

COLLEGE OF ARTS AND SCIENCE | COLLEGE OF MEDICINE

# BIOMEDICAL SCIENCE GUIDEBOOK

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# About This Guide

Welcome to the Bachelor of Science in Biomedical Sciences (BSc (BMSC))!

This guidebook is intended for current BSc (BMSC) students to help guide your program planning at the University of Saskatchewan. This will provide valuable information about the Biomedical Science (BMSC) program; how to apply for majors; how to plan your major; highlights of important course offerings; available research opportunities; and more. While not exhaustive, this guidebook offers essential information that is helpful for your academic journey.

# USask Biomedical Sciences Program Structure

Biomedical science is a diverse field of study that focuses on biological sciences especially relevant to human health and the improvement of patient care.

Through a unique partnership, the Colleges of Arts & Science and Medicine at USask offer the direct-entry Bachelor of Science in Biomedical Sciences (BSc (BMSC)). It is delivered by two departments housed in the College of Medicine - Anatomy, Physiology, and Pharmacology (APP) and Biochemistry, Microbiology and Immunology (BMI). APP offers courses that focus on anatomy, human physiology (including all body systems and how they interact and function), cell and developmental biology, neuroscience, and pharmacology (drug interactions with the body and specific systems). BMI offers courses that focus on biochemistry; biomolecules, DNA, proteins, as well as immunology, microbiology, virology, vaccinology, and pathogenesis (how bacteria and viruses interact with the body).

USask BMSC offers a single three-year degree, Biomedical Foundations, as well as four-year degrees, or honours in these fields: Biochemistry, Microbiology, and Immunology (BMIS), Biomedical Neuroscience (BMNS), Cellular, Physiological, and Pharmacological Sciences (CPPS), and Interdisciplinary Biomedical Sciences (ID BMSC).

Students who have completed BMSC degrees have pursued careers in biomedical research, biotechnology, medicine, pharmacy, dentistry, physical therapy, nursing, optometry, veterinary medicine, and many other healthcare-related areas. For information on career planning, up-to-date job postings, resume guides, and more, check out [USask Career Services](#).

## Common Core Courses for First and Second Year

Each of our majors build on the foundation of a two-year biomedical science core platform which provide students with an introductory exposure to cell biology, biochemistry, microbiology, physiology, and pharmacology. Once the core courses have been completed, students apply for one of the BMSC majors. This allows students a broad introductory experience with which to decide which major suits them best.

## **First year**

This degree program is flexible and offers you the opportunity to take courses in many different subject areas. Here is what a typical first-year schedule might look like:

FIRST YEAR	
FALL TERM	DESCRIPTION
BIOL 120	THE NATURE OF LIFE
CHEM 112	GENERAL CHEMISTRY I STRUTURE BONDING AND PROPERTIES OF MATERIALS
PHYS 115	PHYSICS AND THE UNIVERSE
INDG 107	INTRODUCTION TO CANADIAN INDIGENOUS STUDIES
ENG 112	LITERATURE AND COMPOSITION READING DRAMA

WINTER TERM	DESCRIPTION
BMSC 200	BIOMOLECULES
CHEM 115	GENERAL CHEMISTRY II CHEMICAL PROCESSES
PHYS 117	PHYSICS FOR THE LIFE SCIENCES
PSY 120	BIOLOGICAL AND COGNITIVE BASES OF PSYCHOLOGY
ART 110	ART TODAY IDEAS AND PRACTICES

## **Second year**

SECOND YEAR	
FALL TERM	DESCRIPTION
BMSC 207	HUMAN BODY SYSTEMS I
BMSC 210	MICROBIOLOGY
BMSC 240	LABORATORY TECHNIQUES
CHEM 250	INTRODUCTION TO ORGANIC CHEMISTRY
MUS 101	FUNDAMENTALS OF MUSIC I EXPLORING FOUNDATIONS

WINTER TERM	DESCRIPTION
BMSC 208	HUMAN BODY SYSTEMS II
BMSC 220	CELL BIOLOGY
BMSC 230	METABOLISM
MATH 110	CALCULUS I
ARCH 112	THE HUMAN JOURNEY INTRODUCTION TO ARCHAEOLOGY AND BIOLOGICAL ANTHROPOLOGY



Dr. Jeff Dong (PhD), researcher in USask's College of Medicine, looks at slides in his lab in the Health Sciences building (credit: Matt Olson)

## The BMSC Majors

All of these programs can be found in the [University Catalogue](#).

### BIOMEDICAL FOUNDATIONS (BMF)

#### Three-year degree

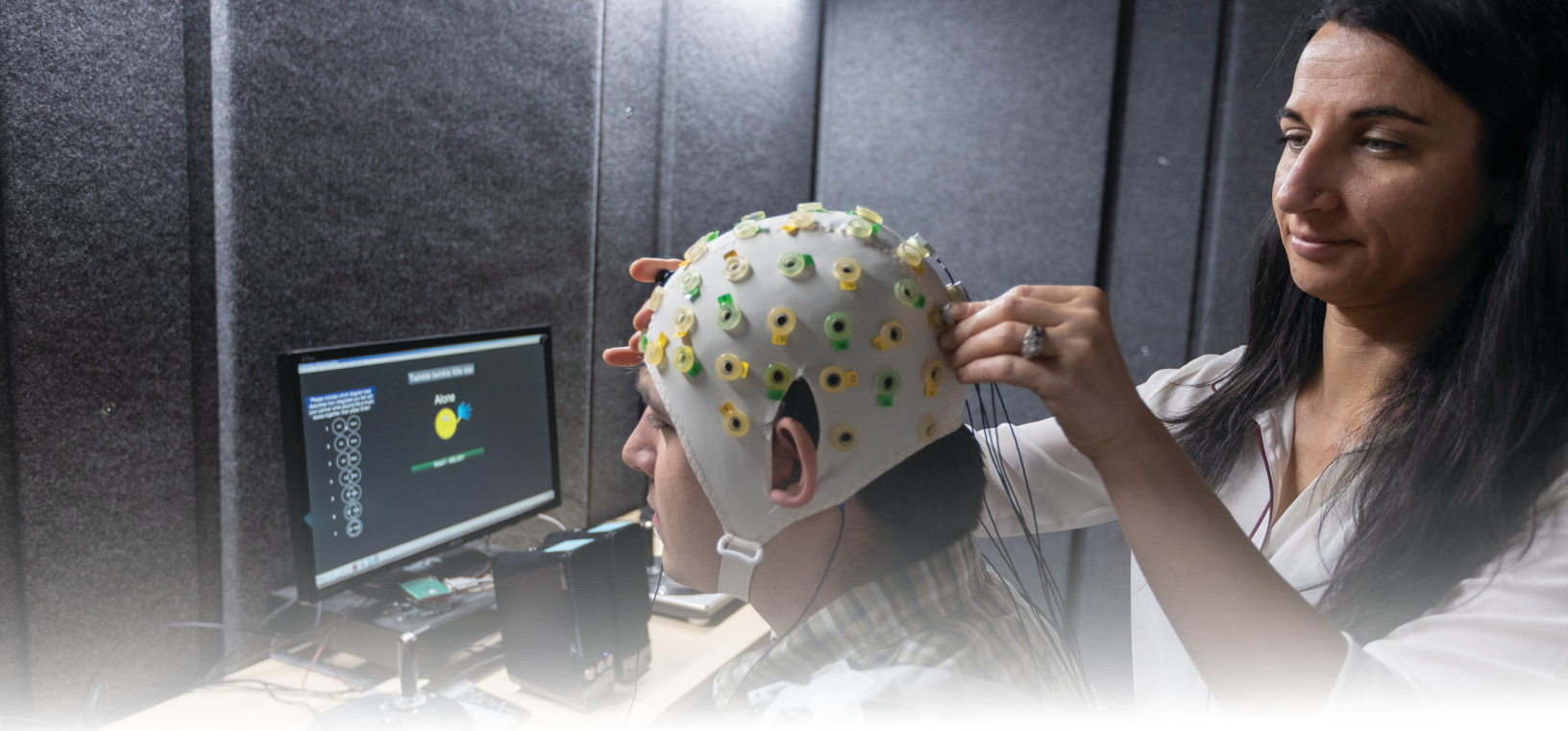
This program builds on the two-year common core biomedical sciences platform shared by all the BMSC majors to provide students with a strong foundation of multi-disciplinary training while providing flexibility. This program includes courses for students preparing to enter health-related professional schools that do not require a four-year degree such as dentistry, veterinary medicine, and pharmacy.

### BIOCHEMISTRY, MICROBIOLOGY, AND IMMUNOLOGY (BMIS)

#### Four-year or Honours degree

This program focuses on the molecular and cellular components of the life sciences including microbial physiology, microbial genetics and pathogenesis, protein structure and function, molecular biology, virology, tumor biology and cancer, immunology, and immunopathogenesis. Flexibility in course selection allows you to take a diverse or focused approach in the courses BMIS has to offer.

[Learn more](#) about BMIS courses.



## **BIOMEDICAL NEUROSCIENCE (BMNS)**

### **Four-year or Honours degree**

This program includes education in many of the major topics in neuroscience including molecular and cellular neuroscience, systems and sensory neuroscience, behavioural and cognitive neuroscience, neurophysiology, and neuroanatomy.

[Learn more](#) about BMNS courses.

## **CELLULAR, PHYSIOLOGICAL, AND PHARMACOLOGICAL SCIENCES (CPPS)**

### **Four-year or Honours degree**

This program includes the disciplines of cell and developmental biology, gross anatomy and histology, physiology, and pharmacology. These life science disciplines provide a comprehensive understanding of the functions and mechanisms of actions of the cells and major systems of the human body, and of the effects and mode of action of chemicals which change the major systems of the body.

[Learn more](#) about CPPS courses.

## **INTERDISCIPLINARY BIOMEDICAL SCIENCES (ID BMSC)**

### **Four-year or Honours degree**

The interdisciplinary major provides flexibility for students who seek a broader combination of biomedical science disciplines not represented with the standard majors.

[Learn more](#) about ID BMSC courses.

# Applying for a BSc (BMSC) Major

When you are admitted to the BSc (BMSC) program, your major is automatically set as undeclared.

## Applying to a Three-year Biomedical Foundations (BMF) major

You can switch to the three-year BMF at any time through the [A&S Student Inquiry Form](#).

## Applying for a Four-year or Honours BMIS, BMNS, BMSC ID, or CPPS major

It is important to gain exposure to the different biomedical sciences areas before deciding on a major, so you must complete all the M4 core requirements to become eligible to apply to a BMSC major.

### M4 Core Requirements (24 credit units)

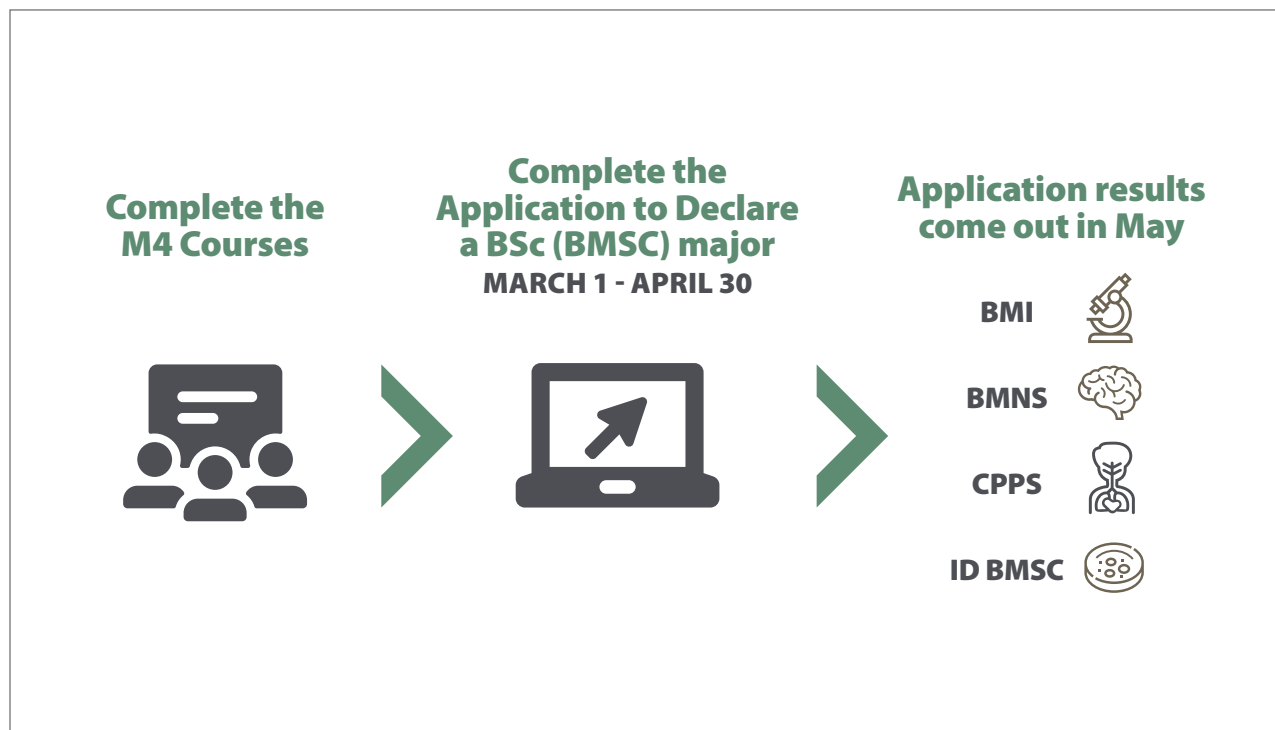
- [BMSC 200.3](#) Biomolecules
- [BMSC 207.3](#) Human Body Systems I
- [BMSC 208.3](#) Human Body Systems II
- [BMSC 210.3](#) Microbiology
- [BMSC 220.3](#) Cell Biology
- [BMSC 230.3](#) Metabolism
- [BMSC 240.3](#) Laboratory Techniques
- [CHEM 250.3](#) Introduction to Organic Chemistry

The application to declare a major is open annually from March 1st to April 30th.

In the application, you will rank your preference of majors. Once the application closes, student eligibility is checked and placement in majors is ranked if necessary.

You will be informed via your USask email of your placement at the beginning of May after you have applied for a major.





## BMSC Majors with Limited Space

An application process is used for the BMSC majors because some have limited capacity. Biomedical Neuroscience (BMNS) and the Interdisciplinary Biomedical Science (ID BMSC) majors each have limited availability (40 seats).

If student demand is greater than the major's capacity, all eligible students will be ranked by their average in the M4 courses. The top students will be accepted into the major of first choice and the remaining placed in their second choice. Note that taking courses from the ID BMSC or BMNS major requirements does not guarantee acceptance into the program



# Academic Advising

Academic advisors offer advice, guidance, and strategies regarding your academic progress and planning. We suggest you meet with a BMSC Academic Advisor once a year throughout your studies and anytime you have questions about deciding on a BMSC major, course planning, honours, or concerns about your academic experience.

Though academic advising is a collaborative process, you are ultimately responsible for monitoring and managing your own program as you progress through your degree. Academic advisors from both BMSC and Arts & Science are available to assist you with your planning and understanding of your program.

You can book an academic advising appointment on the [BMSC website](#).

## Academic Advising Appointments

How to prepare for your advising appointment:

- Write down your questions and thoughts and bring them to the appointment to ensure you gather all the information you need. Consider what you want to gain from the appointment.
- Bring a draft of your planned course timetable to map out your progress. The academic advisor can provide suggestions and review your planned major courses.
- Ensure you're familiar with your planned major and the requirements in the [program catalogue](#).
- Familiarize yourself with the [College of Arts and Science academic policies](#); you'll find helpful information about retakes, honours, average requirements etc. Write down any questions you may have about them.
- Bring your laptop/tablet or notebook to take notes during the meeting.

How to apply the information gained from an advising appointment:

- Review your notes from the appointment and highlight any important deadlines in your calendar.
- Email any follow-up questions to the academic advisor.

# Flexible Schedule Options

If you decide to complete your degree in five years instead of four, you should be aware that this might affect your ability to get into certain professional programs or graduate schools. Some non-USask medical schools, for example, require that you complete your undergraduate degree in four years. Ensure that you are aware of the admission requirements of the programs to which you may apply.

## FLEXIBILITY IN THE 2-YEAR SEQUENCE AND DEGREE PLANNING

Year two in the BMSC two-year sequence includes multiple 200-level BMSC introductory courses. You may choose to extend your 2-year sequence over three years, which results in applying for your BMSC major in 3rd year. If you are considering this option, it is recommended to book with the BMSC academic advisor to discuss sequencing options for your planned major.

Prerequisites are an important factor when determining which courses have flexibility. The following courses are critical to take in 1st year to progress with your BMSC classes.

### CRITICAL FIRST-YEAR COURSES:

The following courses should be a priority if you are planning to extend your first two years over three years:

- BIOL 120: This course is one of the prerequisites for multiple 200-level BMSC courses
- CHEM 112: This course is one of the prerequisites for BMSC 200
- BMSC 200: This course is a pre/corequisite for all other 200-level BMSC courses

## 200-LEVEL BMSC SPRING AND SUMMER COURSES AVAILABLE

You can help make your second year lighter without adding an additional year, by taking M4 core courses as spring and/or summer courses between your first and second year. The following BMSC M4 core courses are offered over spring and summer and are web-based, which allows you the flexibility to study outside of Saskatoon. Note that while these courses offered in spring and/or summer are web-based, they may include in-person exams.

USask [Flexible Learning](#) can provide more information about options for writing exams off campus, if possible. Ensure you explore this option well in advance of your exams or planned registration to check criteria eligibility and process.

BMSC M4 CORE COURSE SPRING & SUMMER OFFERINGS			
M4 COURSE	TERM OFFERED		
	SPRING TERM	SUMMER TERM	SPRING/SUMMER MULTI-TERM
BMSC 200			■
BMSC 207	■		
BMSC 208		■	
BMSC 210			■
BMSC 230			■



# Course Planning Sheet for 4-Year Majors

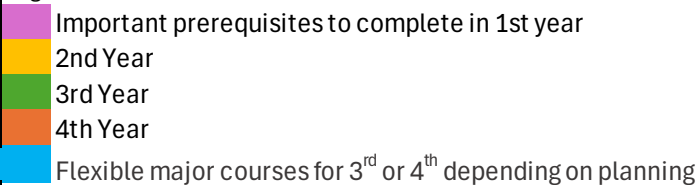
The following planning guides suggest timelines to help you plan your major-specific courses.

Courses at the 300- and 400-level tend to reach their registration capacity quickly. It is highly recommended that students carefully plan their schedule in advance and register immediately when their registration window opens to secure desired course options. Delayed registration can result in the inability to secure seats in required courses. The BMSC Academic Advisor can help plan first choice classes and secondary choice classes, so students are prepared if a class fills.

Students have 10 years from the time they start their program to complete the program requirements based on the academic year in which they started. Students can change their academic program year but cannot pick requirements from multiple academic program years.

# Biochemistry, Microbiology, and Immunology


Worksheet – for reference only, always refer to the program catalogue for official updates

3rd and 4th Year Major Course Planning: Biochemistry, Microbiology and Immunology (BMIS) 4-Year Based on the 2024-2025 calendar	
<b>M1 College Requirement (15 cu)</b> English Language Requirement (6 cu) • Indigenous Learning Requirement (3 cu) • Quantitative Reasoning Requirement (6 cu) <b>Choose 3 cu</b> MATH 110.3 MATH 125.3 <b>Choose 3 cu</b> STAT 245.3 STAT 246.3 PLSC 214.3	<b>Recommended sequencing for M4 M5:</b> Legend:  • Important prerequisites to complete in 1st year • 2nd Year • 3rd Year • 4th Year • Flexible major courses for 3 <sup>rd</sup> or 4 <sup>th</sup> depending on planning and prerequisites Review your course plans with the BMSC academic advisor and ensure you check times, prerequisites and the BMSC website for any course updates.
<b>M2 Breadth Requirement (3 cu)</b> •	
<b>M3 Cognate Requirement (21 cu)</b> BIOL 120.3 CHEM 112.3 CHEM 115.3 PHIL 140.3 <b>Choose 3 cu</b> HLST 110.3 PSY 121.3 SOC 112.3 PHYS 115.3 PHYS 117.3 or PHYS 125.3 PSY 120.3 SOC 111.3	<b>M4 Core Requirements (24 cu)</b> Must be completed before major declaration BMSC 200.3 BMSC 207.3 BMSC 208.3 BMSC 210.3 BMSC 220.3 BMSC 230.3 BMSC 240.3 CHEM 250.3
<b>M5 Major Requirements (36 cu)</b>	
BMSC 320.3 BMIS 340.3 BMIS 400.0  <b>Choose 3 cu Lab</b> BMIS 310.3 BMIS 390.3  <b>Choose 3 cu</b> BINF 151.3 BINF 351.3 CMPT 140.3 (BINF recommended)	<b>choose 15cu (at least 9cu must be at the 400-level)</b> <del>BMIS 308.3</del> BMIS 412.3 BMIS 435.3 BMIS 317.3 BMIS 417.3 BMIS 436.3 BMIS 319.3 BMIS 420.3 BMIS 450.3 BMIS 321.3 BMIS 423.3 BMIS 487.6 BMIS 325.3 BMIS 425.3 BMIS 489.6 BMIS 380.3 BMIS 430.3 BMIS 489.6 BMIS 389.3  <b>choose 9cu</b> BIOL 226.3 CMPT 451.3 FABS 430.3 BIOL 316.3 CPPS 302.3 FABS 450.3 BIOL 331.3 CPPS 303.3 NEUR 301.3 BIOL 420.3 CPPS 304.3 STAT 345.3 BIOL 436.3 CPPS 325.3 CHEM 456.3 FABS 325.3 CHEP 350.3 FABS 334.3 Any BMSC, BMIS, BIOC, MCIM course at the 300 or 400 level
<b>M6 Elective Requirement (21 cu)</b> • • •	• • •

# Biomedical Neuroscience


There is limited capacity (40 seats) in the Biomedical Neuroscience (BMNS). Students should first secure a seat in the major before completing third year courses in BMNS.

**Worksheet – for reference only, always refer to the program catalogue for official updates**

3rd and 4th Year Major Course Planning: Biomedical Neuroscience (BMNS) 4-Year	
Based on the 2024-2025 calendar	
<b>M1 College Requirement (15 cu)</b> English Language Requirement (6 cu) • • Indigenous Learning Requirement (3 cu) • Quantitative Reasoning Requirement (6 cu) <b>Choose 3 cu</b> <b>Choose 3 cu</b> MATH 110.3                      STAT 245.3 MATH 125.3                      STAT 246.3 PLSC 214.3	<b>Recommended sequencing for M4 M5:</b> <b>Legend:</b>  <ul style="list-style-type: none"> <li><span style="color: purple;">■</span> Important prerequisites to complete in 1st year</li> <li><span style="color: yellow;">■</span> 2nd Year</li> <li><span style="color: green;">■</span> 3rd Year</li> <li><span style="color: orange;">■</span> 4th Year</li> <li><span style="color: blue;">■</span> Flexible major courses for 3<sup>rd</sup> or 4<sup>th</sup> depending on planning and prerequisites</li> </ul> Review your course plans with the BMSC academic advisor and ensure you check times, prerequisites and the BMSC website for any course updates.
<b>M2 Breadth Requirement (3 cu)</b> PHIL 140.3	
<b>M3 Cognate Requirement (21 cu)</b> <span style="color: purple;">BIOL 120.3</span> PHYS 115.3 <span style="color: purple;">CHEM 112.3</span> PHYS 117.3 or PHYS 125.3 CHEM 115.3 <b>PSY 120.3</b>  <b>Choose 3 cu</b> HLST 110.3                      SOC 112.3 PSY 121.3                      SOC 111.3	
<b>M4 Core Requirements (24 cu)</b> Must be completed before major declaration <span style="color: purple;">BMSC 200.3</span> <span style="color: yellow;">BMSC 230.3</span> <span style="color: yellow;">BMSC 207.3</span> <span style="color: yellow;">BMSC 240.3</span> <span style="color: yellow;">BMSC 208.3</span> <span style="color: yellow;">CHEM 250.3</span> <span style="color: yellow;">BMSC 210.3</span> <span style="color: yellow;">BMSC 220.3</span>	
<b>M5 Major Requirements (36 cu)</b>	
<span style="color: blue;">BIOL 226.3</span> <span style="color: green;">NEUR 301.3</span> <span style="color: green;">CPPS 304.3</span> <span style="color: green;">CPPS 306.3</span> <span style="color: blue;">CPPS 325.3</span> <span style="color: green;">NEUR 350.3</span> <span style="color: blue;">NEUR 334.3</span> <span style="color: orange;">NEUR 405.3</span>  <b>Choose 3 cu Lab</b> <span style="color: green;">CPPS 331.3</span> <span style="color: green;">CPPS 308.3</span>	<b>Choose 6 cu</b> <span style="color: orange;">BIOL 430.3</span> <span style="color: orange;">NEUR 420.3</span> <span style="color: orange;">KIN 422.3</span> <span style="color: orange;">NEUR 480.3</span> <span style="color: orange;">NEUR 404.3</span> <span style="color: orange;">PSY 448.3</span>  <b>Choose 6 cu</b> <span style="color: blue;">PSY 242.3</span> <span style="color: blue;">PSY 246.3</span> <span style="color: blue;">PSY 252.3</span>
<b>M6 Elective Requirement (21 cu)</b> • • • • • • • • •	

# Cellular, Physiological, and Pharmacological Sciences


Worksheet – for reference only, always refer to the program catalogue for official updates

3rd and 4th year Major Course planning: Cellular, Physiological and Pharmacological Sciences (CPPS) 4-Year	
Based on the 2024-2025 calendar	
<b>M1 College Requirement (15 cu)</b> English Language Requirement (6 cu) • • Indigenous Learning Requirement (3 cu) • Quantitative Reasoning Requirement (6 cu) <b>Choose 3 cu</b> <b>Choose 3 cu</b> MATH 110.3                      STAT 245.3 MATH 125.3                      STAT 246.3 PLSC 214.3	<b>Recommended sequencing for M4 M5:</b> Legend:  Important prerequisites to complete in 1st year 2nd Year 3rd Year 4th Year Flexible major courses for 3 <sup>rd</sup> or 4 <sup>th</sup> depending on planning and prerequisites  Review your course plans with the BMSC academic advisor and ensure you check times, prerequisites and the BMSC website for any course updates.
<b>M2 Breadth Requirement (3 cu)</b> •	
<b>M3 Cognate Requirement (21 cu)</b> <b>BIOL 120.3</b> PHYS 115.3 <b>CHEM 112.3</b> PHYS 117.3 or PHYS 125.3 CHEM 115.3 PHIL 140.3 <b>Choose 3 cu</b> HLST 110.3                      PSY 120.3 PSY 121.3                      SOC 111.3 SOC 112.3	
<b>M4 Core Requirements (24 cu)</b> Must be completed before major declaration <b>BMSC 200.3</b> <b>BMSC 230.3</b> <b>BMSC 207.3</b> <b>BMSC 240.3</b> <b>BMSC 208.3</b> <b>CHEM 250.3</b> <b>BMSC 210.3</b> <b>BMSC 220.3</b>	
M5 Major Requirements (36 cu)	
<b>BIOL 226.3</b> <b>CPPS 302.3</b> <b>CPPS 303.3</b> <b>CPPS 304.3</b> <b>CPPS 325.3</b>  <b>Choose 3 cu</b> <b>CPPS 306.3</b> <b>CPPS 307.3</b>  <b>Choose 3 cu Lab</b> <b>CPPS 331.3</b> <b>CPPS 308.3</b>	<b>Choose 9 cu</b> <b>BMSC 320.3</b> <b>CPPS 330.3</b> <b>BMIS 319.3</b> <b>NEUR 301.3</b> <b>BMIS 321.3</b> <b>NEUR 350.3</b> <b>CHEP 350.3</b> <b>PATH 205.3</b> <b>CPPS 310.3</b> <b>TOX 300.3</b>  <b>Choose 6 cu</b> <b>CPPS 337.3</b> or <b>CPPS 417.3</b> <b>CPPS 400.3</b> <b>CPPS 406.3</b> <b>CPPS 401.3</b> <b>CPPS 407.3</b> <b>CPPS 402.3</b> <b>CPPS 415.3</b> <b>CPPS 403.3</b> <b>NEUR 404.3</b> <b>CPPS 405.3</b> <b>NEUR 480.3</b>
<b>M6 Elective Requirement (21 cu)</b> • • • • • • • • •	

# Interdisciplinary Biomedical Sciences

There is limited capacity (40 seats) in the Interdisciplinary Biomedical Sciences (ID BMSC).

**Worksheet – for reference only, always refer to the program catalogue for official updates**

3rd and 4th Year Major Course Planning: Interdisciplinary Biomedical Sciences 4-Year	
Based on the 2024-2025 calendar	
<b>M1 College Requirement (15 cu)</b> English Language Requirement (6 cu) • • Indigenous Learning Requirement (3 cu) • Quantitative Reasoning Requirement (6 cu) <b>Choose 3 cu</b> <b>Choose 3 cu</b> MATH 110.3                      STAT 245.3 MATH 125.3                      STAT 246.3 PLSC 214.3	<b>Recommended sequencing for M4 M5:</b>  Important prerequisites to complete in 1st year 2nd Year 3rd Year 4th Year Flexible major courses for 3 <sup>rd</sup> or 4 <sup>th</sup> depending on planning and prerequisites  Review your course plans with the BMSC academic advisor and ensure you check times, prerequisites and the BMSC website for any course updates.
<b>M2 Breadth Requirement (3 cu)</b> •	
<b>M3 Cognate Requirement (21 cu)</b> <b>BIOL 120.3</b> PHYS 115.3 <b>CHEM 112.3</b> PHYS 117.3 or PHYS 125.3 CHEM 115.3 PHIL 140.3 <b>Choose 3 cu</b> HLST 110.3                      PSY 120.3 PSY 121.3                      SOC 111.3 SOC 112.3	
<b>M4 Core Requirements (24 cu)</b> Must be completed before major declaration <b>BMSC 200.3</b> <b>BMSC 230.3</b> <b>BMSC 207.3</b> <b>BMSC 240.3</b> <b>BMSC 208.3</b> <b>CHEM 250.3</b> <b>BMSC 210.3</b> <b>BMSC 220.3</b>	
<b>M5 Major Requirements (36 cu)</b>	
<b>BMSC 320.3</b> <b>CPPS 304.3</b> <b>BMSC 405.3</b> <b>CPPS 337.3</b> <b>BMIS 321.3</b> <b>PATH 205.3</b> <b>CHEP 350.3</b>	<b>Within the following requirements, at least 6cu must be at the 400-level</b>  <b>Choose 6cu from the following:</b> ACB 300 level, 400-level CPPS 300 level, 400-level NEUR 300 level, 400-level PHPY 300 level, 400-level  <b>Choose 6cu from the following:</b> BIOC 300 level, 400-level BMIS 300 level, 400-level BMSC 300 level, 400-level MCIM 300-level, 400-level
<b>Choose 3 cu Lab</b> <b>BMIS 310.3</b> <b>BMIS 340.3</b> <b>BMIS 390.3</b> <b>CPPS 331.3</b> <b>CPPS 308.3</b>	
<b>M6 Elective Requirement (21 cu)</b> • • •	





# Links to Important Documents

- The [A&S Student Handbook](#) is helpful for first-year students. You will find information about important USask policies, an overview of your responsibilities as a student, campus supports, and additional information.
- Please become familiar with USask [academic courses policies](#).
- [Academic policies](#) for A&S are found in the program catalogue. These policies govern the overall degree and program. Any questions about policies can be directed to the [Arts and Science undergraduate student advising office](#).
- It is important that you know the [class registration and withdrawal deadlines](#) so you are aware when you can add or drop a course.
- USask academic integrity information can be [found here](#).
- Information on student conduct and appeals is [found here](#).

# Registration preparation

1. Review the program catalogue for your major.
2. Determine which courses remain to be completed and prioritize these courses for the upcoming year. You are encouraged to book an academic advising appointment to review your registration plan.
3. Create a draft timetable and search the courses based on their current availability. It is important to be aware that course times and offerings are never guaranteed and are subject to change, but this initial planning helps to create a framework to review later. Note that courses for the upcoming Fall and Winter Terms are searchable each year starting in May, and for the upcoming Spring and Summer Terms each year starting in January.
4. Ensure no time conflicts exist by rechecking course times before registration opens.
5. Plan back-up courses since 300 and 400-level courses tend to fill quickly.

Registration for Fall and Winter term classes opens in June. Each student is assigned a registration window based on their credit count which aligns to a specific year of study. More details can be found on the [USask registration overview page](#).

## BMSC Course Updates

You will find all current information regarding course and prerequisite changes, major-specific announcements, and details about honours degrees for BMSC students on the [BMSC webpage](#).



# Research Opportunities

USask biomedical sciences offers research opportunities through coursework, honours courses, and summer research.

## Experiential Learning Courses:

Courses that provide hands-on learning through Course-Based Undergraduate Research Experience (CURE)

### **BMIS 380.3: Team Based Experimental Microbiology**

This is a Course-based Undergraduate Research Experience (CURE) course. Students will be provided with a collection of results and observations from suitable experimental systems provided by local faculty. In teams of up to four, students will be coached in developing a “next step” hypothesis and designing protocols to test their hypothesis. Once the experiment has been designed and approved, each team will determine reagents required, prepare necessary reagents, set up equipment, carry out the experiments, analyze the results and prepare a formal journal-style report that describes the experimental purpose, the methods, the results and the conclusions.

### **CPPS 331.3: Methods in Cell and Developmental Biology**

This hands-on course provides students with experience in multiple lab techniques common to cell biology using eukaryotic cells which includes tissue culture and fluorescence microscopy. Teams of students are guided to apply the scientific method to create their own hypotheses and experiment(s) using mammalian cells. This provides an authentic research experience and allows students to develop skills in tissue culture techniques, collaborative problem solving, analysis of original data, and strengthening scientific reporting skills.

## Honours Undergraduate Research Courses:

The honours programs in CPPS, BMIS, BMNS and ID BMSC each include a specific undergraduate research course that provides an opportunity to work on a research project with guidance from a faculty member.

### **CPPS 432.6, BMIS 489.6, NEUR 432.6: Honours Undergraduate Research Courses**

Students secure their supervisor who will oversee their research project. You can learn about each individual course and their individual requirements on the BMSC website.

You will find more details about applying for Honours, eligibility, and important timelines for securing a supervisor on the [BMSC website](#).

## Summer Research Opportunities:

Information on summer research opportunities is sent to students via PAWS announcements at the beginning of the winter term. Please check your inbox for valuable information. Reach out to BMSC faculty who are doing research you find interesting early in the school year to find out about any opportunities that you can apply for.



# Getting Involved

## BMSC Welcome Week Event

Come join us at the “Welcome to the BMSC Program” event in September geared for first and second year BMSC students. During this event, you’ll have an opportunity to meet the BMSC department heads, undergraduate chairs, academic advisors, and student groups. We’ll provide information about the majors offered in the BMSC program and how to declare a major. This event is an informative and wonderful opportunity to connect with fellow BMSC students and gain valuable insights!

## BMSC Student Groups

The BMSC student groups help to build a sense of community that can enhance your university experience. These groups host events like research nights, social gatherings, graduation parties and clothing sales. Consider becoming a member of a student group!

- **Anatomy, Physiology and Pharmacology student Association (APPSA) -**  
[appsa@ussu.ca](mailto:appsa@ussu.ca) Instagram: usaskappsa
- **Biochemistry, Microbiology and Immunology Student Association (BMISA) -**  
[bmisausask@outlook.com](mailto:bmisausask@outlook.com) Instagram: usask.bmisa
- **Neuroscience Student’s Society (NSS) -**  
[nss@ussu.ca](mailto:nss@ussu.ca) Instagram: usask\_nss