diversity and Interaction (3), or both</td>
<td></td>
</tr>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes (3 + lab) and</td>
<td></td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interaction (3 + lab) (see Tips for Choosing Courses)</td>
<td>3-6</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1280</td>
<td>Introduction to Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1290</td>
<td>Introduction to Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>Choose one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDG 1220</td>
<td>Indigenous Peoples in Canada, Part 1</td>
<td>3</td>
</tr>
<tr>
<td>INDG 1240</td>
<td>Indigenous Peoples in Canada, Part 2</td>
<td></td>
</tr>
<tr>
<td>INDG 2020 (W) / HIST 2020 (W)</td>
<td>The Métis in Canada</td>
<td></td>
</tr>
<tr>
<td>INDG 2080</td>
<td>Inuit Society and Culture (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1000 (M)</td>
<td>Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Elective(s) (see Tips for Choosing Courses)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total Credit Hours

30

## MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Environmental Studies requires 24 graded credit hours, including at least 12 credit hours of the following courses:

- ENVR 1000
- BIOL 1010 or BIOL 1030
- ENVR 2000
- GEOG 1280
- STAT 1000 (M)
- ENVR 1000 or ENVR 2000 or BIOL 1010 or BIOL 1020 or BIOL 1030, or ECON 1010 are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.

## TIPS FOR CHOOSING COURSES

- ENVR 1000, ENVR 2000, BIOL 1010 (or BIOL 1020 and BIOL 1030), and ECON 1010 are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.
- Completing BIOL 1020 and BIOL 1030 is recommended for students with an interest in the Conservation and Biodiversity, Natural Resource Management, Toxicology, Water Resources, and Wildlife Management focus areas.
- EVDS 1680 is a recommended elective for students with an interest in the Sustainable Building focus area.
- The Written (W) course is not required for admission.
- The Mathematics (M) course are not required for admission. The Mathematics (M) course requirement will be met by STAT 1000 (M).
- Choose electives from the Recommended Introductory Courses List.
- If you are considering taking INDG 2080, please be aware that the pre-requisites for this class are INDG 1200; INDG 1220 and INDG 1240; or written consent of the Indigenous Studies Department Head.
- Students interested in Environmental Studies are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early on.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:

• Math 40S
• Biology 40S – if taking BIOL 1020
• Chemistry 40S or Physics 40S – if taking BIOL 1020

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:

• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• Honours/Major: 4 years (120 credit hours), Co-op may extend your studies by an additional term(s).
• General: 3 years (90 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES

AVAILABLE FOCUS AREAS
CLAYTON H. RIDDELL
FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES

GEOGRAPHY, B.A.
Honours, Advanced, and General degrees are available.

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course(s) in 2nd subject field</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course(s) in 3rd subject field</td>
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</tr>
<tr>
<td>Course(s) in 4th subject field</td>
<td>6</td>
</tr>
<tr>
<td>Course(s) in 5th subject field or Electives (see Tips for Choosing Courses)</td>
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<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

From the courses selected above, have you fulfilled:

- 6 credit hours of Humanities courses (see Tips for Choosing Courses)
- 6 credit hours of Science courses (see Science Courses for B.A. Geography chart)
- Written (W) course (see Tips for Choosing Courses)
- Mathematics (M) course (see Tips for Choosing Courses)

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Geography requires 24 graded credit hours, including at least 6 credit hours of the following courses:

- GEOG 1280
- GEOG 1290
- GEOG 1700 / GPE 1700

SCIENCE COURSES FOR B.A. GEOGRAPHY

<table>
<thead>
<tr>
<th>Faculty of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>See the Recommended Introductory Courses List for specific courses.</td>
</tr>
<tr>
<td>Astronomy (ASTR)</td>
</tr>
<tr>
<td>Biological Sciences (BIOL)</td>
</tr>
<tr>
<td>Chemistry (CHEM)</td>
</tr>
<tr>
<td>Computer Science (COMP)</td>
</tr>
<tr>
<td>Mathematics (MATH)</td>
</tr>
<tr>
<td>Microbiology (MBIO)</td>
</tr>
<tr>
<td>Physics (PHYS)</td>
</tr>
<tr>
<td>Statistics (STAT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Faculty of Agricultural and Food Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Agriculture - AGRI 1600</td>
</tr>
<tr>
<td>- Entomology - ENTM 1000</td>
</tr>
<tr>
<td>- Plant Science - PLNT 1000</td>
</tr>
<tr>
<td>Some additional upper-level courses in ENTM, PLNT, and SOIL may also be used.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clayton H. Riddell Faculty of Environment, Earth, and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Environment - ENVR 1000, ENVR 2000</td>
</tr>
<tr>
<td>- Geography - GEOG 1290</td>
</tr>
<tr>
<td>- Geological Sciences - GEOL 1340, GEOL 1400, GEOL 1410, GEOL 1420</td>
</tr>
</tbody>
</table>
TIPS FOR CHOOSING COURSES

- It is recommended to start working on the subject field, elective, Humanities, and Science courses requirements in first year.
- A subject field is comprised of six credit hours in one subject and may be completed by two 3-credit hour courses in a subject (ex., ENVR 1000 (3) and ENVR 2000 (3)) or by one 6-credit hour course in a subject (ex. INDG 1200 (6)).
- Choose courses to fulfill the subject field, elective, and Humanities course requirements from the Recommended Introductory Courses List. Humanities courses are marked with H.
- Choose courses to fulfill the Science course requirement from the Science Courses for B.A. Geography chart.
- A minor is required in the Advanced and General Major degrees. See the Academic Calendar for information on accepted minors. Consider choosing courses that will work toward your intended minor.
- The Written (W) course is not required for admission. Once in the degree, students will have the option to fulfill the Written (W) course with ENVR 2810 (W).
- The Mathematics (M) course is not required for admission.
- Students interested in Geography are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early on.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Math 40S
- Additional 40S courses may be required, depending on the Science courses you choose.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- Honours/Major: 4 years (120 credit hours).
- General: 3 years (90 credit hours).

NEED MORE INFORMATION?
EARTH SCIENCES, B.Sc. GENERAL

General degree is available. Major or Honours are available in Geology, Geophysics, and Environmental Geoscience.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1340 The Dynamic Earth</td>
<td></td>
</tr>
<tr>
<td>GEOL 1400 Time-Trekker’s Travelog: Our Evolving Earth or</td>
<td></td>
</tr>
<tr>
<td>GEOL 1410 Natural Disasters and Global Change or</td>
<td></td>
</tr>
<tr>
<td>GEOL 1420 Exploring the Planets</td>
<td></td>
</tr>
<tr>
<td>Introductory course(s) in intended Minor (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

From the courses selected above, have you fulfilled:

- 6 credit hours of Faculty of Arts course(s) (see Tips for Choosing Courses)
- Written (W) course (see Tips for Choosing Courses)
- Mathematics (M) course (see Tips for Choosing Courses)

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Earth Sciences (General) requires 24 graded credit hours, including GEOL 1340.

TIPS FOR CHOOSING COURSES

- Students are recommended to take GEOL 1400, but the listed substitutions are permitted.
- Consider choosing courses in your first year that will work toward your intended minor, as a minor is required in this degree. See the Academic Calendar for information on accepted minors.
- You are recommended to complete the 6 credit hours of Faculty of Arts course(s) requirement in first year.
- Choose Faculty of Arts courses, electives, and courses for your minor from the Recommended Introductory Courses List.
- The Written (W) course is not required for admission.
- The Mathematics (M) course is not required for admission.
- Students interested in Earth Sciences (General) are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early on.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

For Year 2 courses, minimum 50% required in:

- Chemistry 40S
- Math 40S
- Physics 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:

- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 3 years (90 credit hours).

NEED MORE INFORMATION?
ENVIRONMENTAL GEOSCIENCE, B.Sc.
Honours and Major degrees are available.

**FIRST YEAR COURSES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1340</td>
<td>The Dynamic Earth</td>
<td>3 + lab</td>
</tr>
<tr>
<td>GEOL 1400</td>
<td>Time-Trekker’s Travelog: Our Evolving Earth</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 1000</td>
<td>Environmental Science 1: Concepts</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M)</td>
<td>Introduction to Calculus or MATH 1510 (M)</td>
<td>Applied Calculus 1 or MATH 1230 (M)</td>
</tr>
<tr>
<td>PHYS 1020 (M)</td>
<td>General Physics 1 or PHYS 1050 Physics 1: Mechanics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1000 (M)</td>
<td>Basic Statistical Analysis 1 (see Tips for Choosing Courses) or STAT 1150 (M) Introduction to Statistics and Computing (see Tips for Choosing Courses)</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s) (see Tips for Choosing Courses)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
<td></td>
</tr>
</tbody>
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**MINIMUM ADMISSION REQUIREMENTS**

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Environmental Geoscience requires 24 graded credit hours, including GEOL 1340.

**TIPS FOR CHOOSING COURSES**

- CHEM 1100, CHEM 1120, PHYS 1020 (M), and MATH 1500 (M) (or substitutes listed in the chart) are prerequisites for upper level courses in the program. It is recommended to complete these in first year, before admission.
- The Written (W) course is not required for admission. The Written (W) course requirement will be met by GEOL 3130 (W) in Year 3 of the program.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by MATH 1500 (M) (or substitutes listed in the chart).
- Choose your Faculty of Arts course from the Recommended Introductory Courses List.
- Students interested in Environmental Geoscience are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early to learn about minimum grades and GPA requirements.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Chemistry 40S
• Physics 40S

Minimum 60% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission to the Earth Sciences (General) program, and consult with an Academic Advisor in the faculty to enter the Environmental Geoscience (Major or Honours) program.
• For complete admission details and deadlines, consult with an Academic Advisor in the faculty.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
• Honours/Major: 4 years (120 credit hours).

NEED MORE INFORMATION?
GEOLOGY, B.Sc.
Honours and Major degrees are available.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1340</td>
<td>The Dynamic Earth</td>
<td>3 + lab</td>
</tr>
<tr>
<td>GEOL 1400</td>
<td>Time-Trekker’s Travelog: Our Evolving Earth</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500</td>
<td>(M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1230 (M) Differential Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>(M) General Physics 1 or PHYS 1050 Physics 1: Mechanics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s)</td>
<td>(see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>(see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 30

### MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Geology requires 24 graded credit hours, including GEOL 1340.

### TIPS FOR CHOOSING COURSES

- CHEM 1100, CHEM 1120, PHYS 1020 (M), and MATH 1500 (M) (or substitutes listed in the chart) are prerequisites for upper level courses in the program. It is recommended to complete these in first year, before admission.
- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by GEOL 3130 (W) in Year 3 of the program.
- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by MATH 1500 (M) (or substitutes listed in the chart).
- Choose Faculty of Arts courses and electives from the **Recommended Introductory Courses List**.
- Students interested in Geology are encouraged to meet with an **Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources** early to learn about minimum grades and GPA requirements.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Chemistry 40S
• Physics 40S

Minimum 60% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission to the Earth Sciences (General) program, and consult with an Academic Advisor in the faculty to enter the Geology (Major or Honours) program.
• For complete admission details and deadlines, consult with an Academic Advisor in the faculty.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• Honours/Major: 4 years (120 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW | CAREER COMPASS | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
GEOPHYSICS, B.Sc.
Honours and Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1340 The Dynamic Earth</td>
<td>3 + lab</td>
</tr>
<tr>
<td>GEOL 1400 Time-Trekker’s Travelog: Our Evolving Earth or</td>
<td></td>
</tr>
<tr>
<td>GEOL 1410 Natural Disasters and Global Change or</td>
<td></td>
</tr>
<tr>
<td>GEOL 1420 Exploring the Planets</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1210 (M) Techniques of Classical and Linear Algebra or</td>
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<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1 or</td>
<td></td>
</tr>
<tr>
<td>MATH 1230 (M) Differential Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1710 (M) Applied Calculus 2 or MATH 1700 (M) Calculus 2</td>
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</tr>
<tr>
<td>PHYS 1050 Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1070 Physics 1: Waves and Modern Physics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Geophysics requires 24 graded credit hours, including GEOL 1340.

TIPS FOR CHOOSING COURSES
- Students are recommended to take GEOL 1400, but the listed substitutions are permitted.
- PHYS 1050, PHYS 1070, MATH 1510 (M) and MATH 1710 (M) (or substitutes listed in the chart) are prerequisites for upper level courses in the program. It is recommended to complete these in first year, before admission.
- The Written (W) course is not required for admissions. The Written (W) course requirement will be met by GEOL 3130 (W) in Year 3 of the program.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by MATH courses in the chart.
- Choose your Faculty of Arts course from the Recommended Introductory Courses List.
- Students interested in Geophysics are encouraged to meet with an Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources early to learn about minimum grades and GPA requirements.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Chemistry 40S
- Physics 40S

Minimum 60% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission to the Earth Sciences (General) program, and consult with an Academic Advisor in the faculty to enter the Geophysics (Major or Honours) program.
- For complete admission details and deadlines, consult with an Academic Advisor in the faculty.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
- Honours/Major: 4 years (120 credit hours).

NEED MORE INFORMATION?
PHYSICAL GEOGRAPHY, B.Sc.

Physical Geography offers streams in Atmospheric Science, Geomatics, and General Physics. Honours and Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 1290 Introduction to Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1020 (M) General Physics 1 or PHYS 1050 Physics 1: Mechanics</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

12 credit hours from the following:
- GEOL 1340 The Dynamic Earth
- MATH 1300 (M) Vector Geometry and Linear Algebra
- PHYS 1030 (M) General Physics 2 or PHYS 1070 Physics 2: Waves and Modern Physics
- BIOL 1020 Biology 1: Principles and Themes
- BIOL 1030 Biology 2: Biological Diversity, Function and Interaction
- CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics
- CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties
- CHEM 1120 Introduction to Chemistry Techniques
- COMP 1012 Computer Programming for Scientists and Engineers
- MATH 1700 (M) Calculus 2 or MATH 1710 (M) Applied Calculus 2
- STAT 1000 (M) Basic Statistical Analysis 1
- STAT 2000 (M) Basic Statistical Analysis 2

Faculty of Arts course(s) (see Tips for Choosing Courses) 6

Elective (see Tips for Choosing Courses) 3

Total Credit Hours 30

**MINIMUM ADMISSION REQUIREMENTS**

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Physical Geography requires 24 graded credit hours, including GEOG 1290 and at least 6 credit hours of the following courses:
- GEOL 1340
- MATH 1500 (M) or MATH 1510 (M)
- PHYS 1030 (M) or PHYS 1070
- MATH 1300 (M)
- PHYS 1020 (M) or PHYS 1050
**TIPS FOR CHOOSING COURSES**

- MATH 1500 (M) and PHYS 1020 (M) (or substitutes listed in the chart) are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.
- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by ENVR 2810 (W) once in the program.
- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by MATH 1500 (M) (or substitutes listed in the chart).
- Choose Faculty of Arts courses and the elective from the **Recommended Introductory Courses List**. When choosing the elective, consider taking additional courses from the First Year Courses chart.
- Students interested in Physical Geography are encouraged to meet with an **Academic Advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources** early on.
- **Advanced Placement (AP) or International Baccalaureate (IB) credit** may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

**HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES**

Minimum 50% required in:

- Physics 40S
- Biology 40S – if taking BIOL 1020
- Chemistry 40S – if taking CHEM 1100

Minimum 60% required in

- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to [upgrade](#) your high school course.

**HOW TO APPLY**

Please refer to the **Admissions** page to:

- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

**MINIMUM TIME TO GRADUATION**

- Honours/Major: 4 years (120 credit hours), **Co-op** may extend your studies by an additional term(s).
# Radical Faculty of Health Sciences

## Health Sciences, B.H.Sc.

### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAL 1500</td>
<td>Foundations of Human Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1502</td>
<td>Foundations of Human Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110</td>
<td>Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1000</td>
<td>(M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>INDG 1220</td>
<td>Indigenous Peoples in Canada, Part 1 or</td>
<td>3</td>
</tr>
<tr>
<td>INDG 1240</td>
<td>Indigenous Peoples in Canada, Part 2</td>
<td></td>
</tr>
<tr>
<td>PSYC 1200</td>
<td>Introduction to Psychology (6) or</td>
<td></td>
</tr>
<tr>
<td>SOC 1000</td>
<td>Introduction to Sociology (3)</td>
<td>3-6</td>
</tr>
</tbody>
</table>

**Elective (If taking SOC 1000, see Tips for Choosing Courses)**

**Total Credit Hours** 30

---

## Minimum Admission Requirements

All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Health Sciences requires 24 graded credit hours of university-level courses, including:

- 6 credit hours from the Faculty of Arts
- 6 credit hours from the Faculty of Science

---

## Tips for Choosing Courses

- HEAL 1500 (C+), HEAL 1502, CHEM 1100, CHEM 1110, CHEM 1120, PSYC 1200 or SOC 1000, and STAT 1000 (M) are prerequisites for required second year courses in the program. It is recommended to complete these in your first year, before admission.
- For your 6 credit hours of Faculty of Arts courses, consider taking INDG 1220 or INDG 1240, PSYC 1200 (or SOC 1000), as they are required in the degree. See the Faculty of Arts section of the Recommended Introductory Courses List for additional courses.
- For your 6 credit hours of Faculty of Science courses, consider taking BIOL 1410, CHEM 1100, CHEM 1110, CHEM 1120, or STAT 1000, as they are all required in the degree. See the Faculty of Science section of the Recommended Introductory Courses List for additional courses.
- The **Written (W) course** is not required for admission. The Written (W) course requirement may be met by HNSC 2000 (W) in Year 2 of the program or by a Written (W) elective which must be taken within your first 60 credit hours.
- The **Mathematics (M) course** is not required for admission. The Mathematics (M) course requirement will be met by STAT 1000 (M).
- Choose an elective from the Recommended Introductory Courses List.
- Students interested in learning more about Health Sciences, are encouraged to connect with an Academic Advisor in Interdisciplinary Health by emailing IHP.Advisors@umanitoba.ca.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S
- Math 40S (Pre-calculus or Applied)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
- 4 years (120 credit hours).

NEED MORE INFORMATION?
HEALTH STUDIES, B.H.St.

Students will choose a concentration in one of the three following areas: Health Policy, Planning and Evaluation, or Health Promotion and Education, or Family Health.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAL 1500 Foundations of Human Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1502 Foundations of Human Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 1210 Ancient Peoples and Places or ANTH 1220 Socio-Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>FMLY 1012 Introduction to Social Development</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 1220 Socio-Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1200 Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>SOC 1000 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Concentration Elective from the approved list (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but are not required for admission.

Admission to Health Studies requires any 24 graded credit hours of university-level courses.

TIPS FOR CHOOSING COURSES

- HEAL 1500 and HEAL 1502 are required as part of the degree program, either before or after admission. HEAL 1500 (minimum grade of C+) is a prerequisite for HEAL 1502.
- SOC 1000 and STAT 1000 (M) are prerequisites for required second year courses in the program. It is recommended to complete these in first year, before admission.
- Choose your concentration elective from the B.H.St. Concentration Electives list.
- Choose your elective from the Recommended Introductory Courses List.
- The following courses (required later in the program) may be taken in your first year:
  - ECON 1210 or ECON 1220
  - GMGT 1010 (W) or GMGT 2070
  - HNSC 1210
  - INDG 1220 or INDG 1240
- The Written (W) course is not required for admission. The Written (W) course requirement may be met by HNSC 2000 (W) or GMGT 1010 (W) in Year 2 of the program, or by a Written (W) elective which must be taken within your first 60 credit hours.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by STAT 1000 (M).
- Students interested in learning more about Health Studies, are encouraged to connect with an Academic Advisor in Interdisciplinary Health by emailing IHP.Advisors@umanitoba.ca.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S or Chemistry 40S
- Math 40S (Pre-Calculus or Applied recommended)
- Additional 40S courses may be required, depending on the concentration and program electives you choose.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours).

NEED MORE INFORMATION?
DENTAL HYGIENE, DIPLOMA

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410 Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412 Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>ENGL course at the 1000-level or higher (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1200 Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
Admission to Dental Hygiene requires all 30 graded credit hours of university-level courses listed in the Required Courses chart. All courses must be at the 1000-level or higher.

Minimum grades in required courses are outlined in the Academic Calendar.

Open to Canadian citizens and Permanent Residents only.

TIPS FOR CHOOSING COURSES
- Consider taking SOC 1000 or HEAL 1600 as the 3 credit hour elective.
- Choose your elective and your ENGL course from the Recommended Introductory Courses List. Your elective and ENGL course must be at the 1000-level or higher.
- Minimum grades in required courses are outlined in the Academic Calendar.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Chemistry 40S
• Math 40S (Pre-Calculus or Applied)

Minimum 50% recommended in:
• Biology 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
• 3 years (101 credit hours).

NEED MORE INFORMATION?
## DENTAL MEDICINE, D.M.D.

### YEAR 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110</td>
<td>Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1020 (M)</td>
<td>General Physics 1 or Physics 1050 Mechanics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1030 (M)</td>
<td>General Physics 2 or Physics 1070 Waves and Modern Physics</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

Choose 6 credit hours from the following:

- ENGL 1200 (W) Representative Literary Works (6)
- ENGL 1340 (W) Introduction to Literary Analysis (3)
- ENGL 1400 (W) Thematic Approaches to the Study of Literature (3)
- ENGL 0930 (W) English Composition (3)
- ENGL 0940 (W) Writing About Literature (3)

**Humanities or Social Sciences electives (see Tips for Choosing Courses)**

### YEAR 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2122</td>
<td>Experimental Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2700 / MBIO 2700</td>
<td>Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2710 / MBIO 2710</td>
<td>Biochemistry 2: Catabolism, Synthesis, and Information Pathways</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2720</td>
<td>Principles and Practices of the Modern Biochemistry Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives (see Tips for Choosing Courses)**

**MINIMUM ADMISSION REQUIREMENTS**

Admission to Dentistry requires the above graded credit hours of university-level courses listed in the charts and at least 2 regular sessions (i.e., September-April) with at least 24 new graded credit hours of university-level courses. Repeated courses, transfer credit, and AP or IB credit do not count towards these 24 new graded credit hours.

Open to Canadian citizens and Permanent Residents only.
TIPS FOR CHOOSING COURSES

• BIOL 1020, BIOL 1030, CHEM 1100, CHEM 1110 and CHEM 1120 are prerequisites for required second year courses and should be completed in first year.

• If choosing PHYS 1050: MATH 1500 (M) (or MATH 1510, MATH 1524, MATH 1230) is a co-requisite.
  If choosing PHYS 1070: MATH 1700 (M) (or MATH 1710, MATH 1232) is a co-requisite.
  MATH 1500 (M) and MATH 1700 (M) (or substitutions listed) will count towards electives.

• Consider taking HEAL 1600 Health and Health Professions as an elective.

• Choose electives and Humanities or Social Sciences from the Recommended Introductory Courses List. Humanities courses are marked with H and Social Sciences courses are marked with SS.

• The following courses can be taken in either Year 1 or Year 2:
  • 6 credit hours of ENGL courses from the approved list
  • Humanities and Social Sciences electives
  • Electives

• If you plan on completing all the courses in the chart in your first two years of university studies, you must take courses during the Summer Term between your first and second year.

• Students may use Advanced Placement (AP) or International Baccalaureate (IB) credit for required courses. However, students must still complete at least two regular sessions (September-April) with 24 new graded credit hours of university-level courses in each regular session. AP or IB credit will not count towards these 24 new graded credit hours.

HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:

• Biology 40S
• Chemistry 40S
• Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)
• Physics 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:

• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

• All applicants must complete the Canadian English Dental Aptitude Test (DAT).

MINIMUM TIME TO GRADUATION

• 6 years - 2 years of university study (all prerequisites as listed in the charts), plus 4 years in Dentistry.

NEED MORE INFORMATION?
DOCTOR OF MEDICINE (M.D.)
A Doctor of Medicine (M.D.) at the University of Manitoba is an after-degree program. Students must complete an undergraduate degree before applying to the Max Rady College of Medicine. Please browse the Faculties and Programs List to see undergraduate degrees available at UM.

MINIMUM ADMISSION REQUIREMENTS
Admission to Medicine requires an undergraduate degree and a 3 credit hour course that fulfills the Indigenous Content Requirement (see Tips for Choosing Courses).

- Open to Canadian citizens and Permanent Residents only.

TIPS FOR CHOOSING COURSES
- Students should consider taking a combination of courses in biology, chemistry, organic chemistry, physics, microbiology, psychology, sociology, biochemistry, and research methods as they prepare for the MCAT.
- Refer to the Association of American Medical Colleges (AAMC) website for complete details on preparation and writing the MCAT exam.
- Plan to write the MCAT at the end of Year 2 and/or before the beginning of Year 3 studies.
- Courses that fill the Indigenous Content Requirement are marked with ICR in the Recommended Introductory Courses List.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum grades in specific 40S courses may be required, depending on which courses you choose in your first degree.

HOW TO APPLY
Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.
- View previous admission statistics online
- All applicants must complete the Medical College Admission Test (MCAT) and the English Casper® test (online, open-response situational judgment test).

MINIMUM TIME TO GRADUATION
- 7-8 years — Completion of a first degree (minimum 90 credit hours), plus 4 years in Medicine.
- M.D. graduates then complete 3 – 5 years of residency training, which is the final stage of medical education.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
MINIMUM ADMISSION REQUIREMENTS

Admission to Midwifery requires all 30 graded credit hours of university-level courses listed in the First Year Courses chart. All courses must be at the 1000-level or higher.

- Open to Canadian citizens and Permanent Residents only.

TIPS FOR CHOOSING COURSES

- Choose your Science elective from the Faculty of Science section of the Recommended Introductory Courses List. If you do not have a strong background in Science or you are not interested in taking upper-level Science courses, consider taking a Science Interest Course, marked with SCI.

- Your Humanities (H) or Social Sciences (SS) electives, including the Written (W) course, must be at the 1000-level or higher. Consider taking WOMN 1500 (W) or WOMN 1600 (W) to fulfill your Written (W) course, or choose from the Recommended Introductory Courses List.

- Make sure that your Humanities (H) or Social Sciences (SS) elective is marked with a (W) in the Recommended Introductory Courses List, to ensure that it satisfies the Written (W) course requirement.

- Note: While ARTS 1110 (W) fulfills the Written (W) course requirement, it does not count as a Humanities or Social Science elective.

- Once admitted to Midwifery, students attend courses three (3) terms per year (Fall, Winter, and Summer). This program is full-time study only.

- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

FACULTY OF SCIENCE ELECTIVES FOR MIDWIFERY

See the Faculty of Science section in the Recommended Introductory Courses List for specific courses.

- Astronomy (ASTR)
- Biological Sciences (BIOL)
- Chemistry (CHEM)
- Computer Science (COMP)
- Mathematics (MATH)
- Microbiology (MBIO)
- Physics (PHYS)
- Statistics (STAT)
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Chemistry 40S
- Math 40S (Applied or Pre-Calculus)

Minimum 50% recommended in:
- Biology 40S
- Additional 40S courses may be required, depending on the Faculty of Science elective you choose.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.
- All applicants must complete the English Casper® test (online, open-response situational judgment test).

MINIMUM TIME TO GRADUATION
- 4 Years (130 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
Rady Faculty of Health Sciences
College of Nursing

Nursing, B.N.

First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410</td>
<td>Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412</td>
<td>Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Mbio 1220</td>
<td>Essentials of Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>Faculty of Science electives, including a Mathematics (M) course (see Tips for Choosing Courses)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Humanities or Social Sciences electives, including a Written (W) course (See Tips for Choosing Courses)</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 30

Minimum Admission Requirements
Admission to Nursing requires all 30 graded credit hours of university-level courses listed in the First Year Courses chart. All courses must be at the 1000-level or higher.

Tips for Choosing Courses

- Choose your Science electives from the Faculty of Science section of the Recommended Introductory Courses List. If you do not have a strong background in Science or you are not interested in taking upper-level Science courses, consider taking a Science Interest Course, marked with SCI.
- Make sure that at least one of your Faculty of Science courses is marked with an (M), which indicates that it fulfills the Mathematics (M) course requirement.
- Choose your Humanities H or Social Sciences SS electives from the Recommended Introductory Courses List. Humanities courses are marked with H, and Social Sciences courses are marked with SS.
- Make sure that at least one of your Humanities or Social Sciences electives is marked with a (W), which indicates that it fulfills the Written (W) course requirement.
- Your Humanities or Social Sciences electives, including the Written (W) course, must be at the 1000-level or higher. Consider taking PHIL 1290 to fulfill a Humanities elective, or choose from the Recommended Introductory Courses List.
- Note: While ARTS 1110 (W) fulfills the Written (W) course requirement, it does not count as a Humanities or Social Science elective.
- Once admitted to Nursing, students attend courses three (3) terms per year (Fall, Winter, and Summer), as this is an accelerated degree program.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

Faculty of Science Electives for Nursing

See the Faculty of Science section in the Recommended Introductory Courses List for specific courses.

- Astronomy (ASTR)
- Biological Sciences (BIOL)
- Chemistry (CHEM)
- Computer Science (COMP)
- Mathematics (MATH)
- Microbiology (MBIO)
- Physics (PHYS)
- Statistics (STAT)
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% recommended in:
- Biology 40S
- Math 40S
- Additional 40S courses may be required, depending on the Faculty of Science electives you choose.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
- 3.5 Years (127 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW ACADEMIC CALENDAR UM ACHIEVE FACULTY WEBSITE IMPORTANT DATES
# Rady Faculty of Health Sciences
## College of Pharmacy

### PHARMACY, Pharm.D.

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1 or STAT 1150 (M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Humanities or Social Sciences Written (W) elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>24</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 1010 Microbiology 1</td>
<td>3 + lab</td>
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<tr>
<td>BIOL 2410 Human Physiology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2420 Human Physiology 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2700 / MBIO 2700 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Sciences electives (see Tips for Choosing Courses)</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

### Minimum Admission Requirements

Admission to Pharmacy requires all 48 graded credit hours of university-level courses listed in the charts. Students must complete at least one regular session (i.e., September-April) with at least 24 new graded credit hours of university-level courses. Repeated courses, transfer credit, and AP or IB credit do not count towards these 24 new graded credit hours.

Applicants must have 48 graded credit hours completed at the 1000-level or higher.

![Canadian Flag] Open to Canadian citizens and Permanent Residents only.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 50% required in:
• Biology 40S
• Chemistry 40S
Minimum 60% required in:
• Math 40S (Pre-calculus)
If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.
Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.
• All applicants must complete the Casper® test (online, open-response situational judgment test).

MINIMUM TIME TO GRADUATION
• 6 years — 2 years of university study (48 credit hours), plus 4 years in Pharmacy.

NEED MORE INFORMATION?
Rady Faculty of Health Sciences
College of Rehabilitation Sciences

Respiratory Therapy, B.R.T.

First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes (3 + lab) and</td>
<td>6 + lab</td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interaction (3 + lab), or both</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIOL 1000 Foundations of Life (3) and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIOL 1010 Biological Diversity and Interactions (3)</td>
<td></td>
</tr>
<tr>
<td>PSYC 1200</td>
<td>Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>STAT 1000</td>
<td>Basic Statistical Analysis 1 or</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td>STAT 1150 (M) Introduction to Statistics and Computing</td>
<td></td>
</tr>
<tr>
<td>Electives, including a Written (W) course (see Tips for Choosing Courses)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

Minimum Admission Requirements

Admission to Respiratory Therapy requires all 24 graded credit hours of university-level courses listed in the First Year Courses chart.

Students will apply to Respiratory Therapy under Category 1 if they:
- Have completed at least one regular session (i.e. September-April) with at least 24 graded credit hours of university-level courses
- Minimum grades for Category 1 are outlined in the Bachelor of Respiratory Therapy Advanced Entry admission requirements

Students will apply to Respiratory Therapy under Category 2 if they:
- Have completed fewer than 24 graded credit hours of university-level courses in a regular session (i.e. September-April)
- But still have at least 24 graded credit hours of university-level courses overall
- Minimum grades for Category 2 are outlined in the Bachelor of Respiratory Therapy Advanced Entry admission requirements

Category 1 applicants receive priority admission over Category 2 applicants.

Open to Canadian citizens and Permanent Residents only.

Tips for Choosing Courses

- Choose electives, including the Written (W) course, from the Recommended Introductory Courses List. Consider taking HEAL 1600 as an elective.
- Advanced Placement (AP) or International Baccalaureate (IB) credit can be used to fulfill core course requirements, but will not contribute to the 24 credit hour course load requirement for Category 1 admission.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 50% required in:
• Biology 40S if taking BIOL 1020
• Chemistry 40S or Physics 40S if taking BIOL 1020
• Math 40S (Pre-Calculus or Applied recommended)
Recommended:
• Chemistry 40S
• English 40S
• Physics 30S and/or 40S
If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.
Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
• 4 years (136 credit hours)

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
OCCUPATIONAL THERAPY, M.O.T.

The Master of Occupational Therapy at the University of Manitoba is a graduate program following the completion of an undergraduate degree. Students must complete an undergraduate degree, including specific courses in the chart below, before applying to the College of Rehabilitation Sciences. Please browse the Faculties and Programs List to see undergraduate degrees available at UM.

<table>
<thead>
<tr>
<th>COURSES REQUIRED IN FIRST DEGREE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410 Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412 Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Minimum 3 credit hours of Psychology (PSYC) at the 1000-level or higher</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or Indigenous Content Course requirement - one of:</td>
<td></td>
</tr>
<tr>
<td>SOC 1000 Introduction to Sociology</td>
<td></td>
</tr>
<tr>
<td>ANTH 1220 Socio-Cultural Anthropology</td>
<td></td>
</tr>
<tr>
<td>INDG 1220 Indigenous Peoples in Canada, Part I</td>
<td>3</td>
</tr>
<tr>
<td>INDG 1240 Indigenous Peoples in Canada, Part 2</td>
<td></td>
</tr>
<tr>
<td>GEOG 1280 Introduction to Human Geography</td>
<td></td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

Students must complete an undergraduate degree, including the required courses listed in this chart, before admission to Occupational Therapy.

When choosing courses for first year, please also reference the requirements of your intended first degree, as outlined in this guide.

TIPS FOR CHOOSING COURSES

- Other courses may be considered to fulfill the course requirements listed in the chart. Refer to the Occupational Therapy admission requirements for the most up-to-date information.
- BIOL 1410, BIOL 1412 are recommended to take in your first year as this is the best opportunity to obtain space in introductory level courses. Plan to take PSYC 1200 in first or second year, as PSYC 1200 is the prerequisite to PSYC 2290 and PSYC 3070, which are strongly recommended.
- Consider taking HEAL 1600 as an elective in your first degree.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
- Math 40S
- Biology 40S
- Physics 30S and/or 40S

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.
- All applicants must complete the English Casper® test (online, open-response situational judgment test).

MINIMUM TIME TO GRADUATION

- 5 years – completion of first degree (minimum 90 credit hours) plus 2 years in Occupational Therapy.

NEED MORE INFORMATION?
The Master of Physical Therapy at the University of Manitoba is a graduate program. Students must complete an undergraduate degree, including specific courses in the chart below, before applying to the College of Rehabilitation Sciences. Please browse the Faculties and Programs List to see undergraduate degrees available at UM.

<table>
<thead>
<tr>
<th>COURSES REQUIRED IN FIRST DEGREE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410 Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412 Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1 or PSYC 2250 Introduction to Psychological Research</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

Minimum 3 credit hours of Indigenous Studies (INDG)

Choose one of the following:
- INDG 1200 Indigenous Peoples in Canada (6)
- INDG 1220 Indigenous Peoples in Canada, Part 1 (3)
- INDG 1240 Indigenous Peoples in Canada, Part 2 (3)
- HIST 2010 (W) Indigenous History in Canada (6)
- INDG 2020 (W) / HIST 2020 (W) The Métis in Canada (3)
- INDG 2080 Inuit Society and Culture (3)

Minimum 3 credit hours of Psychology (PSYC) at the 1000-level or higher

Minimum 3 credit hours of English Literature (ENGL) at the 1000-level or higher

**MINIMUM ADMISSION REQUIREMENTS**

Students must complete an undergraduate degree, including the required courses listed in this chart, before admission to Physical Therapy.

- Minimum grades in required courses are outlined in the Master of Physical Therapy Applicant Information Guide.
- When choosing courses for first year, please also reference the requirements of your intended first degree, as outlined in this guide.

**TIPS FOR CHOOSING COURSES**

- Other courses may be considered to fulfill the course requirements listed in the chart. Refer to the Physical Therapy admission requirements for the most up-to-date information. If you feel your courses may qualify contact the Physical Therapy Chair of Admissions.
- Statistical analysis and research courses from departments other than Statistics may be considered on an individual basis instead of STAT 1000 (M).
- Choose your Indigenous Studies (INDG), Psychology (PSYC) and English Literature (ENGL) courses from the Recommended Introductory Courses List. These courses must be at the 1000-level or higher.
- Consider taking HEAL 1600 as an elective in your first degree.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Math 40S (Pre-Calculus or Applied recommended)

Recommended:
- Biology 40S
- Chemistry 40S
- English 40S
- Physics 30S and/or 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.
- All applicants must complete the English Casper® test (online, open-response situational judgment test).

MINIMUM TIME TO GRADUATION

- 5 years – completion of first degree (minimum 90 credit hours) plus 2 years in Physical Therapy.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  ACADEMIC CALENDAR  FACULTY WEBSITE  IMPORTANT DATES
FACULTY OF KINESIOLOGY AND RECREATION MANAGEMENT

KINESIOLOGY, B.KIN.

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPER 1200</td>
<td>Physical Activity, Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1500</td>
<td>Foundations of Physical Education and Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412</td>
<td>Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PSYC 1200</td>
<td>Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>STAT 1000 (M)</td>
<td>Basic Statistical Analysis 1 or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M)</td>
<td>Introduction to Statistics and Computing</td>
<td></td>
</tr>
<tr>
<td>Science electives from list (see below)</td>
<td>6 + lab</td>
<td></td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
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</tr>
</tbody>
</table>

Total Credit Hours 30

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Kinesiology requires 24 credit hours of university-level courses, including:

- BIOL 1410
- BIOL 1412
- KPER 1500

TIPS FOR CHOOSING COURSES

- KPER 1200 and STAT 1000 (M) are additionally recommended in your first year, before admission, as they are prerequisites for second year courses in the program.
- Choose 6 credit hours of Science electives from the Science Electives Chart below. Note that all listed courses include a lab. It is recommended to complete 6 credit hours of these courses in your first year as a foundation for the lab work required in upper year courses.
- The Written \( (W) \) course is not required for admission. The Written \( (W) \) course requirement will be met by KPER 2120 \( (W) \) in Year 2 of the program.
- The Mathematics \( (M) \) course is not required for admission. The Mathematics \( (M) \) course requirement will be met by STAT 1000 \( (M) \).
- Choose your elective from the Recommended Introductory Courses List.
- Advanced Placement \( (AP) \) or International Baccalaureate \( (IB) \) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

FACULTY OF KINESIOLOGY LIST OF SCIENCE ELECTIVES

Choose 6 credit hours from the following courses:

- ASTR 1810
- BIOL 1020
- BIOL 1030
- CHEM 1120
- COMP 1010
- COMP 1020
- MATH 1240 \( (M) \)
- MATH 1500 \( (M) \) (or equivalent)
- MATH 1700 \( (M) \) (or equivalent)
- MBIO 1010
- PHYS 1020 \( (M) \) (or equivalent)
- PHYS 1030 \( (M) \) (or equivalent)
- STAT 2000 \( (M) \) (or equivalent)
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Math 40S
• Additional 40S courses may be required, depending on the Science electives you choose.

Recommended:
• Biology 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW | CAREER COMPASS | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
ATHLETIC THERAPY, B.KIN.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPER 1200</td>
<td>Physical Activity, Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1500</td>
<td>Foundations of Physical Education and Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412</td>
<td>Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>HNSC 1210</td>
<td>Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1200</td>
<td>Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>STAT 1000</td>
<td>Basic Statistical Analysis 1 or STAT 1150</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Science electives from list (see below)</td>
<td>6 + lab</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours**

30

---

### Minimum Admission Requirements

All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Athletic Therapy requires 24 credit hours of university-level courses, including:

- BIOL 1410
- BIOL 1412
- KPER 1500

### Tips for Choosing Courses

- KPER 1200 and STAT 1000 (M) are additionally recommended in your first year, before admission, as they are prerequisites for second year courses in the program.
- Choose 6 credit hours of Science electives from the Science Electives Chart below. Note that all listed courses include a lab. It is recommended to complete 6 credit hours of these courses in first year as a foundation for the lab work required in upper year courses.
- The Written (W) course is not required for admission. The Written (W) course requirement will be met by KPER 2120 (W) in Year 2 of the program.
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement will be met by STAT 1000 (M).
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.

**Faculty of Kinesiology List of Science Electives**

Choose 6 credit hours from the following courses:

- ASTR 1810
- CHEM 1120
- MATH 1240 (M)
- MBIO 1010
- BIOL 1020
- COMP 1010
- MATH 1500 (M) (or equivalent)
- PHYS 1020 (M) (or equivalent)
- BIOL 1030
- COMP 1020
- MATH 1700 (M) (or equivalent)
- PHYS 1030 (M) (or equivalent)
- STAT 2000 (M) (or equivalent)
**HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES**

Minimum 50% required in:
- Math 40S
- Additional 40S courses may be required, depending on the Science electives you choose.

Recommended:
- Biology 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to **upgrade** your high school course.

**HOW TO APPLY**

Please refer to the [Admissions](#) page to:
- Review the [2025-2026 Advanced Entry admission requirements](#), which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

**MINIMUM TIME TO GRADUATION**

- 4 years (120 credit hours).

**NEED MORE INFORMATION?**

[PROGRAM OVERVIEW](#)  [CAREER COMPASS](#)  [ACADEMIC CALENDAR](#)  [UM ACHIEVE](#)  [FACULTY WEBSITE](#)  [IMPORTANT DATES](#)
# PHYSICAL EDUCATION, B.P.E.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPER 1200 Physical Activity, Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1500 Foundations of Physical Education and Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1410 Anatomy of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1412 Physiology of the Human Body</td>
<td>3 + lab</td>
</tr>
<tr>
<td>ENGL 1200 (W) Representative Literary Works</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (M) course from the Mathematics or Statistics departments</td>
<td>3</td>
</tr>
<tr>
<td>Electives/Teaching Minor <em>(see Tips for Choosing Courses)</em></td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

## MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission. Admission to Physical Education requires 24 credit hours of university-level courses, including:

- BIOL 1410
- BIOL 1412
- KPER 1500

## TIPS FOR CHOOSING COURSES

- KPER 1200 is additionally recommended in your first year, before admission, as it is a prerequisite for second year courses in the program.
- B.P.E. students who are planning to enter the Faculty of Education should choose courses toward their teachable subject or minor when choosing elective courses. Refer to the Education page of this guide for more information on teachable subject areas.
- B.P.E. students who do not plan to enter the Faculty of Education may choose electives from the Recommended Introductory Courses List.
- The Written (W) course is not required for admission. The Written (W) course requirement will be met by ENGL 1200 (W).
- ENGL 1340 (W) and ENGL 1400 (W) can be used instead of ENGL 1200 (W).
- The Mathematics (M) course is not required for admission. The Mathematics (M) course requirement must be met with a course from the Math or Statistics department.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
• Biology 40S
• Math 40S
• Additional 40S courses may be required, depending on the teachable minor or subject you choose. See the Education page for more information.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

Please refer to the Admissions page to:
• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• 3 years (120 credit hours). B.Ed. - An additional 2 years (60 credit hours) in Education.

NEED MORE INFORMATION?
# FACULTY OF KINESIOLOGY AND RECREATION MANAGEMENT

## RECREATION MANAGEMENT AND COMMUNITY DEVELOPMENT, B.R.M.C.D.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
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<tbody>
<tr>
<td>KPER 1200 Physical Activity, Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1400 Concepts of Recreation and Leisure</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1200 Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>SOC 1000 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1 or STAT 1150 (M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>12</td>
</tr>
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</table>

**Total Credit Hours**  
30

## MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but are not required for admission. Admission to Recreation Management and Community Development requires any 24 credit hours of university-level courses.

## TIPS FOR CHOOSING COURSES

- KPER 1200, KPER 1400, and STAT 1000 (M) are recommended in your first year, before admission, as they are prerequisites for second year courses in the program.
- Consider taking REC 2100 in your first or second year towards the faculty elective requirement in the program.
- The **Written (W) course** is not required for admission. The Written (W) course requirement will be met by KPER 2120 (W) in Year 2 of the program.
- The **Mathematics (M) course** are not required for admission. The Mathematics (M) course requirement will be met by STAT 1000 (M).
- Choose your electives from the **Recommended Introductory Courses List**.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
- Contact an **Academic Advisor** in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 50% required in:
- Math 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION
- 4 years (120 credit hours).

NEED MORE INFORMATION?

[Program Overview]  [Career Compass]  [Academic Calendar]  [UM Achieve]  [Faculty Website]  [Important Dates]
FACULTY OF LAW

JURIS DOCTOR, J.D.

Students must complete at least 60 credit hours before applying to the Faculty of Law, but many students choose to complete an undergraduate degree before applying. Please browse the Faculties and Programs List to see undergraduate degrees available at UM.

<table>
<thead>
<tr>
<th>YEAR 1 (30 CREDIT HOURS)</th>
<th>CREDIT HOURS</th>
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<tr>
<td>Courses of interest and that may be suitable for a degree in another faculty</td>
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<td>Total Credit Hours</td>
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</table>

<table>
<thead>
<tr>
<th>YEAR 2 (30 CREDIT HOURS)</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses of interest and that may be suitable for a degree in another faculty</td>
<td>30</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

There are no prerequisites or preferred courses for admission to Law. Any 60 graded credit hours of university-level courses will be accepted for admission. Choose courses in which you have personal interest to increase the likelihood of achieving strong grades, as Law admission is competitive. You may choose your courses from the Recommended Introductory Courses List.

TIPS FOR CHOOSING COURSES

- When choosing your first year courses, consider which faculty or program you want to enter in Year 2. As many students complete a first degree before their admission into law school, it is a good idea to keep the degree requirements of your second year faculty in mind when choosing courses.
- The Law School Admission Test (LSAT) does not presuppose any specialized knowledge, but is designed to measure your abilities to read, understand and reason. Choose courses that assist in the development of these skills.
- You are strongly recommended to register for courses that have a writing component. This will help you to develop writing and research skills at the post-secondary level.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree program.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

- None

HOW TO APPLY

Please refer to the Admissions page to:

- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

- View previous admission statistics online.

MINIMUM TIME TO GRADUATION

- 5 years - 2 years of University study (60 credit hours), plus 3 years in Law.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
MUSIC, B.Mus.
General, Composition, History, Music Education, and Performance programs are available.

MUSIC, B.Jazz, Jazz Studies

PREPARATORY WORK FOR A MUSIC DEGREE
- Students must audition to be accepted into the Desautels Faculty of Music. While most students enter directly from high school, all applicants should prepare for the audition by taking private lessons on their instrument/voice and continue to study music theory (either MUSC 1930 or private study).
- The Desautels Faculty of Music Prep Studies program offers private instruction in a variety of instruments and group theory classes.

TIPS FOR CHOOSING COURSES
- MUSC 1020, MUSC 1040, MUSC 1110, MUSC 1120, MUSC 1030, and MUSC 1930 are Recommended Introductory Courses.
  - Please note, MUSC 1010 and MUSC 1930 cannot be used towards the B.Mus. and B.Jazz degrees. However, 1930 may be required as a pre-requisite for 1st year courses once you enter the degree.
- MUSC 1930 Rudiments of Music can be used to fulfill the Theory entrance exam requirement for admission to the Desautels Faculty of Music. A grade of 70% or higher is required for admission to the Desautels Faculty of Music.
- MUSC 3820: Perspectives in Indigenous Music and MUSC 3830: Discovering Jazz are open to first year students.
- The Written (W) course is not required for admission.
- The Mathematics (M) course are not required for admission. Consider taking MUSC 3230 (M): Acoustics of Music to meet the Mathematics (M) course requirement. Consult with an academic advisor in the Faculty of Music if you plan to take this course in your first year.
- There is room for up to 24 credit hours of non-music elective courses in the Music degree, including the Written (W) course and Mathematics (M) course. Choose electives from the Recommended Introductory Courses List.
- Ensembles are open to students in faculties outside of Music. Ensemble auditions are held each year at the end of August. Visit the Ensemble Audition information page in July for specific details.
- If you are interested in a Bachelor of Music or a Bachelor of Jazz Studies, please contact the Music Advisor at dfom.advising@umanitob.ca.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Recommended:
- Music 40S
- Private lessons in your instrument
- Formal instruction in music theory

HOW TO APPLY

Please refer to the Admissions page to:
- Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
- Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

- B.Mus.: 5 years from University 1 or 4 years if Direct Entry from high school (126 credit hours).
- B.Jazz: 5 years from University 1 or 4 years if Direct Entry from high school (126 credit hours).
- B.Mus (Education): 5 years from University 1 or 4 years if Direct Entry from high school (132 credit hours).

NEED MORE INFORMATION?
FACULTY OF SCIENCE
DEGREES OFFERED IN THE FACULTY OF SCIENCE

B.Sc. GENERAL – (90 CREDIT HOURS)
A three year (90 credit hour) general program provides students with general training in a number of diverse Science disciplines. General programs are intended for:
- Students who are looking for a general education in the natural and/or mathematical sciences
- Students who are planning to enter a program that requires a first degree such as Education, Occupational Therapy, or Medicine

B.Sc. MAJOR – (120 CREDIT HOURS)
A four year (120 credit hour) major program provides students with in-depth study in a specific Science discipline and prepare students for a career in that discipline.
Major programs are not intended for students who wish to pursue graduate studies (ex. Master’s or PhD). However, if a student completes a Major program and wishes to pursue graduate studies, they can usually do so without difficulty.

B.Sc. HONOURS – (120 CREDIT HOURS)
A four year (120 credit hour) honours program provides students with extensive and rigorous study in a specific Science discipline. Students are required to pursue this degree full-time, and there are higher grade requirements compared to General and Major programs.
Honours programs are intended for students who wish to pursue graduate studies (ex. Master’s or PhD). Students who are interested in an Honours program should connect with advisors in the Faculty of Science.

CO-OPERATIVE EDUCATION (CO-OP)
Co-operative education is a form of experiential learning which integrates academic, classroom-based learning and relevant, paid work experience. Most Honours and Major programs in the Faculty of Science have Co-op options. For more information, review the Science Co-op Program page.

MINOR (18 CREDIT HOURS)
Your major is your main area of study within your degree program. Most of the courses in your degree program will focus on your major.
In contrast, your minor is a second, smaller area of study. A minor takes up 18 credit hours of your degree program, and can be in an area that is unrelated to your major. For example, you can major in Biology and minor in Philosophy. Students in the General program do not have the option of declaring a minor. Students in Honours and Major programs have the option of declaring a minor.

PREPARING FOR A HEALTH-RELATED PROFESSIONS IN THE FACULTY OF SCIENCE
Science degrees offer in-depth knowledge of the Science disciplines that help us understand bigger picture concepts. Science degrees also offer opportunities to take the courses you need to apply to professional health-related programs.
In general, taking introductory courses in Biological Sciences, Chemistry, Microbiology, Physics, Statistics, and Mathematics can lead to degree programs in the Life Sciences and are great preparation for admission into professional health-related programs. In addition to specific courses, many programs require entrance exams/tests and interviews.
If you are planning on applying for programs at the University of Manitoba, please see their program pages in the First Year Planning Guide for further details:
- Dentistry
- Medicine
- Pharmacy
- Physical Therapy
- Nursing
- Occupational Therapy
- Respiratory Therapy

If you are planning on applying for a program outside of the University of Manitoba, you are encouraged to consult with each individual school’s website and admissions information as requirements vary from school to school. A few programs commonly identified are the Western College of Veterinary Medicine at the University of Saskatchewan and the School of Optometry & Vision Science at the University of Waterloo.
### SCIENCE DEGREES AND PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
<th>Minor</th>
<th>Major</th>
<th>Honours</th>
<th>Co-Op</th>
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<tr>
<td>Ecology and Evolutionary Biology</td>
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<tr>
<td>Molecular, Cellular, and Systems Biology</td>
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<td>Chemistry – Physics Joint Program</td>
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<td>Computer Science – Physics and Astronomy Joint Program</td>
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<td>Computer Science – Statistics Joint Program</td>
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<td><strong>MATHEMATICS</strong></td>
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<td>Mathematics – Economics Joint Program</td>
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<td>Medical and Biological Physics option</td>
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<td><strong>PSYCHOLOGY</strong></td>
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<td><strong>STATISTICS</strong></td>
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<tr>
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<td>Statistics – Mathematics Joint Program</td>
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<td>Statistics – Economics Joint Program</td>
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<tr>
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</tbody>
</table>

You can click on any subject in the chart ex. Genetics to view the Introductory Course Requirements.
FACULTY OF SCIENCE
COMPUTER SCIENCE

COMPUTER SCIENCE, B.C.Sc.
Honours and Four Year Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1010 Introductory Computer Science 1 or COMP 1012 Computer Programming for Scientists and Engineers</td>
<td>3 + lab</td>
</tr>
<tr>
<td>COMP 1020 Introductory Computer Science 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240 (M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1220 (M) Linear Algebra 1 or MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1700 (M) Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Computer Science Honours or Major program, students must complete 24 credit hours, including:

- COMP 1020
- MATH 1300 (M)
- MATH 1700 (M)
- MATH 1240 (M)
- MATH 1500 (M) or substitutes listed in the chart

Minimum grades in required courses are outlined in the Academic Calendar Computer Science Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES

- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- COMP 1000 or COMP 1600 is recommended as an elective in your first year.
  If you choose to take COMP 1000 or COMP 1600 as an elective, it must be taken before declaring your major.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
FACULTY OF SCIENCE
COMPUTER SCIENCE

COMPUTER SCIENCE–MATHEMATICS JOINT, B.Sc. HONOURS

<table>
<thead>
<tr>
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<tr>
<td>MATH 1220 (M) Linear Algebra 1 or MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
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<tr>
<td>MATH 1230 (M) Differential Calculus or MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1</td>
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</tr>
<tr>
<td>MATH 1232 (M) Integral Calculus or MATH 1700 (M) Calculus 2 or MATH 1710 (M) Applied Calculus 2</td>
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</tr>
<tr>
<td>MATH 1240 (M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
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<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Computer Science-Mathematics Joint Honours program, students must complete 24 credit hours, including COMP 1020 and MATH 1232 (M) (or substitutes listed in the chart).

Minimum grades in required courses are outlined in the Academic Calendar Computer Science–Mathematics Joint Honours Degree Requirements.

TIPS FOR CHOOSING COURSES
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 100 before COMP 1010 (or COMP 1012).
- STAT 2150 is recommended as an elective in your first year, but not required.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
FACULTY OF SCIENCE
COMPUTER SCIENCE

COMPUTER SCIENCE–PHYSICS AND ASTRONOMY JOINT, B.Sc. HONOURS

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1010</td>
<td>Introductory Computer Science 1 or COMP 1012 Computer Programming for Scientists and Engineers</td>
<td>3 + lab</td>
</tr>
<tr>
<td>COMP 1020</td>
<td>Introductory Computer Science 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1070</td>
<td>Physics 2: Waves and Modern Physics or PHYS 1030 (M) General Physics 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300 (M)</td>
<td>Vector Geometry and Linear Algebra or MATH 1220 (M) Linear Algebra 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M)</td>
<td>Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1700 (M)</td>
<td>Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course</td>
<td>(see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Elective</td>
<td>(see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 30

MINIMUM ADMISSION REQUIREMENTS

To enter the Computer Science-Physics and Astronomy Joint Honours program, students must complete 24 credit hours, including:

- COMP 1020
- MATH 1300 (M) or substitutes listed in the chart
- PHYS 1070
- MATH 1700 (M)

Minimum grades in required courses are outlined in the Academic Calendar Computer Science–Physics and Astronomy Joint Honours Degree Requirements.

TIPS FOR CHOOSING COURSES

- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- COMP 1000 or COMP 1600 is recommended as an elective in your first year. If you choose to take COMP 1000 or COMP 1600 as an elective, it must be taken before declaring your major.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- PHYS 1020 (M) and PHYS 1030 (M) may be used as a substitute for PHYS 1050 and PHYS 1070, but higher grades are required.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 60% required in:
• Math 40S (Pre-Calculus)
• Physics 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
### FACULTY OF SCIENCE
### COMPUTER SCIENCE

#### COMPUTER SCIENCE–STATISTICS JOINT, B.Sc. HONOURS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
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<tbody>
<tr>
<td>COMP 1010 Introductory Computer Science 1 or</td>
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</tr>
<tr>
<td>COMP 1012 Computer Programming for Scientists and Engineers</td>
<td>3 + lab</td>
</tr>
<tr>
<td>COMP 1020 Introductory Computer Science 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 2150 (M) Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1220 (M) Linear Algebra 1 or</td>
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</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
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<tr>
<td>MATH 1230 (M) Differential Calculus or</td>
<td>3 + lab</td>
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<td>MATH 1500 (M) Introduction to Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1510 (M) Applied Calculus 1</td>
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<tr>
<td>MATH 1232 (M) Integral Calculus or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1700 (M) Calculus 2 or</td>
<td></td>
</tr>
<tr>
<td>MATH 1710 (M) Applied Calculus 2</td>
<td></td>
</tr>
<tr>
<td>MATH 1240 (M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

### MINIMUM ADMISSION REQUIREMENTS

To enter the Computer Science-Statistics Joint Honours program, students must complete 24 credit hours, including COMP 1020 and STAT 2150 (M).

Minimum grades in required courses are outlined in the Academic Calendar Computer Science–Statistics Joint Honours Degree Requirements.

### TIPS FOR CHOOSING COURSES

- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- Include a Written (W) course as part of the Faculty of Arts course(s); choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
DATA SCIENCE, B.Sc. MAJOR

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>CREDIT HOURS</th>
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<tbody>
<tr>
<td>COMP 1012</td>
<td>Computer Programming for Scientists and Engineers or COMP 1010 Introductory Computer Science 1</td>
<td>3 + lab</td>
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<tr>
<td>COMP 1020</td>
<td>Introductory Computer Science 2</td>
<td>3 + lab</td>
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<tr>
<td>MATH 1220 (M)</td>
<td>Linear Algebra 1 or MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M)</td>
<td>Differential Calculus or MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232 (M)</td>
<td>Integral Calculus or MATH 1700 (M) Calculus 2 or MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240 (M)</td>
<td>Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M)</td>
<td>Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
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</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
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</table>

MINIMUM ADMISSION REQUIREMENTS

To enter the Data Science Major program, students must complete 24 credit hours, including:

- COMP 1020
- MATH 1232 (M) (or substitutes listed in chart)
- STAT 1150 (M)

Minimum grades in required courses are outlined in the Academic Calendar Data Science Degree Requirements.

TIPS FOR CHOOSING COURSES

- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you're strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to **upgrade** your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can **transit** on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a **Science Advisor**.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), **Co-op** may extend your studies by an additional year.

NEED MORE INFORMATION?

- **PROGRAM OVERVIEW**
- **ACADEMIC CALENDAR**
- **UM ACHIEVE**
- **FACULTY WEBSITE**
- **IMPORTANT DATES**
FACULTY OF SCIENCE
LIFE SCIENCES

BIOCHEMISTRY, B.Sc.
Honours and Four Year Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M) Differential Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1510 (M) Applied Calculus 1 or</td>
<td></td>
</tr>
<tr>
<td>MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td></td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1000 (M) Basic Statistical Analysis 1</td>
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<tr>
<td>PHYS 1050 Physics 1: Mechanics or</td>
<td>3 + lab</td>
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<tr>
<td>PHYS 1020 (M) General Physics 1</td>
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<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Biochemistry Joint Honours or Major program, students must complete 24 credit hours, including:

- BIOL 1020
- CHEM 1110
- CHEM 1120

Minimum grades in required courses are outlined in the Academic Calendar Biochemistry Joint Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES
- Include a Written (W) course as part of the Faculty of Arts course(s); choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S
- Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
- Math 40S (Pre-Calculus)
- Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
**FACULTY OF SCIENCE**  
**LIFE SCIENCES**

**BIOLOGICAL SCIENCES, B.Sc.**
Honours and Four Year Major degrees are available.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1150</td>
<td>(M) Introduction to Statistics and Computing or STAT 1000 (M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

Choose two of the following:
- MATH 1240 (M) Elementary Discrete Mathematics
- MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1210 (M) Techniques of Classical and Linear Algebra or MATH 1220 (M) Linear Algebra 1
- MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and Social Sciences

- MATH 1700 (M) Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M) Applied Calculus 2
- PHYS 1020 (M) General Physics 1 or PHYS 1050 Physics 1: Mechanics

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<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours**

<table>
<thead>
<tr>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

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**MINIMUM ADMISSION REQUIREMENTS**

To enter the Biological Sciences Honours or Major program, students must complete 24 credit hours, including BIOL 1030.

Minimum grades in required courses are outlined in the [Academic Calendar Biological Sciences Honours](#) and [Four Year Major Degree Requirements](#).

**TIPS FOR CHOOSING COURSES**

- Students interested in focusing their studies in a particular biology discipline can choose to declare a concentration in either [Ecology and Evolutionary Biology](#) or [Molecular, Cellular, and Systems Biology](#).
- Students interested in doing the Molecular, Cellular and Systems concentration should consider taking CHEM 1110 in their first year, as it is a prerequisite for second year courses in the program.
- Include a [Written (W) course](#) as part of the Faculty of Arts course(s) or as part of your electives; choose from the [Recommended Introductory Courses List](#).
- STAT 1150 (M) is strongly recommended over STAT 1000 (M).
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S
- Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
- Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)
- Physics 40S - if taking PHYS 1050

Students who do not have Pre-Calculus Math 40S (60%) can alternatively use both Applied Math 40S (70%) and Physics 40S.

Some courses have higher grade prerequisites. Please select the course code ex. MATH 1220 to read the course description which lists the specific prerequisites.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
**FACULTY OF SCIENCE**

**LIFE SCIENCES**

**GENETICS, B.Sc.**

Honours and Four Year Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
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<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing or STAT 1000 (M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Choose one of the following: MATH 1210 (M) Techniques of Classical and Linear Algebra MATH 1220 (M) Linear Algebra 1 MATH 1232 (M) Integral Calculus MATH 1240 (M) Elementary Discrete Mathematics MATH 1300 (M) Vector Geometry and Linear Algebra MATH 1700 (M) Calculus 2 MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>3</td>
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<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**MINIMUM ADMISSION REQUIREMENTS**

To enter the Genetics Honours or Major program, students must complete 24 credit hours, including BIOL 1030 and CHEM 1110.

Minimum grades in required courses are outlined in the Academic Calendar Genetics Honours and Four Year Major Degree Requirements.

**TIPS FOR CHOOSING COURSES**

- STAT 1150 (M) is strongly recommended over STAT 1000 (M).
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Biology 40S
• Chemistry 40S

Minimum 60% required in:
• Math 40S (Pre-Calculus)

Some courses have higher grade prerequisites. Please select the course code ex. MATH 1220 to read the course description which lists the specific prerequisites.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
FACULTY OF SCIENCE
LIFE SCIENCES

MICROBIOLOGY, B.Sc.
Honours and Four Year Major degrees are available.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020 Biology 1: Principles and Themes</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1030 Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MBIO 1010 Microbiology 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120 Introduction to Chemistry Techniques</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing or STAT 1000 (M) Basic Statistical Analysis 1</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

Choose one of the following:
- MATH 1210 (M) Techniques of Classical and Linear Algebra
- MATH 1220 (M) Linear Algebra 1
- MATH 1230 (M) Differential Calculus
- MATH 1240 (M) Elementary Discrete Mathematics
- MATH 1300 (M) Vector Geometry and Linear Algebra
- MATH 1500 (M) Introduction to Calculus
- MATH 1510 (M) Applied Calculus 1
- MATH 1524 (M) Mathematics for Management and Social Sciences
- PHYS 1020 (M) General Physics 1
- PHYS 1050 Physics 1: Mechanics

Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses) | 6 |

Total Credit Hours | 30 |

MINIMUM ADMISSION REQUIREMENTS
To enter the Microbiology Honours or Major program, students must complete 24 credit hours, including MBIO 1010 and CHEM 1100.

Minimum grades in required courses are outlined in the Academic Calendar Microbiology Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES
- STAT 1150 (M) is strongly recommended over STAT 1000 (M).
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S
- Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
- Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)
- Physics 40S - if taking PHYS 1050

Some courses have higher grade prerequisites. Please select the course code ex. MATH 1220 to read the course description which lists the specific prerequisites.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

ACTUARIAL MATHEMATICS, B.Sc. HONOURS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles</td>
<td>3</td>
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<tr>
<td>ECON 1020 Introduction to Macroeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1220 (M) Linear Algebra 1 or MATH 1300 (M) Vector Geometry and Linear Algebra</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M) Differential Calculus or MATH 1500 (M) Introduction to Calculus or MATH 1510 (M) Applied Calculus 1</td>
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<td>3 + lab</td>
</tr>
<tr>
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<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing</td>
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</tr>
<tr>
<td>STAT 2150 (M) Statistics and Computing</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the First Year Courses chart are program requirements and students are strongly encouraged to take these in first year.

Minimum grades in required courses are outlined in the Academic Calendar Actuarial Mathematics Honours Degree Requirements.

TIPS FOR CHOOSING COURSES

- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- Choose electives from the Recommended Introductory Courses List.
- The Written (W) course requirement will be met by GMGT 2010 (W) in Year 2 of the program.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 70% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
• 4 years (120 credit hours).

NEED MORE INFORMATION?
APPLIED MATHEMATICS, B.Sc. MAJOR

Applied Mathematics has options in Computer Science, Economics, or Statistics.

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<tr>
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<td>MATH 1220 (M) Linear Algebra 1 or MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1210 (M) Techniques of Classical and Linear Algebra</td>
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<tr>
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<td>3 + lab</td>
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<tr>
<td>6 credit hours from one of the options, below:</td>
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<tr>
<td>Computer Science Option</td>
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<tr>
<td>COMP 1010 Introductory Computer Science 1 (3 + lab) or COMP 1012 Computer Programming for Scientists and Engineers (3 + lab)</td>
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</tr>
<tr>
<td>COMP 1020 Introductory Computer Science 2 (3 + lab)</td>
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<tr>
<td>Economics Option</td>
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</tr>
<tr>
<td>ECON 1010 Introduction to Microeconomic Principles (3) and ECON 1020 Introduction to Macroeconomic Principles (3), or both</td>
<td>6</td>
</tr>
<tr>
<td>ECON 1210 Introduction to Canadian Economic Issues and Policies (3) and ECON 1220 Introduction to Global Environmental Economic Issues and Policies (3)</td>
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<tr>
<td>Statistics Option</td>
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<tr>
<td>STAT 1150 (M) Introduction to Statistics and Computing (3 + lab) and STAT 2150 (M) Statistics and Computing (3 + lab)</td>
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<tr>
<td>Electives - If 6 credit hours are chosen from the Computer Science or Statistics Option, then 6 credit hours of electives must be from the Faculty of Arts, including a Written (W) course. (See Tips for Choosing Courses)</td>
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<td>Total Credit Hours</td>
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MINIMUM ADMISSION REQUIREMENTS

To enter the Applied Mathematics Major program, students must complete 24 credit hours, including MATH 1232 (M) (or substitutes listed in the chart).

Minimum grades in required courses are outlined in the following Academic Calendar Applied Mathematics Degree Requirements:

• Computer Science Option
• Economics Option
• Statistics Option
TIPS FOR CHOOSING COURSES

- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but have higher grade requirements.
- Choose 6 credit hours from the Computer Science, Economics, or Statistics option to determine which is the best option for your degree overall.
- Include a Written (W) course as part of your electives; choose from the Recommended Introductory Courses List.
- Include 6 credit hours from the Faculty of Arts if pursuing Computer Science or Statistics option.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

- PROGRAM OVERVIEW
- CAREER COMPASS
- ACADEMIC CALENDAR
- UM ACHIEVE
- FACULTY WEBSITE
- IMPORTANT DATES
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

MATHEMATICS, B.Sc.
Honours and Four Year Major degrees are available.

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</tr>
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</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
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<tr>
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<td>6</td>
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MINIMUM ADMISSION REQUIREMENTS
To enter the Mathematics Honours or Major program, students must complete 24 credit hours, including MATH 1232 (M) (or substitutes listed in the chart).
Minimum grades in required courses are outlined in the Academic Calendar Mathematics Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES
• Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
• Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
• Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:

- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
## FIRST YEAR COURSES

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<th>Course Code</th>
<th>Course Name and Notes</th>
<th>Credit Hours</th>
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</tr>
<tr>
<td>ECON 1020</td>
<td>Introduction to Macroeconomic Principles, or both ECON 1210 Canadian Economic Issues and Policies and ECON 1220 Global Environmental Economic Issues and Policies</td>
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<td>Introductory Computer Science 1 or COMP 1012 Computer Programming for Scientists and Engineers</td>
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</tr>
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</table>

## MINIMUM ADMISSION REQUIREMENTS

To enter the Mathematics-Economics Joint Honours program, students must complete 24 credit hours, including:

- ECON 1010
- MATH 1232 (M)
- or substitutes listed in the chart

Minimum grades in required courses are outlined in the Academic Calendar Mathematics–Economics Joint Honours Degree Requirements.

## TIPS FOR CHOOSING COURSES

- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- Include a Written (W) course as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
• 4 years (120 credit hours).

NEED MORE INFORMATION?
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

STATISTICS, B.Sc.
Honours and Four Year Major degrees are available.

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<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
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</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Statistics Honours or Major program, students must complete 24 credit hours, including STAT 2150 (M). Minimum grades in required courses are outlined in the Academic Calendar Statistics Honours and Four Year Major Degree Requirements.

TIPS FOR CHOOSING COURSES
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

STATISTICS—ACTUARIAL MATHEMATICS JOINT, B.Sc. HONOURS

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>CREDIT HOURS</th>
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<tbody>
<tr>
<td>STAT 1150 (M)</td>
<td>Introduction to Statistics and Computing</td>
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HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours).

NEED MORE INFORMATION?
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

STATISTICS–ECONOMICS JOINT, B.Sc. HONOURS

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MINIMUM ADMISSION REQUIREMENTS

To enter the Statistics-Economics Joint Honours program, students must complete 24 credit hours, including:

- ECON 1010
- STAT 2150 (M)
- ECON 1020 or substitutes listed in the chart

Minimum grades in required courses are outlined in the Academic Calendar Statistics–Economics Joint Honours Degree Requirements.

TIPS FOR CHOOSING COURSES

- Students will normally take STAT 2150 in Year 2 and enter the Joint Honours program in Year 3. If you would like to enter the Joint Honours program in Year 2, consider taking STAT 2150 (M) in your first year.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you're strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- Include a Written (W) course as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES
Minimum 70% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY
• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION
• 4 years (120 credit hours).

NEED MORE INFORMATION?
FACULTY OF SCIENCE
MATHEMATICAL SCIENCES

STATISTICS—MATHEMATICS JOINT, B.Sc. HONOURS

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<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240 (M) Elementary Discrete Mathematics</td>
<td>3 + lab</td>
</tr>
<tr>
<td>COMP 1010 Introductory Computer Science 1 or COMP 1012 Computer Programming for Scientists and Engineers</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
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<tr>
<td>Elective (see Tips for Choosing Courses)</td>
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<tr>
<td>Total Credit Hours</td>
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</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

To enter the Statistics-Mathematics Joint Honours program, students must complete 24 credit hours, including:

- MATH 1232 (M)
- STAT 2150 (M)
- or substitutes listed in the chart

Minimum grades in required courses are outlined in the Academic Calendar Statistics—Mathematics Joint Honours Degree Requirements.

TIPS FOR CHOOSING COURSES

- Students are strongly advised to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but higher grades are required.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 70% required in:

- Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours).

NEED MORE INFORMATION?
CHEMISTRY, B.Sc.
Honours and Four Year Major degrees are available.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
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<td>CHEM 1110</td>
<td>Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
<td>3</td>
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<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques</td>
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<tr>
<td>MATH 1500</td>
<td>(M) Introduction to Calculus or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230</td>
<td>(M) Differential Calculus or</td>
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<tr>
<td>MATH 1510</td>
<td>(M) Applied Calculus 1 or</td>
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<tr>
<td>MATH 1524</td>
<td>(M) Mathematics for Management and Social Sciences</td>
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</tr>
<tr>
<td>MATH 1700</td>
<td>(M) Calculus 2 or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232</td>
<td>(M) Integral Calculus or</td>
<td></td>
</tr>
<tr>
<td>MATH 1710</td>
<td>(M) Applied Calculus 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>(M) General Physics 1 or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1030</td>
<td>(M) General Physics 2 or</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1070</td>
<td>Physics 2: Waves and Modern Physics</td>
<td></td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>(see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

### MINIMUM ADMISSION REQUIREMENTS
To enter the Chemistry Honours or Major program, students must complete 24 credit hours, including CHEM 1110. Minimum grades in required courses are outlined in the Academic Calendar Chemistry Honours and Four Year Major Degree Requirements.

### TIPS FOR CHOOSING COURSES
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Chemistry 40S

Minimum 60% required in:
• Math 40S (Pre-Calculus)
• Physics 40S

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW | CAREER COMPASS | ACADEMIC CALENDAR | UM ACHIEVE | FACULTY WEBSITE | IMPORTANT DATES
## FACULTY OF SCIENCE
### PHYSICAL SCIENCES

## ASTRONOMY AND ASTROPHYSICS, B.Sc. HONOURS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1050 Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1070 Physics 2: Waves and Modern Physics or PHYS 1030 (M) General Physics 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1220 (M) Linear Algebra 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1700 (M) Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M) Applied Calculus 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>COMP 1012 Computer Programming for Scientists and Engineers or COMP 1010 Introductory Computer Science 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>ASTR 1810 Introduction to Astronomy: The Magnificent Universe</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
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<tr>
<td>Elective (see Tips for Choosing Courses)</td>
<td>3</td>
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<tr>
<td>Total Credit Hours</td>
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</table>

### MINIMUM ADMISSION REQUIREMENTS
To enter the Astronomy and Astrophysics Honours program, students must complete 24 credit hours, including PHYS 1070 (or substitutes listed in the chart).

Minimum grades in required courses are outlined in the Academic Calendar Astronomy and Astrophysics Degree Requirements.

### TIPS FOR CHOOSING COURSES
- Students are strongly advised to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed, but higher grades are required.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- ASTR 1830 is recommended as an elective in your first year.
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
- Math 40S (Pre-Calculus)
- Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?
## MINIMUM ADMISSION REQUIREMENTS

To enter the Medical and Biological Physics Honours program, students must complete 24 credit hours, including PHYS 1070 (or substitutes listed in the chart).

Minimum grades in required courses are outlined in the [Academic Calendar Medical and Biological Physics Degree Requirements](#).

## TIPS FOR CHOOSING COURSES

- Students are strongly advised to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed, but **higher grades are required**.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- Include a **Written (W) course** as part of the Faculty of Arts course(s); choose from the [Recommended Introductory Courses List](#).
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1070</td>
<td>Physics 2: Waves and Modern Physics or PHYS 1030 (M) General Physics 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes</td>
<td>3 + lab</td>
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<tr>
<td>BIOL 1030</td>
<td>Biology 2: Biological Diversity, Function and Interactions</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300</td>
<td>(M) Vector Geometry and Linear Algebra or MATH 1220 (M) Linear Algebra 1</td>
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<tr>
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<td>(M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and Social Sciences</td>
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<tr>
<td>MATH 1700</td>
<td>(M) Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M) Applied Calculus 2</td>
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</tr>
<tr>
<td>COMP 1012</td>
<td>Computer Programming for Scientists and Engineers or COMP 1010 Introductory Computer Science 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
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<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>30</strong></td>
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</tbody>
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HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Biology 40S
- Chemistry 40S or Physics 40S - if taking PHYS 1020

Minimum 60% required in:
- Math 40S (Pre-Calculus)
- Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
### PHYSICS, B.Sc. HONOURS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
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<tbody>
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<td>PHYS 1050 Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
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<tr>
<td>Total Credit Hours</td>
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### MINIMUM ADMISSION REQUIREMENTS

To enter the Physics Honours program, students must complete 24 credit hours, including PHYS 1070 (or substitutes listed in the chart).

Minimum grades in required courses are outlined in the [Academic Calendar Physics Degree Requirements](#).

### TIPS FOR CHOOSING COURSES

- Students are strongly advised to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed, but **higher grades are required**.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you're strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- Include a **Written (W) course** as part of the Faculty of Arts course(s) or as part of your electives; choose from the [Recommended Introductory Courses List](#).
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
• Math 40S (Pre-Calculus)
• Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
# PHYSICS AND ASTRONOMY, B.Sc. MAJOR

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
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<tbody>
<tr>
<td>PHYS 1050 Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
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<td>PHYS 1070 Physics 2: Waves and Modern Physics or PHYS 1030 (M) General Physics 2</td>
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</tr>
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<td>MATH 1300 (M) Vector Geometry and Linear Algebra or MATH 1220 (M) Linear Algebra 1</td>
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</tr>
<tr>
<td>MATH 1500 (M) Introduction to Calculus or MATH 1230 (M) Differential Calculus or</td>
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</tr>
<tr>
<td>MATH 1510 (M) Applied Calculus 1 or MATH 1524 (M) Mathematics for Management and</td>
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<tr>
<td>Social Sciences</td>
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</tr>
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<td>MATH 1700 (M) Calculus 2 or MATH 1232 (M) Integral Calculus or MATH 1710 (M)</td>
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<tr>
<td>Applied Calculus 2</td>
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<tr>
<td>COMP 1012 Computer Programming for Scientists and Engineers or COMP 1010</td>
<td>3 + lab</td>
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<tr>
<td>Introductory Computer Science 1</td>
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<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
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<td>Electives (see Tips for Choosing Courses)</td>
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<tr>
<td>Total Credit Hours</td>
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## MINIMUM ADMISSION REQUIREMENTS

To enter the Physics and Astronomy Major program, students must complete 24 credit hours, including PHYS 1050 (or substitute listed in the chart).

Minimum grades in required courses are outlined in the Academic Calendar Physics and Astronomy Four Year Major Degree Requirements.

## TIPS FOR CHOOSING COURSES

- Students are strongly advised to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed, but **higher grades are required**.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- Include a Written (W) course as part of the Faculty of Arts course(s) or as part of your electives; choose from the Recommended Introductory Courses List.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
  • Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
  • Math 40S (Pre-Calculus)
  • Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
### CHEMISTRY–PHYSICS JOINT, B.Sc. HONOURS

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1100 Introductory Chemistry 1: Atomic and Molecular Structure and Energetics</td>
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<tr>
<td>CHEM 1110 Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties</td>
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<td>CHEM 1120 Introduction to Chemistry Techniques</td>
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<td>PHYS 1050 Physics 1: Mechanics or PHYS 1020 (M) General Physics 1</td>
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</tr>
<tr>
<td>Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
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**MINIMUM ADMISSION REQUIREMENTS**

To enter the Chemistry-Physics Joint Honours program, students must complete 24 credit hours, including:
- CHEM 1100
- PHYS 1050
- MATH 1300 (M)
- or substitutes listed in the chart
- CHEM 1110
- PHYS 1070
- MATH 1700 (M)

Minimum grades in required courses are outlined in the [Academic Calendar Chemistry–Physics Joint Honours Degree Requirements](#).

**TIPS FOR CHOOSING COURSES**

- Students are strongly encouraged to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed but **higher grades are required**.
- Include a **Written (W) course** as part of the Faculty of Arts course(s) or as part of your electives; choose from the [Recommended Introductory Courses List](#).
- **Advanced Placement (AP) or International Baccalaureate (IB) credit** may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
- Chemistry 40S
- Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
- Math 40S (Pre-Calculus)
- Physics 40S - if taking PHYS 1050

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.
- After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

- 4 years (120 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW  CAREER COMPASS  ACADEMIC CALENDAR  UM ACHIEVE  FACULTY WEBSITE  IMPORTANT DATES
### First Year Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1220</td>
<td>Linear Algebra 1 or MATH 1300 or MATH 1210</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230</td>
<td>Differential Calculus or MATH 1500 or MATH 1510</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232</td>
<td>Integral Calculus or MATH 1700 or MATH 1710</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240</td>
<td>Elementary Discrete Mathematics</td>
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<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150</td>
<td>Introduction to Statistics and Computing</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

**Faculty of Arts course(s), including a Written (W) course (see Tips for Choosing Courses)**

**Total Credit Hours**

### Minimum Admission Requirements

To enter the Mathematics-Physics and Astronomy Joint Honours program, students must complete 24 credit hours, including:

- MATH 1232 (M)
- PHYS 1070
- PHYS 1050
- or substitutes listed in the chart

Minimum grades in required courses are outlined in the [Academic Calendar Mathematics–Physics and Astronomy Joint Honours Degree Requirements](#).

### Tips for Choosing Courses

- Students are strongly advised to take PHYS 1050 and PHYS 1070. The listed substitutions are allowed, but **higher grades are required**.
- Students are strongly encouraged to take MATH 1220 (M), MATH 1230 (M), and MATH 1232 (M). The listed substitutions are allowed, but **higher grades are required**.
- If you do not have any previous programming experience and/or you did not take Computer Science 40S in high school, you’re strongly encouraged to take the elective COMP 1000 before COMP 1012 (or COMP 1010).
- Include a **Written (W) course** as part of the Faculty of Arts course(s); choose from the [Recommended Introductory Courses List](#).
- Students should complete their Written (W) course in their first year, as there are no electives in their second year. If a student does not complete their Written (W) course in their second year, they must take it in their second year along with their required second year courses.
- **Advanced Placement (AP) or International Baccalaureate (IB) credit** may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Minimum 50% required in:
• Physics 40S - if taking PHYS 1020 (M)

Minimum 60% required in:
• Physics 40S - if taking PHYS 1050

Minimum 70% required in:
• Math 40S (Pre-Calculus)

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.

• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year.

NEED MORE INFORMATION?

[Links to Program Overview, Career Compass, Academic Calendar, UM Achieve, Faculty Website, Important Dates]
PSYCHOLOGY, B.Sc.
Honours and Four Year Major degrees are available.
The Honours and Major programs are comprised of courses in Psychology with related courses in Science. The Honours and Four Year Major Psychology degrees are also offered through the Faculty of Arts.

<table>
<thead>
<tr>
<th>FIRST YEAR COURSES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1200 Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Written (W) course (see Tips for Choosing Courses)</td>
<td></td>
</tr>
<tr>
<td>6 credit hours of Introductory Faculty of Science courses</td>
<td></td>
</tr>
<tr>
<td>Choose from these Recommended Intro Science Courses:</td>
<td></td>
</tr>
<tr>
<td>Biological Sciences</td>
<td></td>
</tr>
<tr>
<td>BIOL 1020 and BIOL 1030</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 1100 and CHEM 1110</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>STAT 1000 (M) and STAT 2000 (M), or</td>
<td></td>
</tr>
<tr>
<td>STAT 1150 (M) and STAT 2150 (M)</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
</tr>
<tr>
<td>COMP 1010 or</td>
<td></td>
</tr>
<tr>
<td>COMP 1012</td>
<td></td>
</tr>
<tr>
<td>COMP 1020</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Choose 2 courses from:</td>
<td></td>
</tr>
<tr>
<td>MATH 1500 (M) or</td>
<td></td>
</tr>
<tr>
<td>MATH 1510 (M), MATH 1524 (M), MATH 1230 (M)</td>
<td></td>
</tr>
<tr>
<td>MATH 1700 (M), MATH 1710 (M), or MATH 1232 (M)</td>
<td></td>
</tr>
<tr>
<td>MATH 1300 (M) or</td>
<td></td>
</tr>
<tr>
<td>MATH 1220 (M)</td>
<td></td>
</tr>
<tr>
<td>MATH 1240 (M)</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>MBIO 1010 and MBIO 2020</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 1020 (M) and</td>
<td></td>
</tr>
<tr>
<td>PHYS 1030 (M), or PHYS 1050</td>
<td></td>
</tr>
<tr>
<td>PHYS 1070</td>
<td></td>
</tr>
<tr>
<td>15 credit hours of Faculty of Science courses (choose from above) or</td>
<td></td>
</tr>
<tr>
<td>Electives (see Tips for Choosing Courses)</td>
<td>15</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS
To enter the Psychology Major in the Faculty of Science, students must complete 24 credit hours, including PSYC 1200 and at least 6 credit hours of Introductory Faculty of Science courses.
Minimum grades in required courses are outlined in the Academic Calendar Psychology Honours and Four Year Major Degree Requirements.
TIPS FOR CHOOSING COURSES

• When choosing Intro Science Courses from the list in the chart, consider the subject areas you want to pursue beyond the first year.

• If you are interested in taking upper-level Chemistry courses later in your degree, take CHEM 1120 in addition to CHEM 1100 and CHEM 1110.

• For your 15 credit hours of Faculty of Science courses or electives, you are strongly encouraged to choose courses from the chart. This will ensure you have the prerequisites for upper-level Science courses required later in your degree.

• Alternately, you may choose your 15 credit hours of Faculty of Science courses or electives from the Recommended Introductory Courses List.

• If you want to take Computer Science as part of your Introductory Science courses, and you do not have any previous programming experience, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).

• Choose your Written (W) course from the Recommended Introductory Courses List.

• The Mathematics (M) course will be met by PSYC 2260 (M) in Year 2 of the program.

• If you are interested in Psychology and want to know what degree may be right for you, please contact the Psychology Undergraduate Advisor at psychugadvisor@umanitoba.ca.

• Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

Introductory science courses in Biology, Chemistry, Computer Science, Mathematics, and Statistics have 40S level prerequisites. Click the course code for a specific course ex. BIOL 1020 to view more detailed prerequisites. If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

HOW TO APPLY

• To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.

• After you transit to Science, use the Declarations menu in Aurora to declare your major. To enter an Honours program, you must consult with a Science Advisor.

MINIMUM TIME TO GRADUATION

• 4 years (120 credit hours), Co-op may extend your studies by an additional year. Co-op is only available for the major, not the Honours program.

NEED MORE INFORMATION?
The B.Sc. General provides students with diversified training in Science.

### FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1010</td>
<td>Introductory Computer Science 1 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>COMP 1012</td>
<td>Computer Programming for Scientists and Engineers (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>COMP 1020</td>
<td>Introductory Computer Science 2 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1220</td>
<td>(M) Linear Algebra 1 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300</td>
<td>(M) Vector Geometry and Linear Algebra (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1210</td>
<td>(M) Techniques of Classical and Linear Algebra (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1230</td>
<td>(M) Differential Calculus (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1500</td>
<td>(M) Introduction to Calculus (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1524</td>
<td>(M) Mathematics for Management and Social Sciences (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1232</td>
<td>(M) Integral Calculus (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>(M) Calculus 2 (3 + lab) (or equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1240</td>
<td>(M) Elementary Discrete Mathematics (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1000</td>
<td>(M) Basic Statistical Analysis (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 1150</td>
<td>(M) Introduction to Statistics and Computing (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 2000</td>
<td>(M) Basic Statistical Analysis 2 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 2150</td>
<td>(M) Statistics and Computing (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 1810</td>
<td>Introduction to Astronomy: The Magnificent Universe (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 1830</td>
<td>Life in the Universe (3)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1100</td>
<td>Introductory Chemistry 1: Atomic and Molecular Structure and Energetics (3)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1110</td>
<td>Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties (3)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1120</td>
<td>Introduction to Chemistry Techniques (3)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1020</td>
<td>(M) General Physics 1 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1030</td>
<td>(M) General Physics 2 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1070</td>
<td>Physics 2: Waves and Modern Physics (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1020</td>
<td>Biology 1: Principles and Themes (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Anatomy of the Human Body (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1412</td>
<td>Physiology of the Human Body (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MBIO 1010</td>
<td>Microbiology 1 (3 + lab)</td>
<td>3</td>
</tr>
<tr>
<td>MBIO 1220</td>
<td>Essentials of Microbiology (3)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>(see Tips for Choosing Courses)</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
**TIPS FOR CHOOSING COURSES**

- If you are deciding between a 3-year General Science Degree or a 4-year degree (Honours or Major), consult the program planning page for the specific 4-year degree for more course planning information.
- When choosing first year Science courses, consider what upper-level Science subjects you would like to focus on later in your degree.
- If you want to take Computer Science as part of your Introductory Science courses, and do not have any previous programming experience, you’re strongly encouraged to take the elective COMP 1000 before COMP 1010 (or COMP 1012).
- Choose your Faculty of Arts courses and your elective from the Recommended Introductory Courses List. Make sure that at least one of these courses is a Written (W) course.
- **Advanced Placement (AP) or International Baccalaureate (IB)** credit may be used to reduce the first year course load and to meet prerequisites for 2000-level courses, where applicable.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>If you intend to take upper-level Biology courses, take BIOL 1020 and BIOL 1030. Note: BIOL 1410 and BIOL 1412 are not prerequisites for most upper-level Biology courses. BIOL 1410 and BIOL 1412 are intended for students targeting health-related programs.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>If you plan on taking upper-level Chemistry courses, take CHEM 1100, CHEM 1110, and CHEM 1120.</td>
</tr>
<tr>
<td>Mathematics</td>
<td>If you plan on taking upper-level Math courses, take MATH 1220 (M), MATH 1230 (M), MATH 1232 (M), and MATH 1240 (M) (or substitutes listed).</td>
</tr>
<tr>
<td>Microbiology</td>
<td>If you plan on taking upper-level Microbiology courses, take BIOL 1020, BIOL 1030, MBIO 1010, CHEM 1100, CHEM 1110, and CHEM 1120. Note: MBIO 1220 is intended for students targeting Nursing, and is not a prerequisite for upper-level MBIO courses.</td>
</tr>
<tr>
<td>Statistics</td>
<td>If you plan on taking upper-level Statistics courses, take STAT 1150 (M), STAT 2150 (M), MATH 1230 (M), and MATH 1232 (M) (or substitutes listed).</td>
</tr>
</tbody>
</table>

**HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES**

Minimum 50% required in:
- Math 40S (Pre-Calculus) or 70% in Math 40S (Applied)
- Chemistry 40S or Physics 40S

Introductory science courses in Astronomy, Biology, Chemistry, Computer Science, Mathematics, Microbiology, Physics, and Statistics have 40S level prerequisites. Click the course code for a specific course ex. BIOL 1020 to view more detailed prerequisites.

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school course.

**HOW TO APPLY**

- To move from University 1 to the Faculty of Science, U1 students can transit on the Aurora registration system. U1 students must complete 24 credit hours to transit, and transit is open once a year in June.

**MINIMUM TIME TO GRADUATION**

- 3 years (90 credit hours)
- B.Sc. General Degree students can participate in the General Science Internship Program, which may extend your studies.

**NEED MORE INFORMATION?**
FACULTY OF SOCIAL WORK

SOCIAL WORK, B.S.W.

FIRST YEAR COURSES

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit hours of Indigenous Studies (INDG) at the 1000-level or higher</td>
<td>6</td>
</tr>
<tr>
<td>3 credit hours of Women’s and Gender Studies (WOMN) at the 1000-level or higher</td>
<td>3</td>
</tr>
<tr>
<td>Choose 12 credit hours from the following: (see Tips for Choosing Courses)</td>
<td>12</td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
</tr>
<tr>
<td>Family Social Sciences</td>
<td></td>
</tr>
<tr>
<td>Non-Social Work electives (see Tips for Choosing Courses)</td>
<td>9</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM ADMISSION REQUIREMENTS

All courses listed in the chart are required in the degree program, but may not be required for admission.

Admission to Social Work requires 30 graded credit hours of university-level courses, including at least 21 credit hours selected from the First Year Courses chart. All courses must be at the 1000-level or higher.

TIPS FOR CHOOSING COURSES

- For your 6 credit hours of Indigenous Studies (INDG), see the Faculty of Arts section of the Recommended Introductory Courses List for course options.
- In the Faculty of Social Work, a non-Social Work elective is any course taught in a faculty other than Social Work. Choose your non-Social Work elective from the Recommended Introductory Courses List.
- Choose your Humanities or Social Sciences from the Faculty of Arts section in the Recommended Introductory Courses List. Humanities courses are marked with H, and Social Sciences courses are marked with SS. Psychology (PSYC) and Sociology (SOC) are strongly recommended.
- Choose your Family Social Sciences (FMLY) from the Rady Faculty of Health Sciences section in the Recommended Introductory Courses List.
- The Written (W) course is not required for admission.
- The Mathematics (M) course is not required for admission.
- Choose courses that can enhance your learning and foundational knowledge in the field of social work, while increasing your academic satisfaction and potential for competitive grades. Choose courses from the Recommended Introductory Courses List.
- Advanced Placement (AP) or International Baccalaureate (IB) credit may be used to meet prerequisites for 2000-level courses, where applicable. Students seeking admission to the Faculty of Social Work must complete at least 30 credit hours at the university-level, in addition to the courses transferred from AP or IB programs. Students may receive credit for applicable AP or IB courses once they are admitted to the B.S.W. Program. Contact an Academic Advisor in the First Year Centre for information and possible permission to register in upper level courses.
- Contact an Academic Advisor in the First Year Centre to find out if you can use the Summer Term to complete the admission requirements for your target degree.
HIGH SCHOOL PREREQUISITES FOR UNIVERSITY-LEVEL COURSES

• None

HOW TO APPLY

Please refer to the Admissions page to:

• Review the 2025-2026 Advanced Entry admission requirements, which outline detailed application information, deadlines, and minimum requirements that students must meet to apply to this program.
• Submit your application for admission.

Admission requirements may change from year to year. We encourage you to regularly review the Advanced Entry admission requirements for your target degree program to ensure that you are getting the most current admission information.

MINIMUM TIME TO GRADUATION

• 4 years (123 credit hours).

NEED MORE INFORMATION?

PROGRAM OVERVIEW
ACADEMIC CALENDAR
UM ACHIEVE
FACULTY WEBSITE
IMPORTANT DATES
RECOMMENDED INTRODUCTORY COURSES

The Recommended Introductory Courses List is a list of courses open to first year students. Click on the course number to view the course description and to get additional information.

Courses that fulfill certain degree requirements or are offered in specialized formats are indicated with the icons listed below:

(W) Written course—indicates courses that meet the University of Manitoba’s W requirement, as these courses have significant content in written English.

(M) Mathematics course—indicates courses that meet the University of Manitoba’s M requirement, as these courses have significant content in mathematics.

H Humanities—indicates courses that are classified as humanities subjects. Humanities subjects generally focus on the study of human culture.

ICR Indigenous Content Requirement—indicates courses that meet the Indigenous Content Requirement in the Faculty of Arts.

SS Social Sciences—indicates courses that are classified as social science subjects. Social Science subjects generally focus on the study of society, social relationships and behaviour.

SCI Science Interest Course—indicates a good choice for students who don’t have a strong science background. Although these courses are not intended to lead to advanced-level studies, they may meet the science requirement of a degree program.

QUICK LINKS TO COURSES BY FACULTY

<p>| FACULTY OF AGRICULTURAL AND FOOD SCIENCES |
| FACULTY OF ARCHITECTURE |
| SCHOOL OF ART |
| ASPER SCHOOL OF BUSINESS |
| PRICE FACULTY OF ENGINEERING |
| FACULTY OF ARTS |
| RADY FACULTY OF HEALTH SCIENCES |
| CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES |
| FACULTY OF KINESIOLOGY AND RECREATION MANAGEMENT |
| DESAUTELS FACULTY OF MUSIC |
| FACULTY OF SCIENCE |
| FACULTY OF SOCIAL WORK |</p>
<table>
<thead>
<tr>
<th>FACULTY OF AGRICULTURAL AND FOOD SCIENCES</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGRIBUSINESS</strong></td>
<td></td>
</tr>
<tr>
<td>ABIZ 1000 Introduction to Agribusiness Management</td>
<td>3</td>
</tr>
<tr>
<td>ABIZ 1010 Economics of World Food Issues and Policies</td>
<td>3</td>
</tr>
<tr>
<td><strong>AGRICULTURE</strong></td>
<td></td>
</tr>
<tr>
<td>AGRI 1600 Introduction to Agrifood Systems</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>ENTOMOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>ENTM 1000 World of Bugs</td>
<td>3</td>
</tr>
<tr>
<td><strong>FOOD SCIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>FOOD 1000 Food Safety Today and Tomorrow</td>
<td>3</td>
</tr>
<tr>
<td><strong>HUMAN NUTRITIONAL SCIENCES</strong></td>
<td></td>
</tr>
<tr>
<td>HNSC 1200 Food: Facts and Fallacies</td>
<td>3</td>
</tr>
<tr>
<td>HNSC 1210 Nutrition for Health and Changing Lifestyles</td>
<td>3</td>
</tr>
<tr>
<td><strong>PLANT SCIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>PLNT 1000 Urban Agriculture</td>
<td>3</td>
</tr>
<tr>
<td><strong>FACULTY OF ARCHITECTURE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL DESIGN</strong></td>
<td></td>
</tr>
<tr>
<td>EVDS 1600 Introduction to Environmental Design</td>
<td>3</td>
</tr>
<tr>
<td>EVDS 1602 Visual Literacy</td>
<td>3</td>
</tr>
<tr>
<td>EVDS 1660 History of Culture, Ideas and Environment 1</td>
<td>3</td>
</tr>
<tr>
<td>May not be held with FAAH 1030.</td>
<td></td>
</tr>
<tr>
<td>EVDS 1670 History of Culture, Ideas and Environment 2</td>
<td>3</td>
</tr>
<tr>
<td>Prerequisite: EVDS 1660 (C).</td>
<td></td>
</tr>
<tr>
<td>May not be held with FAAH 1040.</td>
<td></td>
</tr>
</tbody>
</table>

*If you are interested in taking a specific course, click on its course code ex. ABIZ 1000 to view essential information such as a course description, prerequisites, and restrictions.*
# RECOMMENDED INTRODUCTORY COURSES

## SCHOOL OF ART

### FINE ART, GENERAL

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA 1020 (M)</td>
<td>Mathematics in Art</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Also offered as MATH 1020 (M).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A good course to choose if you don't have a strong mathematics background and you need a Mathematics (M) course.</td>
<td></td>
</tr>
</tbody>
</table>

### FINE ART, ART HISTORY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAAH 1030</td>
<td>Introduction to Art 1A</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>May not be held with EVDS 1660.</td>
<td></td>
</tr>
<tr>
<td>FAAH 1040</td>
<td>Introduction to Art 2A</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>May not be held with EVDS 1670.</td>
<td></td>
</tr>
</tbody>
</table>

### FINE ART, STUDIO

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STDO 1210</td>
<td>Drawing: Studio 1</td>
<td>3</td>
</tr>
<tr>
<td>STDO 1240</td>
<td>Figure Study 1</td>
<td>3</td>
</tr>
<tr>
<td>STDO 1250</td>
<td>Drawing: Studio 2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: STDO 1210 (C).</td>
<td></td>
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<tr>
<td>STDO 1410</td>
<td>Visual Language</td>
<td>3</td>
</tr>
<tr>
<td>STDO 1470</td>
<td>Materials Studio</td>
<td>3</td>
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<tr>
<td></td>
<td>Prerequisite: STDO 1410 (C).</td>
<td></td>
</tr>
<tr>
<td>STDO 1510</td>
<td>Art Now</td>
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## ASPER SCHOOL OF BUSINESS

### GENERAL MANAGEMENT

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>GMG1 1010 (W)</td>
<td>Business and Society</td>
<td>3</td>
</tr>
<tr>
<td>GMG1 2060</td>
<td>Management and Organizational Theory</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: GMG1 1010 (D).</td>
<td></td>
</tr>
<tr>
<td>GMG1 2070</td>
<td>Introduction to Organizational Behaviour</td>
<td>3</td>
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</table>

### ENTREPRENEURSHIP / SMALL BUSINESS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 2020</td>
<td>Starting a New Business</td>
<td>3</td>
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</table>

### MARKETING

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MKT 2210</td>
<td>Fundamentals of Marketing</td>
<td>3</td>
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</table>
## FACULTY OF ARTS

### ANTHROPOLOGY

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ANTH 1210</td>
<td>Ancient Peoples and Places</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 1220</td>
<td>Socio-Cultural Anthropology</td>
<td>3</td>
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</table>

### ARABIC

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>ARA 2000</td>
<td>Intermediate Arabic</td>
<td>6 + lab</td>
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</table>

Prerequisite: ARA 1000 (C) or written consent of instructor.

### ARTS INTERDISCIPLINARY

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ARTS 1110</td>
<td>Introduction to University</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1160</td>
<td>Leadership: An Interdisciplinary Approach</td>
<td>3</td>
</tr>
</tbody>
</table>

### ASIAN STUDIES

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ASIA 1420 (W)</td>
<td>Asian Civilizations to 1500</td>
<td>3</td>
</tr>
<tr>
<td>ASIA 1430 (W)</td>
<td>Asian Civilizations from 1500</td>
<td>3</td>
</tr>
<tr>
<td>ASIA 1750</td>
<td>Introduction to Korean</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

Students who have received all or a portion of their elementary or secondary education in the Korean language may not normally enrol.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIA 1760</td>
<td>Introduction to Chinese (Mandarin)</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

Students who have received all or a portion of their elementary or secondary education in the Chinese language may not normally enrol.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIA 1770</td>
<td>Introduction to Japanese</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

This course is intended for students with no prior knowledge of Japanese. Students with prior knowledge of the language are required to take a placement test or to meet with the Program Director or designate for an interview.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIA 2750</td>
<td>Intermediate Korean</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

Prerequisite: ASIA 1750 (C) or written consent of instructor.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIA 2760</td>
<td>Intermediate Chinese (Mandarin)</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

Prerequisite: ASIA 1760 (C) or written consent of instructor.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASIA 2770</td>
<td>Intermediate Japanese</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

Prerequisite: ASIA 1770 (C) or written consent of instructor.

---

1. If you are interested in taking a specific course, click on its course code ex. **MKT 2210** to view essential information such as a course description, prerequisites, and restrictions.
## RECOMMENDED INTRODUCTORY COURSES

### FACULTY OF ARTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDN 1000</td>
<td>Introduction to Canada</td>
<td>3</td>
</tr>
<tr>
<td>CATH 1190 (W)</td>
<td>Introduction to Catholic Studies</td>
<td>3</td>
</tr>
<tr>
<td>CLAS 1270</td>
<td>Introduction to Ancient Greek Culture</td>
<td>3</td>
</tr>
<tr>
<td>CLAS 1280</td>
<td>Introduction to Ancient Roman Culture</td>
<td>3</td>
</tr>
<tr>
<td>CLAS 1520</td>
<td>Greek and Roman Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1010</td>
<td>Introduction to Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1020</td>
<td>Introduction to Macroeconomic Principles.</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1210</td>
<td>Introduction to Canadian Economic Issues and Policies</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1220</td>
<td>Introduction to Global Environmental Economic Issues and Policies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 0930 (W)</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 0940 (W)</td>
<td>Writing About Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1200 (W)</td>
<td>Representative Literary Works</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1340 (W)</td>
<td>Introduction to Literary Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1400 (W)</td>
<td>Thematic Approaches to the Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>FILM 1290</td>
<td>The Art of the Film 1</td>
<td>3</td>
</tr>
<tr>
<td>FILM 1310</td>
<td>Film History</td>
<td>3</td>
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</table>

**Prerequisite:** FILM 1290 (C) or written consent of instructor.
# FACULTY OF ARTS

## FRENCH

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FREN 1152</strong></td>
<td>Introductory French 1</td>
<td>For students with no prior knowledge of French or who have studied French up to and including Grade 11 or its equivalent.</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>FREN 1154</strong></td>
<td>Introductory French 2</td>
<td>For students with limited prior knowledge of French or who have studied French up to and including Grade 11 or its equivalent or who have successfully completed Introductory French 1.</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>FREN 1192</strong></td>
<td>Français pour bilingues et francophones 1</td>
<td>Prerequisite: Senior 4 French or written consent of department head.</td>
<td>3</td>
</tr>
<tr>
<td><strong>FREN 1194</strong></td>
<td>Français pour bilingues et francophones 2</td>
<td>Prerequisite: FREN 1192 (C) or written consent of department head.</td>
<td>6</td>
</tr>
<tr>
<td><strong>FREN 1202</strong></td>
<td>Intermediate French 1</td>
<td>Prerequisite: FREN 1154 (C) or Senior 4 French.</td>
<td>3</td>
</tr>
<tr>
<td><strong>FREN 1204</strong></td>
<td>Intermediate French 2</td>
<td>Prerequisite: FREN 1202 (C) or written consent of department head.</td>
<td>3</td>
</tr>
<tr>
<td><strong>FREN 1252</strong></td>
<td>Français Oral 1</td>
<td>Prerequisite: Senior 4 French or FREN 1154 (B) or written consent of department head.</td>
<td>3</td>
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</tbody>
</table>

## GERMAN

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRMN 1122</strong></td>
<td>Introductory German 1</td>
<td>For students with limited or no prior knowledge of German. Students with Grade 12 German or its equivalent may not normally take the course for credit.</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>GRMN 1124</strong></td>
<td>Introductory German 2</td>
<td>For students with some basic knowledge of German. Prerequisite: GRMN 1122 (C) or written consent of department head.</td>
<td>3 + lab</td>
</tr>
<tr>
<td><strong>GRMN 2102</strong></td>
<td>Intermediate German 1</td>
<td>Prerequisite: German 405 or GRMN 1124 (C) or written consent of department head.</td>
<td>3</td>
</tr>
<tr>
<td><strong>GRMN 2104</strong></td>
<td>Intermediate German 2</td>
<td>Prerequisite: GRMN 2102 (C) or written consent of department head.</td>
<td>3</td>
</tr>
<tr>
<td><strong>GRMN 2130 (W)</strong></td>
<td>Introduction to German Culture from the Beginnings to 1918</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>GRMN 2500 (W)</strong></td>
<td>German Romanticism in English</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

If you are interested in taking a specific course, click on its course code ex. ECON 1010, to view essential information such as a course description, prerequisites, and restrictions.
# RECOMMENDED INTRODUCTORY COURSES

## FACULTY OF ARTS

### GLOBAL POLITICAL ECONOMY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>GPE 1700</td>
<td>Social Justice in the 21st Century: Global Political Economy and Environmental Change</td>
<td>3</td>
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</table>

### GREEK

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>GRK 1010</td>
<td>Introduction to the Reading of Ancient Greek 1</td>
<td>3</td>
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</table>
| GRK 1020    | Introduction to the Reading of Ancient Greek 2  
Prerequisite: GRK 1010 (C). | 3            |

### HEBREW

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>HEB 1250</td>
<td>Hebrew 1</td>
<td>6 + lab</td>
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</tbody>
</table>

| Prerequisite: written consent of program coordinator. |

### HISTORY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1200 (W)</td>
<td>An Introduction to the History of Western Civilization</td>
<td>6</td>
</tr>
<tr>
<td>HIST 1270 (W)</td>
<td>New Directions in History: Inquiries into the Power Relations of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1350 (W)</td>
<td>An Introduction to the History of Western Civilization to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1360 (W)</td>
<td>An Introduction to the History of Western Civilization from 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1370 (W)</td>
<td>An Introduction to Modern World History: 1500-1800</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1380 (W)</td>
<td>An Introduction to Modern World History: 1800-Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1390 (W)</td>
<td>History of Colonial Canada: 1500-1885</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1400 (W)</td>
<td>History of Canadian Nation since 1867</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1420 (W)</td>
<td>Asian Civilizations to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1430 (W)</td>
<td>Asian Civilizations from 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1440 (W)</td>
<td>History of Canada</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2010 (W)</td>
<td>Indigenous History in Canada</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2020 (W)</td>
<td>The Métis in Canada</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2140 (W)</td>
<td>Colonial Latin America</td>
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</table>
**FACULTY OF ARTS**

**HISTORY (CONTINUED)**

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<tr>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>HIST 2150 (W)</td>
<td>Independent Latin America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2180 (W)</td>
<td>The History of Catholicism to 1540</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2210 (W)</td>
<td>History of Britain, 1485 to the Present</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2230 (W)</td>
<td>History of the United States from 1607</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2282 (W)</td>
<td>Inventing Canada</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2286 (W)</td>
<td>Modern Canada</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2350 (W)</td>
<td>Europe 1789-1870</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2360 (W)</td>
<td>Europe 1870 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2420 (W)</td>
<td>The Medieval World</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2500 (W)</td>
<td>History of Africa</td>
<td>6</td>
</tr>
<tr>
<td>HIST 2610 (W)</td>
<td>Making of Modern Ukraine</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2660 (W)</td>
<td>History of the Soviet Union</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2670 (W)</td>
<td>History of Capitalism</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2990 (W)</td>
<td>The History of Catholicism since 1540</td>
<td>3</td>
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</tbody>
</table>

**HEBREW**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEB 1260</td>
<td>Hebrew 2</td>
<td>3 + lab</td>
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</tbody>
</table>

Prerequisite: Written consent of program coordinator.

**HUNGARIAN**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUNG 1000</td>
<td>Introduction to Hungarian 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>HUNG 1002</td>
<td>Introduction to Hungarian 2</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

Prerequisite: HUNG 1000 (C) or written consent of department head.

If you are interested in taking a specific course, click on its course code ex. **GRK 1010** to view essential information such as a course description, prerequisites, and restrictions.
# Recommended Introductory Courses

## Faculty of Arts

### Icelandic

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICEL 1200</td>
<td>Introduction to Icelandic</td>
<td>Intended for students with little or no previous knowledge of Icelandic.</td>
<td>6 + lab</td>
</tr>
<tr>
<td>ICEL 1400</td>
<td>Introduction to Contemporary Culture in Iceland</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Indigenous Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDG 1200</td>
<td>Indigenous Peoples in Canada</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>INDG 1220</td>
<td>Indigenous Peoples in Canada, Part 1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>INDG 1240</td>
<td>Indigenous Peoples in Canada, Part 2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>INDG 2012 (W)</td>
<td>Indigenous History in Canada</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>INDG 2020 (W)</td>
<td>The Métis in Canada</td>
<td></td>
<td>3</td>
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</tbody>
</table>

### Indigenous Languages

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDG 1250</td>
<td>Introductory Cree 1</td>
<td>Practical course intended for students who are not fluent in Cree.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>INDG 1260</td>
<td>Introductory Cree 2</td>
<td>Prerequisite: INDG 1250 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>INDG 1270</td>
<td>Introductory Anishinaabemowin (Ojibway) 1</td>
<td>Practical course intended for students who are not fluent in Anishinaabe (Ojibwe).</td>
<td>3</td>
</tr>
<tr>
<td>INDG 1280</td>
<td>Introductory Anishinaabemowin (Ojibway) 2</td>
<td>Prerequisite: INDG 1270 (C).</td>
<td>3</td>
</tr>
</tbody>
</table>

### Italian

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITLN 1080</td>
<td>Introductory Italian</td>
<td>An introduction to the Italian language for students with little or no knowledge of Italian.</td>
<td>6 + lab</td>
</tr>
</tbody>
</table>

If you are interested in taking a specific course, click on its course code (e.g., PHIL 1290) to view essential information such as a course description, prerequisites, and restrictions.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS LABR 1260 (W)</td>
<td>Working for a Living</td>
<td>3</td>
</tr>
<tr>
<td>SS LABR 1290 (W)</td>
<td>Labour Unions and Workers' Rights in Canada</td>
<td>3</td>
</tr>
<tr>
<td>H LATN 1080</td>
<td>Introduction to the Reading of Latin 1</td>
<td>3</td>
</tr>
<tr>
<td>H LATN 1090</td>
<td>Introduction to the Reading of Latin 2</td>
<td>3</td>
</tr>
<tr>
<td>SS LING 1000</td>
<td>Introduction to Linguistics 1: Foundations of Language</td>
<td>3</td>
</tr>
<tr>
<td>SS LING 1010</td>
<td>Introduction to Linguistics 2: Language in Context</td>
<td>3</td>
</tr>
<tr>
<td>SS LING 1460</td>
<td>Words</td>
<td>3</td>
</tr>
<tr>
<td>H PHIL 1200</td>
<td>Introduction to Philosophy</td>
<td>6</td>
</tr>
<tr>
<td>H PHIL 1290</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>H PHIL 1300 (M)</td>
<td>Introduction to Logic</td>
<td>3</td>
</tr>
<tr>
<td>H PHIL 1520</td>
<td>Goodness, Beauty, and Justice</td>
<td>3</td>
</tr>
<tr>
<td>H POL 1892</td>
<td>Introductory Polish 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>H POL 1894</td>
<td>Introductory Polish 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>H POL 2610 (W)</td>
<td>Polish Culture 1918 to the Present</td>
<td>3</td>
</tr>
<tr>
<td>H POL 2892</td>
<td>Intermediate Polish 1</td>
<td>3</td>
</tr>
<tr>
<td>H POL 2894</td>
<td>Intermediate Polish 2</td>
<td>3</td>
</tr>
</tbody>
</table>
## RECOMMENDED INTRODUCTORY COURSES

### FACULTY OF ARTS

#### CREDIT HOURS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 1502 (W)</td>
<td>Introduction to Political Studies</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PSYC 1200</td>
<td>Introduction to Psychology</td>
<td>6</td>
</tr>
<tr>
<td>RLGN 1322</td>
<td>Introduction to Eastern Religions</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1324</td>
<td>Introduction to Western Religions</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1410</td>
<td>Death and Concepts of the Future</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1420</td>
<td>Ethics in World Religions</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1424</td>
<td>Religion and Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1430</td>
<td>Food: Religious Concepts and Practices</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1440 (W)</td>
<td>Evil in World Religions</td>
<td>3</td>
</tr>
<tr>
<td>RLGN 1450</td>
<td>Religion and the Media</td>
<td>3</td>
</tr>
<tr>
<td>RUSN 1302</td>
<td>Introductory Russian 1</td>
<td>3 + lab</td>
</tr>
<tr>
<td>RUSN 1304</td>
<td>Introductory Russian 2</td>
<td>3 + lab</td>
</tr>
<tr>
<td>RUSN 2280 (W)</td>
<td>Russian Culture until 1900</td>
<td>3</td>
</tr>
<tr>
<td>RUSN 2812</td>
<td>Intermediate Russian 1</td>
<td>3</td>
</tr>
<tr>
<td>RUSN 2814</td>
<td>Intermediate Russian 2</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1000</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### RECOMMENDED INTRODUCTORY COURSES

- Not open to native speakers and students with high school Russian 41G credit.
- Prerequisite: RUSN 1302 (C) or written consent of department head.
- Prerequisite: Russian 41G or RUSN 1304 (C) or written consent of department head.
- Prerequisite: RUSN 2812 (C) or written consent of the department head.
# FACULTY OF ARTS

## SPANISH

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1182</td>
<td>Introductory Spanish 1</td>
<td>The course is not open to students who have taken Senior 4 Spanish, students with native or near-native proficiency. Students with a proficiency level beyond this course will be directed to a higher-level course.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>SPAN 1184</td>
<td>Introductory Spanish 2</td>
<td>Prerequisite: SPAN 1182 (C) or written permission of department head. The course is not open to students who have taken Senior 4 Spanish, students with native or near-native proficiency. Students with a proficiency level beyond this course will be directed to a higher-level course.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>SPAN 1262</td>
<td>Intermediate Spanish Grammar and Conversation 1</td>
<td>Prerequisite: SPAN 1182 (C) and SPAN 1184 (C) or written consent of department head.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>SPAN 1272</td>
<td>Intermediate Spanish Grammar and Conversation 2</td>
<td>Prerequisite: SPAN 1262 (C) or written consent of instructor or department head.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>SPAN 1280</td>
<td>Spanish for Native Speakers</td>
<td>Prerequisite: Written consent of instructor or department head.</td>
<td>3</td>
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</tbody>
</table>

## THEATRE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THTR 1220</td>
<td>Introduction to Theatre</td>
<td>6</td>
</tr>
</tbody>
</table>

## UKRAINIAN

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UKRN 1312</td>
<td>Introductory Ukrainian 1</td>
<td>Not open to native speakers and students with Ukrainian 40S credit.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>UKRN 1314</td>
<td>Introductory Ukrainian 2</td>
<td>Prerequisite: UKRN 1312 or written consent of the department head.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>UKRN 2722</td>
<td>Intermediate Ukrainian 1</td>
<td>Prerequisite: Ukrainian 40S or UKRN 1314 (C) or written consent of department head.</td>
<td>3</td>
</tr>
<tr>
<td>UKRN 2724</td>
<td>Intermediate Ukrainian 2</td>
<td>Prerequisite: UKRN 2722 or written consent of the department head.</td>
<td>3</td>
</tr>
<tr>
<td>UKRN 2770 (W)</td>
<td>Ukrainian Culture until 1900</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UKRN 2780 (W)</td>
<td>Ukrainian Culture until 1900 to the Present</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

—if you are interested in taking a specific course, click on its course code ex. **UKRN 1312** to view essential information such as a course description, prerequisites, and restrictions.
## Recommended Introductory Courses

### Faculty of Arts

#### Women’s and Gender Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMN 1500 (W)</td>
<td>Introduction to Women’s and Gender Studies in the Humanities</td>
<td>3</td>
</tr>
<tr>
<td>WOMN 1600 (W)</td>
<td>Introduction to Women’s and Gender Studies in the Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>WOMN 2600</td>
<td>Sex, Gender, Space and Place</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Yiddish

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>YDSH 1220</td>
<td>Yiddish</td>
<td>6</td>
</tr>
</tbody>
</table>

**Prerequisite:** Written consent of program coordinator.

### Faculty of Education

#### Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUA 1790</td>
<td>Introduction to Education: What does it mean to Teach?</td>
<td>3</td>
</tr>
<tr>
<td>EDUB 1790</td>
<td>Introduction to Education: What does it mean to Teach?</td>
<td>3</td>
</tr>
</tbody>
</table>

### Price Faculty of Engineering

#### Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1430</td>
<td>Design in Engineering</td>
<td>• 60% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (C)</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Chemistry 40S or CHEM 1018 (C)</td>
<td></td>
</tr>
<tr>
<td>ENG 1440</td>
<td>Introduction to Statics</td>
<td>• 60% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (C)</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Chemistry 40S or CHEM 1018 (C)</td>
<td></td>
</tr>
<tr>
<td>ENG 1450</td>
<td>Introduction to Electrical and Computer Engineering</td>
<td>• 60% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (C)</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60% in Chemistry 40S or CHEM 1018 (C)</td>
<td></td>
</tr>
</tbody>
</table>
### ENG 1460  
**Introduction to Thermal Sciences**  
Prerequisites:  
- 60% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (C)  
- 60% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)  
- 60% in Chemistry 40S or CHEM 1018 (C)  

### CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES

#### ENVIRONMENT, EARTH, AND RESOURCES (GENERAL FACULTY)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EER 1000</td>
<td>Earth: A User's Guide</td>
<td>3</td>
</tr>
</tbody>
</table>

#### ENVIRONMENTAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVR 1000</td>
<td>Environmental Science 1: Concepts</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>May not be held with BIOL 1340.</td>
<td></td>
</tr>
<tr>
<td>ENVR 2000</td>
<td>Environmental Science 2: Issues</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: ENVR 1000 (C) or BIOL 1340 (C).</td>
<td></td>
</tr>
</tbody>
</table>

#### GEOGRAPHY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 1280</td>
<td>Introduction to Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1290</td>
<td>Introduction to Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 1700</td>
<td>Social Justice in the 21st Century: Global Political Economy and Environmental Change</td>
<td>3</td>
</tr>
</tbody>
</table>

#### GEOLOGICAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 1340</td>
<td>The Dynamic Earth</td>
<td>3 + lab</td>
</tr>
<tr>
<td>GEOL 1400</td>
<td>Time-Trekker's Travelog: Our Evolving Earth</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Natural Disasters and Global Change</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Exploring the Planets</td>
<td>3</td>
</tr>
</tbody>
</table>

Tips: If you are interested in taking a specific course, click on its course code ex. **ENVR 1000**, to view essential information such as a course description, prerequisites, and restrictions.
**RECOMMENDED INTRODUCTORY COURSES**

**Rady Faculty of Health Sciences**  
**Max Rady College of Medicine**

### Family Social Sciences

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMLY 1000</td>
<td>Families in Contemporary Canadian Society</td>
<td>3</td>
</tr>
<tr>
<td>FMLY 1010</td>
<td>Human Development in the Family</td>
<td>3</td>
</tr>
<tr>
<td>FMLY 1012</td>
<td>Introduction to Social Development</td>
<td>3</td>
</tr>
<tr>
<td>FMLY 1420</td>
<td>Family Management Principles</td>
<td>3</td>
</tr>
</tbody>
</table>

### Health Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAL 1600</td>
<td>Health and Health Professions</td>
<td>3</td>
</tr>
</tbody>
</table>

### Faculty of Kinesiology and Recreation Management

#### Kinesiology, Physical Education, and Recreation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPER 1200</td>
<td>Physical Activity, Health and Wellness</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1400</td>
<td>Concepts of Recreation and Leisure</td>
<td>3</td>
</tr>
<tr>
<td>KPER 1500</td>
<td>Foundations of Physical Education and Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>REC 2100</td>
<td>Introduction to Leisure Travel</td>
<td>3</td>
</tr>
</tbody>
</table>

### Desautels Faculty of Music

#### Music

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 1010</td>
<td>Music Matters: Excursions in Western Musical Culture REMOVED Look for MUSC 1040</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1020</td>
<td>Introduction to Popular Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1030</td>
<td>History of Musical Theatre</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 1040</td>
<td>Discovering Jazz</td>
<td>3</td>
</tr>
</tbody>
</table>
| MUSC 1110   | Music Theory 1  
   Prerequisite: MUSC 1930 (C.)                                              | 3       |
| MUSC 1120   | Music Theory 2  
   Prerequisite: MUSC 1110 (C.)                                              | 3       |
| MUSC 1930   | Rudiments of Music                                                           | 3       |

---

If you are interested in taking a specific course, click on its course code to view essential information such as a course description, prerequisites, and restrictions.
## FACULTY OF SCIENCE

### ASTRONOMY

**ASTR 1810**

**Introduction to Astronomy: The Magnificent Universe**

Prerequisites:
- 50% in Physics 40S or PHYS 1018 (C)
- 70% in Pre-calculus Mathematics 40S or Applied Mathematics 40S

It is strongly recommended that students attain a minimum of 70% as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 1810</td>
<td>Life in the Universe</td>
<td>3</td>
</tr>
</tbody>
</table>

### BIOLOGICAL SCIENCES

**BIOL 1000**

**Biology: Foundations of Life**

Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).

BIOL 1000 (C) can be used as the prerequisite for BIOL 1020. However, if a student takes BIOL 1020 after taking BIOL 1000, they will lose credit for BIOL 1000.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1000</td>
<td>Life in the Universe</td>
<td>3</td>
</tr>
</tbody>
</table>

**BIOL 1010**

**Biology: Biological Diversity and Interaction**

Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).

If a student takes BIOL 1030 after taking BIOL 1010, they will lose credit for BIOL 1010.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1010</td>
<td>Life in the Universe</td>
<td>3</td>
</tr>
</tbody>
</table>

**BIOL 1020**

**Biology 1: Principles and Themes**

Prerequisites:
- 50% in Biology 40S
- 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C)
- 50% in Chemistry 40S or CHEM 1018 (C) or 50% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)

BIOL 1000 (C) can be used as the prerequisite for BIOL 1020. However, if a student takes BIOL 1020 after taking BIOL 1000, they will lose credit for BIOL 1000.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1020</td>
<td>Life in the Universe</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

**BIOL 1030**

**Biology 2: Biological Diversity, Function and Interactions**

Prerequisite: BIOL 1020 (C).

If a student takes BIOL 1030 after taking BIOL 1010, they will lose credit for BIOL 1010.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1030</td>
<td>Life in the Universe</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

**BIOL 1300**

**Economic Plants**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1300</td>
<td>Life in the Universe</td>
<td>3</td>
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</tbody>
</table>

**BIOL 1340**

**The State of the Earth’s Environment: Contemporary Issues**

May not be held with ENVR 1000.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1340</td>
<td>Life in the Universe</td>
<td>3</td>
</tr>
</tbody>
</table>

**BIOL 1410**

**Anatomy of the Human Body**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410</td>
<td>Life in the Universe</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

**BIOL 1412**

**Physiology of the Human Body**

Prerequisite: BIOL 1410 (C) or BIOL 1030 (C).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1412</td>
<td>Life in the Universe</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>
## RECOMMENDED INTRODUCTORY COURSES

### FACULTY OF SCIENCE

#### CHEMISTRY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1018</td>
<td>Chemistry - The Central Science</td>
<td>This course is intended primarily for students who do not have credit for Chemistry 40S and wish to continue in a subsequent course in Chemistry.</td>
<td>3</td>
</tr>
</tbody>
</table>
| CHEM 1100   | Introductory Chemistry 1: Atomic and Molecular Structure and Energetics | Prerequisites:  
- 50% in Chemistry 40S or CHEM 1018 (C)  
- 50% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C) or 50% in Applied Mathematics or MSKL 0100 (C) | 3       |
| CHEM 1110   | Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties | Prerequisite: CHEM 1100 (C). | 3       |
| CHEM 1120   | Introduction to Chemistry Techniques                     | Prerequisites:  
- 70% in Chemistry 40S or CHEM 1018 (C) and one of:  
  - 70% in Pre-Calculus Mathematics 40S or 70% in Applied Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (B)  
  Or  
  - CHEM 1100 (C) | 3       |
| CHEM 1130   | Introduction to Organic Chemistry                        | Prerequisite: CHEM 1100 (C). | 3       |

#### COMPUTER SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1000</td>
<td>Introductory Programming: Think Like a Computer</td>
<td>Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).</td>
<td>3</td>
</tr>
</tbody>
</table>
| COMP 1010   | Introductory Computer Science 1                           | Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (D).  
May not be held for credit with COMP 1012 | 3 + lab  |
| COMP 1012   | Computer Programming for Scientists and Engineers          | Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).  
Co-requisite: MATH 1230 (M) or MATH 1500 (M) (or equivalent).  
May not be held for credit with COMP 1010. | 3 + lab  |
| COMP 1020   | Introductory Computer Science 2                           | Prerequisite: COMP 1010 (C) or COMP 1012 (C) or 75 % in Computer Science 40S and 50% in any 40S Mathematics course. | 3 + lab  |
| COMP 1600   | Navigating Your Digital World                              |                                                                               | 3       |
# FACULTY OF SCIENCE

## MATHEMATICS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1010 (M)</td>
<td>Applied Finite Mathematics</td>
<td>A good course to choose if you don’t have a strong mathematics background and you need a Mathematics (M) course.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1018 (M)</td>
<td>Pre-Calculus in Practice</td>
<td>This course is intended primarily for students who do not have credit for Pre-calculus Mathematics 40S (60%) and wish to continue in a subsequent course in Mathematics.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1020 (M)</td>
<td>Mathematics in Art</td>
<td>Also offered as FA 1020 (M). A good course to choose if you don’t have a strong mathematics background and you need a Mathematics (M) course.</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1080 (M)</td>
<td>Fundamentals of Mathematical Reasoning</td>
<td>Prerequisite: 50% in Pre-Calculus Mathematics 40S or 65% in Applied Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1090 (M)</td>
<td>Mathematical Reasoning in Euclidean Geometry</td>
<td>Prerequisite: MATH 1080 (M) (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1210 (M)</td>
<td>Techniques of Classical and Linear Algebra</td>
<td>Prerequisite: 60% in Pre-calculus Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1220 (M)</td>
<td>Linear Algebra 1</td>
<td>Prerequisite: 70% in Pre-calculus Mathematics 40S or MATH 1018 (M) (B) or MSKL 0100 (B).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1230 (M)</td>
<td>Differential Calculus</td>
<td>Prerequisite: 70% in Pre-calculus Mathematics 40S or MATH 1018 (M) (B) or MSKL 0100 (B).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1232 (M)</td>
<td>Integral Calculus</td>
<td>Prerequisite: MATH 1230 (M) (C) or MATH 1500 (M) (B).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1240 (M)</td>
<td>Elementary Discrete Mathematics</td>
<td>Prerequisite: 60% in Pre-calculus Mathematics 40S or MATH 1018 (M) (B) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1300 (M)</td>
<td>Vector Geometry and Linear Algebra</td>
<td>Prerequisite: 60% in Pre-calculus Mathematics 40S or 70% in Applied Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1500 (M)</td>
<td>Introduction to Calculus</td>
<td>Prerequisite: 60% in Pre-calculus Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1510 (M)</td>
<td>Applied Calculus 1</td>
<td>Prerequisites:</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td>• 60% in Pre-Calculus Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 50% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## RECOMMENDED INTRODUCTORY COURSES
### FACULTY OF SCIENCE (CONTINUED)

### MATHEMATICS (CONTINUED)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1524 (M)</td>
<td>Mathematics for Management and Social Sciences</td>
<td>Prerequisite: 60% in Pre-calculus Mathematics 40S or MATH 1018 (M) (C+) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1700 (M)</td>
<td>Calculus 2</td>
<td>Prerequisite: MATH 1500 (M) (C) or equivalent.</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MATH 1710 (M)</td>
<td>Applied Calculus 2</td>
<td>Prerequisite: MATH 1510 (M) (C) or equivalent.</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite or co-requisite requirement: PHYS 1050 (C).</td>
<td></td>
</tr>
</tbody>
</table>

### MICROBIOLOGY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 1010</td>
<td>Microbiology 1</td>
<td>Prerequisites: BIOL 1020 (C) and CHEM 1100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>MBIO 1220</td>
<td>Essentials of Microbiology</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### PHYSICS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1018</td>
<td>The Mechanics of Nature</td>
<td>This course is intended primarily for students who do not have credit for Physics 40S and wish to continue in a subsequent course in Physics.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite or co-requisite: 50% in Pre-Calculus Mathematics 40S or 50% in Applied Mathematics or MATH 1018 (M) (C) or MSKL 0100 (C).</td>
<td></td>
</tr>
<tr>
<td>PHYS 1020 (M)</td>
<td>General Physics 1</td>
<td>Prerequisites:</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 50% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 50% in Pre-Calculus Mathematics 40S or 70% in Applied Mathematics 40S or MATH 1018 (M) (C) or MSKL 0100 (C)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is strongly recommended that students attain a minimum of 70% as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S.</td>
<td></td>
</tr>
<tr>
<td>PHYS 1030 (M)</td>
<td>General Physics 2</td>
<td>Prerequisite: PHYS 1020 (M) (C) or PHYS 1050 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>PHYS 1050</td>
<td>Physics 1: Mechanics</td>
<td>Prerequisite: 60% in Physics 40S or PHYS 1018 (C) or PSKL 0100 (P).</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite or co-requisite: MATH 1500 (M) (D) or equivalent.</td>
<td></td>
</tr>
<tr>
<td>PHYS 1070</td>
<td>Physics 2: Waves and Modern Physics</td>
<td>Prerequisites:</td>
<td>3 + lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PHYS 1050 (C) or PHYS 1020 (M) (B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MATH 1500 (M) (C) or equivalent</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite or co-requisite: MATH 1700 (M) (C) or equivalent.</td>
<td></td>
</tr>
</tbody>
</table>
## FACULTY OF SCIENCE

### STATISTICS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 1000 (M)</td>
<td>Basic Statistical Analysis 1</td>
<td>Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 1150 (M)</td>
<td>Introduction to Statistics and Computing</td>
<td>Prerequisite: 70% in Pre-calculus Mathematics 40S or MATH 1018 (M) (B) or MSKL 0100 (B).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 2000 (M)</td>
<td>Basic Statistical Analysis 2</td>
<td>Prerequisite: STAT 1000 (M) (C).</td>
<td>3 + lab</td>
</tr>
<tr>
<td>STAT 2150 (M)</td>
<td>Statistics and Computing</td>
<td>Prerequisites: • STAT 1150 (M) (C) or STAT 2000 (M) (B) • MATH 1500 (M) (C) or equivalent</td>
<td>3 + lab</td>
</tr>
</tbody>
</table>

### FACULTY OF SOCIAL WORK

### SOCIAL WORK

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWRK 1200</td>
<td>Introduction to Canadian Social Welfare</td>
<td>3</td>
</tr>
<tr>
<td>SWRK 1220</td>
<td>Social Justice, Diversity and Human Rights</td>
<td>3</td>
</tr>
<tr>
<td>SWRK 1230</td>
<td>Community Health and Well-Being: Imagination for Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SWRK 1240</td>
<td>Social Work and Professional Identity</td>
<td>3</td>
</tr>
<tr>
<td>SWRK 2030</td>
<td>Communication and Relational Skills in Social Work</td>
<td>3</td>
</tr>
</tbody>
</table>

If you are interested in taking a specific course, click on its course code, e.g., MBIO 1010, to view essential information such as a course description, prerequisites, and restrictions.
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**UM COURSE OPTIONS FOR UPGRADING**

If you are missing a high school prerequisite or did not achieve a sufficient grade for prerequisite purposes, you have the option to upgrade your high school courses through the University of Manitoba. You may take these upgrading courses simultaneously with other university courses, as long as they do not require the course you are upgrading as a prerequisite.

Some upgrading courses are not worth university credit and will not count in your overall course load. Be mindful of this when considering the minimum course load required for admission to a program, your financial aid (ex. Student loans, bursaries, scholarships), your study permits, etc.

### BIOLOGY 40S

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1000</td>
<td>Biology: Foundations of Life</td>
<td>• Prerequisite: 50% in any 40S Mathematics course or MATH 1018 (M) (C) or MSKL 0100 (C).&lt;br&gt;• This course counts for university credit. BIOL 1000 (C) can be used as the prerequisite for BIOL 1020. However, if a student takes BIOL 1020 after taking BIOL 1000, they will lose credit for BIOL 1000.&lt;br&gt;• Register through Aurora.</td>
<td></td>
</tr>
</tbody>
</table>

### CHEMISTRY 40S

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1018</td>
<td>Chemistry - The Central Science</td>
<td>• Register through Aurora.</td>
</tr>
</tbody>
</table>

### MATH 40S

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSKL 0100</td>
<td>Mathematical Skills</td>
<td>• This course does not count for university credit. However, it can be used as a prerequisite for university-level courses that require any Mathematics 40S course.&lt;br&gt;• Register through Extended Education.</td>
</tr>
<tr>
<td>MATH 1018 (M)</td>
<td>Pre-Calculus in Practice</td>
<td>• Register through Aurora.</td>
</tr>
</tbody>
</table>

### PHYSICS 40S

| Course     | Description                                           | Prerequisite or co-requisite: 50% in Pre-Calculus Mathematics 40S or 50% in Applied Mathematics or MATH 1018 (M) (C) or MSKL 0100 (C).<br>• Register through Aurora. |                                                       |
|------------|-------------------------------------------------------|----------------------------------------------------------------------|
| PHYS 1018  | The Mechanics of Nature                              |                                                                      |

### EXTERNAL UPGRADING OPTIONS

You also have the option to upgrade your high school courses outside of the University of Manitoba, through an Adult Education Centre. Typically, external upgrading courses will not be worth university credit and will not count in your overall course load.
**IMPORTANT DATES**

### INITIAL REGISTRATION PERIOD

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 28, 2024</td>
<td>Confirm your Initial Registration Time in Aurora</td>
</tr>
<tr>
<td>July 9-15, 2024</td>
<td>Initial Registration Times begin for new students. Returning students are assigned an Initial Registration Time between July 18-August 6. Students can continue to make changes to course registration prior to the Course Add &amp; Course Drop deadlines for each term.</td>
</tr>
</tbody>
</table>

### FALL TERM 2024

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 3, 2024</td>
<td>Welcome Day</td>
</tr>
<tr>
<td>September 4, 2024</td>
<td>First day of classes</td>
</tr>
<tr>
<td></td>
<td>• Attend first classes to get important course information</td>
</tr>
<tr>
<td>September 17, 2024</td>
<td><strong>Course Drop Date</strong></td>
</tr>
<tr>
<td></td>
<td>• The last day to drop Fall Term 2024 and Fall 2024-Winter 2025 spanned courses and not be assessed a Voluntary Withdrawal (VW)</td>
</tr>
<tr>
<td></td>
<td>• Last day to receive a tuition fee refund for dropped Fall Term 2024 courses</td>
</tr>
<tr>
<td></td>
<td>• Last day to receive a tuition fee refund for dropped Fall 2024-Winter 2025 spanned courses</td>
</tr>
<tr>
<td>September 18, 2024</td>
<td><strong>Course Add Date</strong></td>
</tr>
<tr>
<td></td>
<td>• The last day to add Fall Term 2024 and Fall 2024-Winter 2025 spanned courses</td>
</tr>
<tr>
<td>October 2, 2024</td>
<td>Fall Term 2024 fees are due by 4:30 pm (CST/CDT)</td>
</tr>
<tr>
<td>November 12-15, 2024</td>
<td>Fall Term break</td>
</tr>
<tr>
<td>November 19, 2024</td>
<td><strong>Voluntary Withdrawal (VW) Deadline</strong></td>
</tr>
<tr>
<td></td>
<td>• Last day to Voluntarily Withdraw (VW) from Fall Term 2024 courses</td>
</tr>
<tr>
<td></td>
<td>• After this date, Fall Term 2024 courses cannot be dropped</td>
</tr>
<tr>
<td>November 25, 2024</td>
<td>Registration for Winter 2025-Summer 2025 spanned courses opens in Aurora</td>
</tr>
<tr>
<td>December 9, 2024</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 10-20, 2024</td>
<td>December exam period</td>
</tr>
<tr>
<td>December 21, 2024-January 1, 2025</td>
<td>University closed for Winter holidays</td>
</tr>
</tbody>
</table>
# WINTER TERM 2025

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2, 2025</td>
<td>University reopens</td>
</tr>
<tr>
<td>January 3, 2025</td>
<td>Winter Welcome Day</td>
</tr>
<tr>
<td>January 6, 2025</td>
<td>First day of classes</td>
</tr>
<tr>
<td></td>
<td>• Attend first classes to get important course information</td>
</tr>
<tr>
<td>January 17, 2025</td>
<td><strong>Course Drop Date</strong></td>
</tr>
<tr>
<td></td>
<td>• Last day to drop Winter Term 2025 and Winter 2025-Summer 2025</td>
</tr>
<tr>
<td></td>
<td>spanned courses and not be assessed a Voluntary Withdrawal (VW)</td>
</tr>
<tr>
<td></td>
<td>• Last day to receive a tuition fee refund for dropped Winter Term 2025</td>
</tr>
<tr>
<td></td>
<td>courses</td>
</tr>
<tr>
<td></td>
<td>• Last day to receive a tuition fee refund for dropped Winter 2025-Summer 2025 courses</td>
</tr>
<tr>
<td>January 17, 2025</td>
<td><strong>Voluntary Withdrawal (VW) Deadline</strong></td>
</tr>
<tr>
<td></td>
<td>• Last day to Voluntarily Withdraw (VW) from Fall 2024-Winter 2025</td>
</tr>
<tr>
<td></td>
<td>spanned courses with a refund for the Winter Term fees</td>
</tr>
<tr>
<td></td>
<td>• After this date, spanned Fall 2024-Winter 2025 courses cannot be dropped</td>
</tr>
<tr>
<td>January 20, 2025</td>
<td><strong>Course Add Date</strong></td>
</tr>
<tr>
<td></td>
<td>• Last day to add Winter Term 2025 courses and Winter 2025-Summer 2025</td>
</tr>
<tr>
<td>February 5, 2025</td>
<td>Winter Term fees are due by 4:30 pm (CST/CDT)</td>
</tr>
<tr>
<td>February 18-21, 2025</td>
<td>Winter Term break</td>
</tr>
<tr>
<td>March 19, 2025</td>
<td><strong>Voluntary Withdrawal (VW) Deadline</strong></td>
</tr>
<tr>
<td></td>
<td>• Last day to Voluntarily Withdraw (VW) from Winter Term 2025 courses</td>
</tr>
<tr>
<td></td>
<td>• After this date, Winter Term 2025 courses cannot be dropped</td>
</tr>
<tr>
<td>April 9, 2025</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>April 11-25, 2025</td>
<td>April exam period</td>
</tr>
<tr>
<td>May 15, 2025</td>
<td><strong>Voluntary Withdrawal (VW) Deadline</strong></td>
</tr>
<tr>
<td></td>
<td>• Voluntary Withdrawal (VW) Deadline for Winter 2025-Summer 2025</td>
</tr>
<tr>
<td></td>
<td>spanned courses with a refund for the Summer Term fees</td>
</tr>
<tr>
<td></td>
<td>• After this date, spanned Winter 2025-Summer 2025 courses cannot be dropped</td>
</tr>
</tbody>
</table>

### IMPORTANT DATES AND DEADLINES

View the [Important Dates and Deadlines](#) from the Registrar’s Office for a complete list of academic dates.
CONTACT US

FIRST YEAR CENTRE

1-204-474-6209
fycentre@umanitoba.ca
umfirstyearcentre
Monday-Friday, 8:30 am to 4:30 pm (CST/CDT)
205 Tier Building