

SOC APPROVALS

July 9, 2025

The following proposals were approved at the July 9, 2025 meeting of the Subcommittee on Undergraduate Academic Courses (SOC).

IVEY BUSINESS SCHOOL

Course Introduction – Effective September 1, 2025, the following course be introduced:

BUSINESS ADMINISTRATION 4472A/B FUNDAMENTALS OF AI FOR BUSINESS

(Short Title: Fundamentals of AI)

Course Description

Course provides a comprehensive exploration of Artificial Intelligence's (AI) impact on society and organizations. From theoretical perspectives to practical applications, students gain hands-on experience in AI techniques, navigate its promises and pitfalls, analyze its implications for the future of work, and delve into special topics shaping AI's role in organizations.

Extra Information: 10 classes of 160 mins each delivered once a week.
Course Weight: 0.50

Course Introduction – Effective September 1, 2025, the following course be introduced:

BUSINESS ADMINISTRATION 4482A/B COMPETING TO LEAD: STRATEGIC EXCELLENCE IN BUSINESS CASE COMPETITIONS

(Short Title: Competing to Lead)

Course Description

Competing to Lead helps students develop the strategic insight, executive presence, and communication tools needed to deliver polished, persuasive presentations in high-stakes environments. Students will learn how to perform under tight deadlines, deliver high-impact recommendations, and adapt their messaging to diverse audiences – from corporate executives to international judging panels.

Extra Information: 10 classes of 180 mins each delivered once a week.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**BUSINESS ADMINISTRATION 4424A/B
SUBSTANTIATING SUSTAINABILITY: NAVIGATING THE CHANGING
LANDSCAPE OF CORPORATE GREENWASHING, ~~TRANSPARENCY, AND~~
~~REPORTING~~**

(Short Title: Substantiating Sustainability)

Course Description

As expectations, regulations, and scrutiny around sustainability claims are changing rapidly, this course will prepare students to be leaders in this complex landscape. We will draw on cutting-edge research on greenwashing and how to defeat it to understand the new and complex environment of corporate transparency and reporting.

Extra Information: 20 classes of 80 minutes each delivered twice a week.
Course Weight: 0.50

Administrative Note: This revision was made administratively following the June 4, 2025 meeting of SOC and was presented to the committee for information at the July 9, 2025 meeting.

FACULTY OF ENGINEERING

DEPARTMENT OF CHEMICAL AND BIOCHEMICAL ENGINEERING

Course Introduction – Effective September 1, 2025, the following course be introduced:

CHEMICAL AND BIOCHEMICAL ENGINEERING 4430A/B SELECTED TOPICS IN BIOCHEMICAL ENGINEERING

(Short Title: Selec. Topics in Biochem. Eng.)

Course Description

The course deals with topics of current interest in Biochemical Engineering. Topics and course outline will be available at the time of registration.

Prerequisite(s): Completion of second year of the Chemical Engineering program.

Extra Information: 3 lecture hours, 1 tutorial hour.
Course Weight: 0.50

FACULTY OF HEALTH SCIENCES

BRESCIA SCHOOL OF FOOD AND NUTRITIONAL SCIENCES

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 1070A/B INTRODUCTORY HUMAN NUTRITION

Course Description

An introductory study of food and nutrition, with a particular emphasis on nutrient sources, physiological roles, including dietary requirements, and impact on health.

Antirequisite(s): Foods and Nutrition 2070A/B ~~or the former Foods and Nutrition 1021 or the former Foods and Nutrition 1030E or the former Foods and Nutrition 2121.~~

Extra Information: 3 lecture hours. Grade 11 (or higher) Biology and Chemistry are highly recommended as preparation for this course. **Cross-listed with Foods and Nutrition 2070A/B.**

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 1241A/B LIFECYCLE NUTRITION

Course Description

A study of nutritional requirements from conception to senescence. Discussion of food habits and nutrition intervention programs in relation to the stages of the lifecycle.

Antirequisite(s): Foods and Nutrition 2241A/B, ~~Foods and Nutrition 2245A/B.~~

Prerequisite(s): Foods and Nutrition 1070A/B or Foods and Nutrition 2070A/B ~~or the former Foods and Nutrition 1021 or the former Foods and Nutrition 1030E or the former Foods and Nutrition 2121.~~

Extra Information: 3 lecture hours. **Cross-listed with Foods and Nutrition 2241A/B.**

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2070A/B
FUNDAMENTALS OF HUMAN NUTRITION**

Course Description

An introductory study of food and nutrition, with a particular emphasis on the role of diet and nutrients in supporting health and preventing the development of nutritional deficiencies and disease. Students have the opportunity to independently explore and conduct an analysis of a nutrient-health relationship.

Antirequisite(s): Foods and Nutrition 1070A/B, ~~the former Foods and Nutrition 1021, the former Foods and Nutrition 1030E or the former Foods and Nutrition 2121.~~

Extra Information: 3 lecture hours. Grade 11 (or higher) Biology and Chemistry are highly recommended as preparation for this course. **Cross-listed with Foods and Nutrition 1070A/B.**

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2140A/B
CULINARY NUTRITION**

Course Description

An introduction to food principles and preparation with a focus on food skills, food literacy, and nutrition. Application of concepts through hands-on activities in a food laboratory and exploring techniques to create a variety of foods. Emphasis is placed on understanding the connection between food, health, and practical culinary methods.

Antirequisite(s): The former Foods and Nutrition 2130 and the former Foods and Nutrition 2232.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B.**

Extra Information: 3 lecture hours and 3 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2142A/B
PRINCIPLES OF FOOD SCIENCE**

Course Description

An examination of the physical structure, chemical composition, and nutritive value of foods, focusing on food science and processing techniques. Emphasis is placed on how physical and chemical conditions, ingredient proportions, and manipulative methods affect final products, alongside discussions on sensory qualities and food economics.

Antirequisite(s): The former Foods and Nutrition 2232.

Prerequisite(s): Foods and Nutrition 1070A/B or Foods and Nutrition 2070A/B; Foods and Nutrition 1241A/B or Foods and Nutrition 2241A/B; Chemistry 1301A/B; Chemistry 1302A/B; ~~and~~ Foods and Nutrition 2140A/B.

Extra Information: 3 lecture hours, 3 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2230A/B
INTEGRATED HUMAN NUTRITION**

Course Description

An integrative study of nutrition at the intermediate level. This course explores the roles and functions of nutrients at the organ and system levels under various physiological conditions.

Prerequisite(s): Foods and Nutrition 1070A/B or Foods and Nutrition 2070A/B ~~the former Foods and Nutrition 1030E;~~ Foods and Nutrition 1241A/B or Foods and Nutrition 2241A/B; ~~and~~ Physiology 1021 or Physiology 2130.

Corequisite(s): Biochemistry 2288A or Biochemistry 2280A.

Extra Information: 3 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2241A/B
NUTRITION THROUGHOUT THE HUMAN LIFE CYCLE**

Course Description

A study of nutritional requirements from conception to senescence. Discussion of food habits and nutrition intervention programs in relation to life-cycle.

Antirequisite(s): Foods and Nutrition 1241A/B, ~~Foods and Nutrition 2245A/B.~~

Prerequisite(s): Foods and Nutrition 1070A/B or **Foods and Nutrition 2070A/B** ~~the former Foods and Nutrition 1021, or the former Foods and Nutrition 1030E or the former Foods and Nutrition 2121.~~

Extra Information: 3 lecture hours. **Cross-listed with Foods and Nutrition 1241A/B.**

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 2266F/G
NUTRITION EDUCATION AND COMMUNICATION**

Course Description

An analysis of behaviour change and communication theory in the context of nutrition education.

~~**Antirequisite(s):** Human Ecology 2266F/G.~~

Prerequisite(s): Foods and Nutrition 1070A/B or **Foods and Nutrition 2070A/B** ~~the former Foods and Nutrition 1030E or the former Foods and Nutrition 1021.~~

Pre- or Corequisite(s): Foods and Nutrition 1241A/B or Foods and Nutrition 2241A/B ~~or Foods and Nutrition 2245A/B.~~

Extra Information: 3 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3310A/B
FOOD PRODUCT DEVELOPMENT**

Course Description

Examines the food product development process from concept to market. Discusses challenges, importance to the food industry, methods and techniques as well as new advancements and developments. Students will complete a product development project.

Prerequisite(s): Foods and Nutrition 2140A/B or the former Foods and Nutrition 2130, or the former Foods and Nutrition 2232.

Extra Information: 3 lecture hours, 3 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3342A/B
ADVANCED FOOD SCIENCE**

Course Description

Selected processing methods and their effect on the nutritive value and acceptability of a product; properties and uses of food carbohydrates, fats and enzymes used in the food industry.

Prerequisite(s): Chemistry 2003A/B or Chemistry 2213A/B; ~~and~~ Foods and Nutrition 2142A/B or the former Foods and Nutrition 2232.

Extra Information: 3 lecture hours, 3 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3344A/B
NUTRITIONAL ASSESSMENT**

Course Description

A critical survey of the methods used in the assessment of food and nutrient intakes and nutritional status of groups and individuals, in both health and disease.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B;** ~~and Foods and Nutrition 1241A/B or the former Foods and Nutrition 1030E and Foods and Nutrition 2241A/B;~~ ~~and Foods and Nutrition 2230A/B.~~ Registration in the Honours Specialization in Nutrition and Dietetics module.

Extra Information: 3 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3351A/B
CLINICAL NUTRITION I**

Course Description

Introduction to the profession of nutrition and dietetics, medical nutrition therapy and the nutrition care process including modifications of regular diets to meet special nutritional needs, menu planning and documentation of nutritional care.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B;** ~~and Foods and Nutrition 1241A/B or the former Foods and Nutrition 1030E and Foods and Nutrition 2241A/B;~~ ~~and Foods and Nutrition 2230A/B.~~ Registration in the Honours Specialization in Nutrition and Dietetics. **Pre- or Corequisite(s):** Foods and Nutrition 3344A/B.

Extra Information: 3 lecture hours, 3 tutorial hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3355A/B
AGRICULTURE AND FOOD SYSTEMS: CRITICAL CONVERSATIONS**

Course Description

This course will cover the processes and practices associated with food production in Canada. Appreciation of the whole food system (i.e., production, transformation, distribution, access, consumption, and food waste management), and the multiple aspects of sustainability, will provide a solid foundation for evidence-based conversations in future professional practice.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B;** ~~and Foods and Nutrition 1241A/B or the former Foods and Nutrition 1030E and Foods and Nutrition 2241A/B.~~

Extra Information: 3 hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3361F/G
FUNDAMENTALS OF COMMUNITY NUTRITION**

Course Description

The role of nutrition at the local, regional, national and international levels. Emphasis will be placed on processes involved in planning and evaluating nutrition interventions and policy efforts to support population health.

Antirequisite(s): The former Foods and Nutrition 3361A/B.

Prerequisite(s): Foods and Nutrition 1070A/B or **Foods and Nutrition 2070A/B** ~~the former Foods and Nutrition 1030E;~~ **and** Foods and Nutrition 1241A/B or Foods and Nutrition 2241A/B; ~~Foods and Nutrition 2266F/G or Human Ecology 2266F/G.~~

Extra Information: 3 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3364A/B
NUTRITION, AGING AND HEALTH**

Course Description

A study of the relationships among nutrition, aging and health including the current and projected aged Canadian population, their nutritional needs, limitations (economic, physical, behavioral, etc) to meeting those needs, nutrition/age related health issues and program/services available or needed.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B;** ~~and Foods and Nutrition 1241A/B, or the former Foods and Nutrition 1030E and~~ **or** Foods and Nutrition 2241A/B ~~or Foods and Nutrition 2245A/B.~~

Pre-or Corequisite(s): Foods and Nutrition 2230A/B.

Extra Information: 3 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 3373A/B
NUTRITION AND PHYSICAL ACTIVITY**

Course Description

An integrative study of physical activity and its impact on health and performance. This course will emphasize the role of nutrition to support health, fitness and performance goals in a variety of populations and explore current trends in sport nutrition.

Antirequisite(s): Foods and Nutrition 3339A/B, Kinesiology 3339A/B.

Prerequisite(s): Foods and Nutrition 1070A/B **or Foods and Nutrition 2070A/B;** ~~and Foods and Nutrition 1241A/B, or the former Foods and Nutrition 1030E and~~ **or** Foods and Nutrition 2241A/B; **;** Physiology 1021 or Physiology 2130; ~~and~~ **;** Biochemistry 2280A or Biochemistry 2288A.

Extra Information: 3 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 3380A/B

~~POLICY DEVELOPMENT AND ADVOCACY~~ **FOOD LAW**

Course Description

This course examines ~~policy development in government~~ **food law** and the strategies and actions taken by civil society, **the business sector, and to influence** government in the making and implementation of policy and programs. The focus will be on ~~policies~~ **laws** affecting foods and nutrition in Canada, but other areas will also be considered.

Pre-or Corequisite(s): ~~Human Ecology 2266F/G or Foods and Nutrition 2266F/G, and Foods and Nutrition 3361F/G or the former Foods and Nutrition 3361A/B.~~

Extra Information: 3 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 3400A/B

CULTURE AND FOOD

Course Description

Introduction to the study of social, cultural and communication factors which influence food habits of various ethnic groups that may differ from typical North-American diets. Variations in basic food preparation and culinary techniques will be explored (in the food laboratories).

Prerequisite(s): **Foods and Nutrition 2140A/B or the former** Foods and Nutrition 2130 or **the former** Foods and Nutrition 2232.

Extra Information: 3 lecture hours and 3 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 3450F/G

~~FOOD FOR THOUGHT~~ **FOOD AND PHILOSOPHY**

Course Description

An introductory course in philosophy of food that engages students to think and write critically about local and global ideas about food that impact human ecology and dietetic practice.

Prerequisite(s): Foods and Nutrition 1070A/B ~~or the former Foods and Nutrition 1030E or the former Foods and Nutrition 1021~~ **or Foods and Nutrition 2070A/B;** ~~and~~ Foods and Nutrition 1241A/B or Foods and Nutrition 2241A/B.

Extra Information: 3 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

FOODS AND NUTRITION 4410A/B

GLOBAL POLICIES IN FOOD SAFETY

Course Description

Food safety policy is examined at local, national, international, and global levels. Through case studies, in-class discussions and activities; the influence of food laws, trading policies, litigation, advocacy efforts, economics and politics in shaping food policy are explored to encourage critical thinking and promote inquiry and analysis.

Pre-or Corequisite(s): **Foods and Nutrition 2140A/B and Foods and Nutrition 2142A/B, or the former** Foods and Nutrition 2232.

Extra Information: 3 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 4411F/G
SENIOR RESEARCH PROJECT**

Course Description

Students will develop a research proposal and analyze and interpret secondary data (qualitative or quantitative).

Antirequisite(s): Human Ecology 4411F/G.

Prerequisite(s): Foods and Nutrition 2032A/B and Foods and Nutrition 3032A/B, or the former Foods and Nutrition 3390W/X. Registration in an Honours Specialization in Foods and Nutrition or an Honours Specialization in Nutrition and Dietetics.

Extra Information: 3 lecture/seminar hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**FOODS AND NUTRITION 4420A/B
SENSORY EVALUATION OF FOODS**

Course Description

Covers principles of sensory and consumer science including test methods (discrimination, affective and descriptive tests), questionnaire design, experimental design, statistical considerations and decision analysis. Examines sensory properties of foods through lab experiments and projects.

Prerequisite(s): Foods and Nutrition 3342A/B. **Pre-or Corequisite(s):** Foods and Nutrition 2032A/B and Foods and Nutrition 3032A/B, or the former Foods and Nutrition 3390W/X.

Extra Information: 2 lecture hours, 2 laboratory hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

HUMAN ECOLOGY 3033A/B

~~DESIGN FOR HUMAN NEEDS~~ **ART IN DAILY LIVING**

Course Description

A survey of ~~both visual and the forms,~~ functional **s and principles of art applied to everyday life, including** ~~aspects of the design of~~ shelter, furnishings, clothing and consumer products. ~~Physical needs, social/psychological factors, as well as technology, e~~ Environmental, ethical, ~~and~~ economic, and ~~concerns~~ **individual needs** will be addressed.

Prerequisite(s): ~~Human Ecology 2222A/B or the former Human Ecology 2222F/G.~~ **Registration in third year or above.**

Extra Information: 3 lecture/studio hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

HUMAN ECOLOGY 3343A/B

~~CONSUMER~~ **PERSONAL** ~~ECONOMICS & RESOURCE MANAGEMENT~~

Course Description

An interdisciplinary approach to **historical and current foundations of economics.** ~~the A~~ study of the roles and responsibilities of ~~consumer the individual, marketer, business sector~~ and government in the market-place. Emphasis on ~~consumer~~ **personal** behaviour and management of human, economic, and environmental resources.

~~Pre or Corequisite(s): Human Ecology 2222A/B.~~ **Prerequisite(s): Registration in third year or above.**

Extra Information: 3 lecture hours.

Course Weight: 0.50

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN FAMILY STUDIES AND HUMAN DEVELOPMENT - BA (HUMAN ECOLOGY)

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% ~~with no mark below 60%~~ in the ~~se~~ following **2.0** principal courses, **with no mark less than 60%:**

- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses.

Module

9.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

1.5 courses: Family Studies and Human Development 2300F/G, Family Studies and Human Development 3325A/B; Psychology 2850A/B or Sociology 2205A/B.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

1.0 course from: any of the Family Studies and Human Development 2000-level courses.

1.0 course from: any of the Family Studies and Human Development 3000-level courses.

1.5 courses from: any Family Studies and Human Development 2000-level or above course, Human Ecology 2222A/B, Psychology 2042A/B, Psychology 2043A/B, Psychology 2054A/B, Psychology 2620A/B, or Sociology 2267A/B.

1.5 courses from: any Family Studies and Human Development 3000- or 4000-level course, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B, Sociology 3341F/G.

1.5 courses: Family Studies and Human Development 3230A/B, Family Studies and Human Development 4220A/B, Family Studies and Human Development 3352A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

SPECIALIZATION IN FAMILY STUDIES AND HUMAN DEVELOPMENT - BA (HUMAN ECOLOGY)

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 60% ~~with no mark below 60%~~ in the following **2.0** principal courses, **with no mark less than 60%:**

- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses.

Module

9.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

2.5 courses: Family Studies and Human Development 2300F/G, Family Studies and Human Development 3230A/B, Family Studies and Human Development 3325A/B, Family Studies and Human Development 3352A/B; Psychology 2850A/B or Sociology 2205A/B.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

1.0 course from: any of the Family Studies and Human Development 2000-level courses.

1.0 courses from: any of the Family Studies and Human Development 3000-level courses.

2.0 courses from: any Family Studies and Human Development (formerly Family Studies) 2000-level or above course, Human Ecology 2222A/B, Psychology 2042A/B, Psychology 2043A/B, Psychology 2054A/B, Psychology 2620A/B, Sociology 2267A/B.

1.5 courses from: any Family Studies and Human Development 3000- or 4000-level course, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B, Sociology 3341F/G.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN FAMILY STUDIES AND HUMAN DEVELOPMENT - BA (HUMAN ECOLOGY)

Admission Requirements

Completion of first-year requirements. ~~including~~ **Students must have no mark less than 60% in the following 2.0 principal courses:**

- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses; ~~and~~ **or** 1.0 from Psychology 1000-level courses, ~~with a mark of at least 60% in each of these courses.~~

Module

6.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

1.5 courses: Family Studies and Human Development 2300F/G, Family Studies and Human Development 3325A/B, Family Studies and Human Development 3352A/B.

0.5 course from: Family Studies and Human Development 2245A/B Family Studies and Human Development 2260A/B or Family Studies and Human Development 2265A/B.

1.0 course from: any of the Family Studies and Human Development 2000-level courses.

1.0 course from: any of the Family Studies and Human Development 3000-level courses.

1.5 courses from: any Family Studies and Human Development 2000-level or above courses, Human Ecology 2222A/B, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B, Psychology 2042A/B, Psychology 2043A/B, Psychology 2054A/B, Psychology 2620A/B, Sociology 2267A/B, Sociology 3341F/G.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN FAMILY STUDIES AND HUMAN DEVELOPMENT - BSC (HUMAN ECOLOGY)

Admission Requirements

Completion of first-year requirements with no failures, ~~and~~ **Students must have** an average of at least 70% in the following **4.0** principal courses, with no mark less than 60%:

- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses;
- Chemistry 1301A/B and Chemistry 1302A/B;
- Foods and Nutrition 1070A/B **(or Foods and Nutrition 2070A/B)** and Foods and Nutrition 1241A/B **(or Foods and Nutrition 2241A/B)**;

Module

9.0 courses:

1.0 course: Family Studies and Human Development 2300F/G; Psychology 2850A/B or Sociology 2205A/B.

1.5 courses: Chemistry 2003A/B, Physiology 1021.

1.5 courses: Foods and Nutrition 2230A/B, Foods and Nutrition 2140A/B, Foods and Nutrition 2142A/B.

3.0 courses: Foods and Nutrition 2266F/G, Foods and Nutrition 3361F/G, Foods and Nutrition 3364A/B, Foods and Nutrition 3373A/B, Foods and Nutrition 3380A/B, Foods and Nutrition 3450F/G.

2.0 courses: Human Ecology 2222A/B, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

**SPECIALIZATION IN FAMILY STUDIES AND HUMAN DEVELOPMENT - BSC
(HUMAN ECOLOGY)**

Admission Requirements

Completion of first-year requirements with no failures, ~~and~~ **Students must have** an average of at least 65% in the following **4.0** principal courses, with no mark less than 60%:

- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses;
- Chemistry 1301A/B and Chemistry 1302A/B;
- Foods and Nutrition 1070A/B **(or Foods and Nutrition 2070A/B)** and Foods and Nutrition 1241A/B **(or Foods and Nutrition 2241A/B)**;

Module

9.0 courses:

1.0 course: Family Studies and Human Development 2300F/G; Psychology 2850A/B or Sociology 2205A/B.

1.5 courses: Chemistry 2003A/B, Physiology 1021.

1.5 courses: Foods and Nutrition 2140A/B, Foods and Nutrition 2142A/B, Foods and Nutrition 2230A/B.

3.0 courses: Foods and Nutrition 2266F/G, Foods and Nutrition 3361F/G, Foods and Nutrition 3364A/B, Foods and Nutrition 3373A/B, Foods and Nutrition 3380A/B, Foods and Nutrition 3450F/G.

2.0 courses: Human Ecology 2222A/B, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

MINOR IN FAMILY STUDIES AND HUMAN DEVELOPMENT

Admission Requirements

Completion of first-year requirements. ~~including~~ **Students must have no mark less than 60% in the following 2.0 principal courses:**

- 1.0 from Family Studies and Human Development 1000-level courses
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses, ~~with a mark of at least 60% in each of these courses.~~

Module

4.0 courses:

1.0 course from: any of the Family Studies and Human Development 2000-level courses.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

1.0 course: Family Studies and Human Development 3325A/B, Family Studies and Human Development 3352A/B.

1.5 courses from: any Family Studies and Human Development 2000- or 3000-level courses, Human Ecology 2222A/B, Human Ecology 3033A/B, Human Ecology 3338A/B, Human Ecology 3343A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN NUTRITION AND FAMILIES - BA (HUMAN ECOLOGY)

This module, appropriate for (but not exclusive to) those wishing to go on to a degree within the Faculty of Education, combines coursework from Food and Nutritional Sciences and Family Studies and Human Development. This program may qualify graduates for the designation of Professional Home Economist (P.H.Ec.) post-graduation.

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% ~~with no mark below 60%~~ in the following **3.0** principal courses, **with no mark less than 60%:**

- Foods and Nutrition 1070A/B **(or Foods and Nutrition 2070A/B)** and Foods and Nutrition 1241A/B **(or Foods and Nutrition 2241A/B);**
- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses.

Module

9.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

1.5 courses: Family Studies and Human Development 2300F/G; Psychology 2850A/B or Sociology 2205A/B, Family Studies and Human Development 3352A/B.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

0.5 course from: any Family Studies and Human Development course at the 2000-, 3000-, or 4000-level.

0.5 course from: Human Ecology 3033A/B, Human Ecology 3343A/B, Human Ecology 3338A/B, Psychology 2042A/B, Psychology 2043A/B, Psychology 2620A/B, Psychology 2054A/B or Sociology 2142A/B.

1.5 courses from: Foods and Nutrition 2140A/B, Foods and Nutrition 3400A/B, Foods and Nutrition 2266F/G.

2.5 courses from: Foods and Nutrition 3310A/B, Foods and Nutrition 3361F/G, Foods and Nutrition 3380A/B, Foods and Nutrition 3450F/G, Human Ecology 2222A/B.

1.5 courses: Family Studies and Human Development 3230A/B, Family Studies

and Human Development 3325A/B, Family Studies and Human Development 4220A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

SPECIALIZATION IN NUTRITION AND FAMILIES - BA (HUMAN ECOLOGY)

This module, appropriate for (but not exclusive to) those wishing to go on to a degree within the Faculty of Education, combines coursework from Food and Nutritional Sciences and Family Studies and Human Development. This program may qualify graduates for the designation of Professional Home Economist (P.H.Ec.) post-graduation.

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 60% ~~with no mark below 60%~~ in the following **3.0** principal courses, **with no mark less than 60%**:

- Foods and Nutrition 1070A/B **(or Foods and Nutrition 2070A/B)** and Foods and Nutrition 1241A/B **(or Foods and Nutrition 2241A/B)**;
- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and~~ **or** 1.0 from Psychology 1000-level courses.

Module

9.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

2.5 courses: Family Studies and Human Development 2300F/G; Psychology 2850A/B or Sociology 2205A/B; Family Studies and Human Development 3230A/B; Family Studies and Human Development 3325A/B, Family Studies and Human Development 3352A/B.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

0.5 course from: any Family Studies and Human Development course at the 2000-, 3000-, or 4000-level.

2.5 courses from: Foods and Nutrition 3310A/B, Foods and Nutrition 3361F/G, Foods and Nutrition 3380A/B, Foods and Nutrition 3450F/G, Human Ecology 2222A/B.

1.0 course from: Human Ecology 3033A/B, Human Ecology 3343A/B, Human Ecology 3338A/B, Psychology 2042A/B, Psychology 2043A/B, Psychology 2620A/B, Psychology 2054A/B or Sociology 2142A/B.

1.5 courses: Foods and Nutrition 2140A/B, Foods and Nutrition 3400A/B, Foods and Nutrition 2266F/G.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN NUTRITION AND FAMILIES - BA (HUMAN ECOLOGY)

This module, appropriate for (but not exclusive to) those wishing to go on to a degree within the Faculty of Education, combines coursework from Food and Nutritional Sciences and Family Studies and Human Development. This program may qualify graduates for the designation of Professional Home Economist (P.H.Ec.) post-graduation.

Admission Requirements

Completion of first-year requirements. **including Students must have no mark less than 60% in the following 3.0 principal courses:**

- Foods and Nutrition 1070A/B **(or Foods and Nutrition 2070A/B)** and Foods and Nutrition 1241A/B **(or Foods and Nutrition 2241A/B)** ~~or~~
- 1.0 from Family Studies and Human Development 1000-level courses;
- 1.0 from Sociology 1000-level courses, ~~and or~~ 1.0 from Psychology 1000-level courses, ~~with a mark of at least 60% in each of these courses.~~

Module

6.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

1.5 courses: Family Studies and Human Development 2300F/G, Family Studies and Human Development 3325A/B, Family Studies and Human Development 3352A/B.

0.5 course from: Family Studies and Human Development 2245A/B, Family Studies and Human Development 2260A/B, or Family Studies and Human Development 2265A/B.

0.5 course from: any Family Studies and Human Development course at the 2000, 3000, or 4000-level.

1.5 courses: Foods and Nutrition 2140A/B, Foods and Nutrition 3400A/B, Foods and Nutrition 2266F/G.

1.0 course from: Foods and Nutrition 3310A/B, Foods and Nutrition 3361F/G, Foods and Nutrition 3380A/B, Foods and Nutrition 3450F/G, Human Ecology 2222A/B.

0.5 course from: Psychology 2042A/B, Psychology 2043A/B, Psychology 2620A/B, Human Ecology 3033A/B, Human Ecology 3343A/B, Human Ecology 3338A/B, Psychology 2054A/B or Sociology 2142A/B, Sociology 3341F/G, or any Family Studies and Human Development course at the 2000, 3000, or 4000-level (not previously selected).

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN FAMILIES AND COMMUNITIES - BA (HUMAN ECOLOGY)

Academic Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in these **2.0** principal courses, **with no mark less than 60%: 1.0 from Sociology 1000-level courses,**

- 1.0 from Family Studies and Human Development 1000-level courses;
~~and~~
- 1.0 from ~~Psychology~~ **Sociology** 1000-level courses; ~~with no mark below 60%.~~

Additional Requirements

To register in this module, students are required to submit a Community Development Application Form by May 1 (late applications will be considered at the discretion of the program). Enrolment in this module is limited. Meeting the minimum requirements does not guarantee that students wishing to transfer into this module will be offered enrolment. Priority will be given to students already registered in the Brescia School of Food and Nutritional Sciences.

Module

9.0 courses:

0.5 course: Family Studies and Human Development 3310F/G to be taken no later than the 3rd year.

3.0 courses: Family Studies and Human Development 2300F/G, Family Studies and Human Development 3325A/B, Family Studies and Human Development 4220A/B; Sociology 2205A/B, Sociology 2215A/B; Family Studies and Human Development 3230A/B or Sociology 3322A/B or Sociology 3307F/G.

1.0 course from: any of the Family Studies and Human Development (formerly Family Studies) 2000-level courses.

1.0 course from: any of the Family Studies and Human Development (formerly Family Studies) 3000-level courses.

2.0 courses from: any of the Family Studies and Human Development 2000-, 3000-, or 4000-level courses, Psychology 2042A/B, Psychology 2043A/B, Psychology 2050, Psychology 2075, Psychology 2410A/B, Psychology 2620A/B, Psychology 2054A/B or Sociology 2142A/B, Sociology 2267A/B, Sociology 3333F/G, Sociology 3335A/B, Sociology 3341F/G, Sociology 3360F/G.

1.5 courses: Sociology 3330F/G and then Sociology 3331F/G, concurrent with Sociology 3334A/B.

Related Information

Prior to May 1, 2024, this module was offered by Brescia University College.

SCHULICH SCHOOL OF MEDICINE & DENTISTRY

DEPARTMENT OF ANATOMY AND CELL BIOLOGY

Course Revision – Effective September 1, 2025, the following change(s) be made:

ANATOMY AND CELL BIOLOGY 2200A/B SYSTEMIC ANATOMY OF THE HUMAN BODY

Course Description

An introduction to the gross anatomical structures and functional connections of the core systems in the human body, including the musculoskeletal, circulatory, respiratory, gastrointestinal, urinary, and reproductive systems. Demonstrations reinforce and extend the lectures.

Antirequisite(s): Health Sciences 1300A/B, Health Sciences 2300A/B, ~~Health Sciences 2330A/B~~, Health Sciences 3300A/B, Kinesiology 1060A/B, Kinesiology 2222A/B, Kinesiology 3222A/B, Nursing 1330A/B, **the former Health Sciences 2330A/B**, ~~the former Anatomy and Cell Biology 2221~~, ~~the former Anatomy and Cell Biology 3319~~.

Extra Information: 2 lecture hours, 1 demonstration hour. This is not a laboratory course.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

ANATOMY AND CELL BIOLOGY 4451F/G INTEGRATIVE NEUROSCIENCE

Course Description

This course focuses on the link between cellular/molecular mechanisms in the brain and behaviour. Topics include fundamental brain functions such as learning and memory, circadian rhythms and sleep, sexual behavior, motivation and reward, addiction, fear and anxiety, pain, stress, and the neurobiology of neurological and neuropsychiatric disorders.

Prerequisite(s): Biochemistry 2280A, Biology 2382A/B and registration in Year 4 of a basic medical science module.

Extra Information: 2 lecture hours, ~~2~~**1** laboratory hours.

Course Weight: 0.50

DEPARTMENT OF MEDICAL BIOPHYSICS

Course Revision – Effective September 1, 2025, the following change(s) be made:

MEDICAL BIOPHYSICS 4467B RADIATION BIOLOGY WITH BIOMEDICAL APPLICATIONS

Course Description

Nature and effects of ionizing radiation on biomolecular structures, living cells and tissues. Genetic effects and methods of radiation protection. Radiobiological implications of diagnostic and therapeutic radiation.

Prerequisite(s): Medical Biophysics 3501A; one of Medical Biophysics 3467B or Physics 2101A/B or Physics ~~2102A/B~~ **2104A/B** or the former Medical Biophysics 3507G **or the former Physics 2102A/B**; or permission of the department.

Extra Information: 2 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

MEDICAL BIOPHYSICS 4700A/B CASE STUDIES IN MEDICAL BIOPHYSICS

Course Description

Case studies will highlight specific issues that medical biophysics covers while introducing important concepts and the multidisciplinary nature of research, professionals, and applications in the field. The key themes are cardiovascular and circulatory health, molecular and cellular imaging for research, diagnostic imaging in humans, cancer radiotherapy, and medical images processing.

Prerequisite(s): Registration in Year 4 of an Honours degree that contains a module offered by the Department of Medical Biophysics or registration in Year 4 of a BSc degree or, with special permission, an Honours BHSc, BMSc or BSc degree.

Extra Information: 3 lecture hours.
Course Weight: 0.50

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN MEDICAL BIOPHYSICS (Medical Science Concentration)*

This module leads to an Honours Bachelor of Medical Sciences (BMSc) degree. See BACHELOR OF MEDICAL SCIENCES (BMSc) PROGRAM for more information.

Admission Requirements

Admission to this Honours Specialization module occurs in Year 3 and requires admission to Year 3 of the Bachelor of Medical Sciences (BMSc) Program. Students will usually complete MEDICAL SCIENCES FIRST ENTRY (Medical Sciences 1 and 2) prior to admission to the Honours Specialization module. Enrolment in this Honours Specialization module is limited and meeting the minimum requirements does not guarantee admission.

The 1000-level half courses listed below must each be completed with a mark of at least 60%:

1.0 course: Biology 1001A and Biology 1002B.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.

0.5 course from: Calculus 1000A/B, Calculus 1500A/B.

0.5 course from: Applied Mathematics 1201A/B, Calculus 1301A/B, Calculus 1501A/B, Mathematics 1600A/B.

0.5 course from: Physics 1201A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.

0.5 course from: Computer Science 1026A/B, Physics 1202A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B.

The 2000-level courses below must be completed with a minimum mark of 60% in each prior to admission to the Honours Specialization module in Year 3. These 2000-level courses will also be used towards the Module requirements. See the policy on ADMISSION TO THE BACHELOR OF MEDICAL SCIENCES (BMSc) PROGRAM for additional average, course load requirements, etc.

0.5 course: Biochemistry 2280A.

0.5 course: Chemistry 2213A/B.

0.5 course from: Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2100A.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

Notes:

1. It is recommended that 1.0 of the following modular courses be completed prior to Year 3: (Physics 2101A/B and **Physics 2104A/B or the former** Physics 2102A/B) or Physiology 2130 or Physiology and Pharmacology 2000.
2. Students are encouraged to take Medical Biophysics 2500A/B in second year if they want an introduction to the discipline of Medical Biophysics or are interested in learning how biophysics concepts are applied in translational health research.

Module

11.5 courses:

0.5 course: Biochemistry 2280A.

0.5 course: Chemistry 2213A/B.

0.5 course from: Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2100A.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

1.0 course from: Physics 2101A/B and **Physics 2104A/B or the former** Physics 2102A/B, or Physiology 2130 or Physiology and Pharmacology 2000 (see notes).

3.0 courses: Medical Biophysics 3330F, Medical Biophysics 3467B, Medical Biophysics 3501A, Medical Biophysics 3518B, Medical Biophysics 3720A, Medical Biophysics 3820B.

1.0 course: Medical Biophysics 3980E.

0.5 course: Medical Biophysics 4700A/B.

1.5 courses from: (Medical Biophysics 3503G or Medical Biophysics 4445A/B), Medical Biophysics 4330A, Medical Biophysics 4501A, Medical Biophysics 4730A/B.

1.0 course from: Medical Biophysics 4467B, Medical Biophysics 4518B, Medical Biophysics 4720B.

1.5 course: Medical Biophysics 4985E and Medical Biophysics 4986Y; or the former Medical Biophysics 4970E; or the former Medical Biophysics 4971E.

Notes:

1. Physics 2101A/B, **Physics 2104A/B** and **the former** Physics 2102A/B include the following courses in their prerequisites, with marks of at least 60%: one of Physics 1202A/B, Physics 1402A/B or Physics 1502A/B, and one of Calculus 1301A/B or Calculus 1501A/B.
2. Physiology 3120 may be substituted for Physiology 2130.
3. Students registered in the module prior to September 2024, will follow the modular requirements of the 2023-24 Academic Calendar.

Progression Requirements (for students registered in Year 3 of this module in 2025-26 and onward)

Note: Students registered in Years 3 and 4 of this module in 2024-25 or earlier must consult the policy on *Admission to the Bachelor of Medical Sciences (BMSc) Program* (see Modules Offered in the BMSc Program – Honours Specialization Modules).

In addition to the progression requirements for Honours Specialization modules specified in the policy on Registration and Progression in Three-Year, Four-Year and Honours Programs, students must complete the following 7.0 modular courses by the end of Year 3 (note: some courses require marks greater than 60%):

- Biochemistry 2280A;
- Chemistry 2213A/B;
- One of Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2100A;
- Biology 2244A/B or Statistical Sciences 2244A/B;
- 1.0 course from: (Physics 2101A/B and **Physics 2104A/B or the former** Physics 2102A/B), Physiology 2130, or Physiology and Pharmacology 2000;
- Medical Biophysics 3330F, Medical Biophysics 3467B, Medical Biophysics 3501A, Medical Biophysics 3518B, Medical Biophysics 3720A and Medical Biophysics 3820B; and
- Medical Biophysics 3980E.

Students registered in Year 3 of the Honours Specialization in Medical Biophysics (Medical Science Concentration) in 2025-26 and onward who satisfy the Progression Requirements are assured progression to Year 4 of the Honours Specialization in Medical Biophysics (Medical Science Concentration).

BMSc Students who are not registered in Year 3 of the Honours Specialization in Medical Biophysics (Medical Science Concentration) in 2025-26 and onward may be considered for admission to Year 4 of the Honours Specialization if (i) the minimum Admission and Progression Requirements are satisfied, (ii) spaces are available, and (iii) permission is granted.

DON WRIGHT FACULTY OF MUSIC

DEPARTMENT OF MUSIC PERFORMANCE STUDIES

Course Introduction – Effective September 1, 2025, the following course be introduced:

MUSIC 1970 OPERA WORKSHOP

Course Description

Performing and technical aspects of the production of opera, including musical and dramatic interpretation, stage movement, techniques of stagecraft, lighting, scene construction, make-up, costumes. An audition is required.

Antirequisite(s): Music 2950 if taken in 2021-22, 2022-23, 2023-24, 2024-25.

Prerequisite(s): Permission of the Department.

Extra Information: 4 hours.

Course Weight: 1.00

Course Introduction – Effective September 1, 2025, the following course be introduced:

MUSIC 1973A CHAMBER ORCHESTRA

Course Description

The study and performance of selected works from the Chamber Orchestra repertoire with an emphasis on music of the twentieth century. An audition is required.

Antirequisite(s): Music 3946A if taken in 2021-22, Music 3948A if taken in 2022-23.

Prerequisite(s): Permission of the Department.

Course Weight: 0.50

Course Introduction – Effective September 1, 2025, the following course be introduced:

**MUSIC 1974B
CHAMBER ORCHESTRA**

Course Description

The study and performance of selected works form the Chamber Orchestra repertoire with an emphasis on music of the twentieth century. An audition is required.

Antirequisite(s): Music 3949B if taken in 2022-23.

Prerequisite(s): Permission of the Department.

Course Weight: 0.50

Course Introduction – Effective September 1, 2025, the following course be introduced:

**MUSIC 1975Y
APPLIED CHAMBER MUSIC**

Course Description

The study and performance of selected works in the chamber music repertoire. An audition may be required. Students accepted into the course will be assigned to small ensembles.

Antirequisite(s): Music 2948A if taken in 2021-22, Music 3949B if taken in 2023-24, Music 3951Y if taken in 2021-22 or 2023-24, Music 4949B if taken in 2024-25.

Prerequisite(s): Permission of the Department.

Extra Information: 2 hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**MUSIC 2970
OPERA WORKSHOP+**

Course Description

Performing and technical aspects of the production of opera, including musical and dramatic interpretation, stage movement, techniques of stagecraft, lighting, scene construction, make-up, costumes. An audition is required. Available to students in other faculties by permission of the Department.

Extra Information: 4 hours.
Course Weight: 1.00

Course Revision – Effective September 1, 2025, the following change(s) be made:

**MUSIC 3970
OPERA WORKSHOP+**

Course Description

Performing and technical aspects of the production of opera, including musical and dramatic interpretation, stage movement, techniques of stagecraft, lighting, scene construction, make-up, costumes. An audition is required.

Prerequisite(s): Music 2970.

Extra Information: 4 hours.
Course Weight: 1.00

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

Course Revision – Effective September 1, 2025, the following change(s) be made:

BIOLOGY 4355~~F/G~~A/B

THE BIOLOGY OF AGING: CELLULAR AND MOLECULAR ASPECTS

Course Description

Aging is an extremely complex multifactorial process governed by genetic, epigenetic and environmental factors. This course will explore current topics including: model organisms to study aging, identification of "aging genes", longevity variation among different species, signalling pathways and the role of reactive oxygen species in aging and age-associated diseases.

Prerequisite(s): Biology 3316A/B or Biology 3596~~A/B~~F/G; 1.0 additional Biology course at the 3000-level; and enrolment in Year 4 of an Honours Specialization module offered through the Department of Biology or the Basic Medical Science departments.

Extra Information: Completion of one of the following courses is recommended: Biology 3338A/B, Biology 3592A/B, Biology 3595A/B, Biology 3597A/B. 2 lecture hours.

Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

BIOLOGY 4583F/G

MOLECULAR GENETICS LABORATORY

Course Description

Project-based inquiry focused on refining the laboratory skills of senior genetics students. Experimental approaches will include analysis of gene expression using modern tools and techniques.

Prerequisite(s): A minimum mark of 70% in each of Biology 3596~~A/B~~F/G and 1.0 course from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B, Biology 3598A/B; and registration in year 4 of an Honours Specialization in Genetics or permission of the Genetics Undergraduate Coordinator.

Extra Information: 2 lecture hours, 4~~3~~ laboratory hours.

Course Weight: 0.50

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN GENETICS

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

Biology 1001A (~~or the former Biology 1201A~~) and Biology 1002B (~~or the former Biology 1202B~~); Chemistry 1301A/B and Chemistry 1302A/B; plus 1.0 additional course, with no mark in any of these principal courses below 60%.

0.5 course from: Physics 1201A/B, Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B, the former Physics 1301A/B.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Data Science 1000A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B, **Statistical Sciences 1024A/B**; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, ~~the former Statistical Sciences 1024A/B~~.
Note: If not completed in Year 1, the Mathematics requirement must be completed by the end of Year 2.

If not completed in Year 1, the Physics requirement must be completed by the end of Year 2.

Note: Physics 1101A/B with a minimum mark of 65% can be used to replace Physics 1201A/B.

Module

10.0 courses:

0.5 course: Biochemistry 2280A.

3.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2483A/B, Biology 2581A/B, Biology 3596A/B **F/G**, Biology 4583F/G, Biology 4950F/G.

0.5 course: Chemistry 2213A/B.

0.5 course: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course from: Biology 2601A/B.

1.0 course from: Biology 3466A/B, Biology 3467A/B, Biology 3592A/B, Biology 3598A/B.

1.0 course from: Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

0.5 course from: Any of the 3000-level Biology courses listed above and not already taken.

2.0 courses from: Biology 4260A/B, Biology 4289A/B, Biology 4355F/GA/B, Biology 4510F/G, Biology 4515A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B, Biology 4563F/G, Biology 4970F/G, Biology 4999E.

Notes:

1. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.
2. For progression into fourth year of this module, students must obtain a minimum 70% in each of Biology 3596A/BF/G and 1.0 of the 3000 level Biology courses listed above.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN GENETICS

Admission Requirements

Completion of first year requirements with no failures including a minimum mark of 60% in each of Biology 1001A ~~(or the former Biology 1201A)~~ and Biology 1002B ~~(or the former Biology 1202B)~~. Chemistry 1301A/B and Chemistry 1302A/B.

0.5 course from: Physics 1201A/B, Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B or the former Physics 1301A/B.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Data Science 1000A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B, **Statistical Sciences 1024A/B**; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413, ~~the former Statistical Sciences 1024A/B~~.

Note: If not completed in Year 1, the Mathematics requirement must be completed by the end of Year 2.

If not completed in Year 1, the Physics requirement must be completed by the end of Year 2.

Note: Physics 1101A/B with a minimum mark of 65% can be used to replace Physics 1201A/B.

Module

6.0 courses:

0.5 course: Biochemistry 2280A.

1.5 courses: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B.

0.5 course from: Biology 2244A/B, Statistical Sciences 2244A/B.

0.5 course: Biology 3596A/B **F/G**.

0.5 courses from: Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.5 courses (not already taken above) from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3597A/B.

1.0 course from: Biology 4289A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B.

Notes:

1. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.
2. For progression in this module, students must obtain a minimum of 70% in Biology 3596A/BF/G.
3. A degree containing this module normally requires 4 years to complete.

Program Revision – Effective September 1, 2025, the following changes be made:

MINOR IN GENETICS

Admission Requirements

Completion of first-year requirements, including a minimum mark of 60% in each of Biology 1001A ~~(or the former Biology 1201A)~~ and Biology 1002B ~~(or the former Biology 1202B)~~. Chemistry 1301A/B and Chemistry 1302A/B.

Module

4.0 courses:

1.5 courses: Biochemistry 2280A, Biology 2290F/G, Biology 2581A/B.

2.5 courses from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B, Biology 3594A/B, Biology 3595A/B, Biology 3596A/B **F/G**, Biology 3597A/B, Biology 3598A/B, Biology 4289A/B, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B.

Notes:

1. Biology 3595A/B requires a minimum mark of 70% in Biology 2581A/B.
2. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.
3. Many 4000 level Biology courses require the completion of 1.5 Biology courses at the 3000 level or above.

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN GENETICS AND BIOCHEMISTRY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 4.0 principal courses with no mark in these principal courses below 60%.

1.0 course ~~from~~: Biology 1001A ~~(or the former Biology 1201A)~~ and Biology 1002B ~~(or the former Biology 1202B)~~.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.

0.5 course from: Calculus 1000A/B, Calculus 1500A/B, Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B.

0.5 course from: Calculus 1301A/B, Calculus 1501A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1414A/B, Data Science 1000A/B, Applied Mathematics 1201A/B, **Statistical Sciences 1024A/B**; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1414A/B; ~~the former Statistical Sciences 1024A/B~~.

The former Applied Mathematics 1413 can be used to fulfill the 1.0 mathematics requirement.

0.5 course from: Physics 1201A/B, Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B, the former Physics 1301A/B.

0.5 course from: Physics 1202A/B, Physics 1402A/B, Physics 1502A/B; the former Physics 1029A/B, the former Physics 1302A/B.

Note: Physics 1101A/B with a minimum mark of 80% can be used to replace Physics 1201A/B.

Module

10.0 courses:

0.5 course: Biochemistry 2280A.

2.0 courses: Biology 2290F/G, Biology 2382A/B, Biology 2581A/B, Biology 3596A/B **F/G**.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

1.0 course: Chemistry 2213A/B and Chemistry 2223B.

1.5 courses: Biochemistry 3380G, Biochemistry 3381A, Biochemistry 3382A.

1.0 course from: Biology 3594A/B, Biology 3595A/B, Biology 3597A/B, Biology 3598A/B.

0.5 course from: Biology 3466A/B, Biology 3592A/B, Biology 3593A/B.

1.5 courses from: Biology 4289A/B, Biology 4510F/G, Biology 4540F/G, Biology 4560A/B, Biology 4561F/G, Biology 4562A/B, Biology 4970F/G.

1.0 course: Biochemistry 4410A and Biochemistry 4420A.

0.5 course from: Biochemistry 3385B, Biochemistry 3390B, Biochemistry 3392F/G, Biochemistry 4415B, Biochemistry 4450A, the former Biochemistry 4463B.

Note:

1. Biochemistry 3381A and Biochemistry 3382A requires a minimum mark of 65% in Biochemistry 2280A, and a minimum mark of 60% in each of Chemistry 2213A/B and Chemistry 2223B.
2. For progression into third year of this module, students must obtain a minimum mark of 70% in each of Biology 2581A/B, and Biology 2290F/G.

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN SYNTHETIC BIOLOGY

Admission Requirements

Completion of first year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark below 60% in any of these half courses, including:

1.0 course from: Biology 1001A ~~(or the former Biology 1201A)~~ and Biology 1002B ~~(or the former Biology 1202B)~~.

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.

1.0 course from: Calculus 1000A/B or Calculus 1500A/B, Calculus 1301A/B or Calculus 1501A/B, Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B or Mathematics 1600A/B, Applied Mathematics 1201A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

A minimum mark of 60% is also required in one of the following half courses which is not included in the principal courses:

0.5 course from: Physics 1201A/B, Physics 1401A/B, Physics 1501A/B; the former Physics 1028A/B, the former Physics 1301A/B.

Note: If not completed in Year 1, the Physics requirement must be completed by the end of Year 2.

Note: Physics 1101A/B with a minimum mark of 65% can be used to replace Physics 1201A/B.

Module

10.5 courses:

0.5 course: Biochemistry 2280A with a mark of at least 65%.

1.0 course: Biology 2290F/G, Biology 2581A/B, with a mark of at least 70% in each.

0.5 course: Biology 2382A/B.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

0.5 course from: Chemistry 2213A/B or Chemistry 2273A.

0.5 course from: Chemistry 2223B or Chemistry 2283G.

1.5 courses: Biochemistry 3381A, Biochemistry 3382A, Biochemistry 3392F/G.

0.5 course from: Biochemistry 3380G or Biochemistry 3390B.

1.0 course: Biology 3593A/B, Biology 3596A/BF/G.

0.5 course: Science 3377A/B.

0.5 course from: Business Administration 2295F/G, or one of Business Administration 1220E or Business Administration 2257 (see note).

0.5 course from: Philosophy 2035F/G, Philosophy 2300F/G, ~~Philosophy 2320F/G~~, Philosophy 2370F/G, Philosophy 2350F/G, Philosophy 3341F/G, **the former Philosophy 2320F/G**.

0.5 course: Biology 4260A/B.

0.5 course: Biochemistry 4415B.

1.5 courses: Biology 4998E (Research Project = 1.5 courses).

Note: the module will be comprised of 11.0 courses if either Business Administration 1220E or Business Administration 2257 is taken. Business Administration 1220E cannot be used towards both First Year Requirements and modular requirements.

DEPARTMENT OF CHEMISTRY

Course Revision – Effective September 1, 2025, the following change(s) be made:

CHEMISTRY 2284B

PHYSICAL CHEMISTRY II: QUANTUM THEORY

Course Description

Foundations of the quantum theory of chemical structure and bonding. Topics include chemically relevant model problems of quantum mechanics, elements of atomic and molecular spectroscopy, relationship between classical and statistical thermodynamics.

Antirequisite(s): Chemistry 2214A/B, **the former** Chemistry 3374A/B, the former Chemistry 2384B.

Prerequisite(s): Chemistry 1301A/B, Chemistry 1302A/B, 0.5 course from Calculus 1000-A/B, Calculus 1500A/B, Numerical and Mathematical Methods 1412A/B, and any other 0.5 course at the 1000-level from Calculus, Applied Mathematics, Mathematics, or Numerical and Mathematical Methods. Integrated Science 1001X may be used as a substitute for the combination of Chemistry 1302A/B and Calculus 1301A/B.

Extra Information: 3 lecture hours, 1 tutorial hour.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

CHEMISTRY 4424A/B

MOLECULAR STRUCTURE AND SIMULATION

Course Description

Exposition of modern computational methods used in chemistry, biological modeling, and materials research. Topics include molecular quantum mechanics, molecular dynamics, and elements of statistical and machine-learning techniques.

Antirequisite(s): **t**he former Chemistry 4444A/B, the former Chemistry 4474A/B.

Prerequisite(s): **Chemistry 2284B or the former** Chemistry 3374A/B or Physics 3200A/B.

Extra Information: 3 lecture hours.
Course Weight: 0.50

Program Revision – Effective September 1, 2025, the following changes be made:

MINOR IN CHEMISTRY

This minor is intended for students who are not in Chemistry, particularly those in Biology and Health Sciences, Biochemistry, Materials Science, or those looking for a second teachable for Teacher's College.

This minor cannot be taken in combination with any other module offered by the Department of Chemistry.

Admission Requirements

Completion of first year requirements, including the following 2.0 courses with no mark less than 60% in any course:

1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.

1.0 course from: (Calculus 1000A/B or Calculus 1500A/B or Numerical and Mathematical Methods 1412A/B or the former Applied Mathematics 1412A/B) and (Applied Mathematics 1201A/B or Calculus 1301A/B or Calculus 1501A/B or Mathematics 1600A/B or Mathematics 1229A/B or Numerical and Mathematical Methods 1411A/B or Numerical and Mathematical Methods 1414A/B or the former Applied Mathematics 1411A/B or the former Applied Mathematics 1414A/B), or the former Applied Mathematics 1413.

Module

4.0 courses:

2.0 courses: Chemistry 2211A/B, Chemistry 2213A/B, Chemistry 2214A/B, Chemistry 2272F.

2.0 courses from: Chemistry 2210A/B, Chemistry 2223B, Chemistry 2370A/B, Chemistry 3300A/B, Chemistry 3320A/B, Chemistry 3330~~F~~**G**A/B, Chemistry 3364A/B, Chemistry 3393A/B.

DEPARTMENT OF COMPUTER SCIENCE

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN COMPUTER SCIENCE

Admission Requirements

Registration in the Computer Science program and ~~C~~ completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, with no mark in these principal courses below 60%, including:

- 0.5 course: Computer Science 1020A/B.
- 0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B or Data Science 1200A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);
- 0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);
- 1.0 course from: Applied Mathematics 1201A/B, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, ~~Computer Science 4442A/B~~, and Computer Science 4482A/B) require Mathematics 1600A/B as a prerequisite.

Students not registered in the Computer Science program may only enrol in up to 1.5 courses from Computer Science per academic year.

Module

9.0 courses:

5.5 courses: Computer Science 2208A/B, Computer Science 2209A/B, Computer Science 2210A/B, Computer Science 2211A/B, Computer Science 2212A/B/Y, Computer Science 3305A/B, Computer Science 3307A/B/Y, Computer Science 3331A/B, Computer Science 3340A/B, Computer Science 3342A/B, Computer Science 3350A/B.

0.5 course from: Computer Science 2214A/B, Mathematics 2155F/G.

0.5 course from: Writing 2101F/G, Writing 2111F/G, ~~Writing 2125F/G~~, Writing 2131F/G, **the former Writing 2125F/G**.

0.5 course: Computer Science 4490Z.

1.0 course from: Computer Science courses at the 4000 level, Data Science 3000A/B.

0.5 course from: Computer Science courses at the 3000 level or above, Science 3377A/B, Mathematics 2156A/B, Mathematics 3159A/B.

0.5 course from: Statistical Sciences 2141A/B, Statistical Sciences 2244A/B or Biology 2244A/B, Statistical Sciences 2857A/B.

Note: Students who are also pursuing the Software Engineering Minor or the Game Development Minor must take Computer Science 4470Y or 4480Y respectively. If either minor is taken, Computer Science 4490Z must be replaced in the Honours Specialization with a 0.5 course in Computer Science at the 4000 level.

Program Revision – Effective September 1, 2025, the following changes be made:

SPECIALIZATION IN COMPUTER SCIENCE

Admission Requirements

Registration in the Computer Science program and ~~C~~ completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course: Computer Science 1020A/B.
0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B, Data Science 1200A/B, or Engineering Science 1036A/B (in each case with a mark of at least 65%);
0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);
1.0 course from: Applied Mathematics 1201A/B, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, ~~Computer Science 4442A/B~~, and Computer Science 4482A/B) require Mathematics 1600A/B as a prerequisite.

Students not registered in the Computer Science program may only enrol in up to 1.5 courses from Computer Science per academic year.

Module

9.0 courses:

5.0 courses: Computer Science 2208A/B, Computer Science 2209A/B, Computer Science 2210A/B, Computer Science 2211A/B, Computer Science 2212A/B/Y, Computer Science 3305A/B, Computer Science 3307A/B/Y, Computer Science 3331A/B, Computer Science 3342A/B, Computer Science 3350A/B.

0.5 course from: Computer Science 2214A/B, Mathematics 2155F/G.

0.5 course from: Writing 2101F/G, Writing 2111F/G, ~~Writing 2125F/G~~, Writing 2131F/G, **the former Writing 2125F/G**.

1.5 courses from: Computer Science at the 4000 level, Data Science 3000A/B.

1.0 course from: Computer Science courses at the 3000 level or above, Science 3377A/B, Mathematics 2156A/B, Mathematics 3159A/B.

0.5 course from: Statistical Sciences 2141A/B, Statistical Sciences 2244A/B or Biology 2244A/B, Statistical Sciences 2857A/B.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN COMPUTER SCIENCE

Admission Requirements

Registration in the Computer Science program and ~~C~~ completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course: Computer Science 1020A/B.
0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B, Data Science 1200A/B or Engineering Science 1036A/B (in each case with a mark of at least 65%);
0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);
1.0 course from: Applied Mathematics 1201A/B, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, ~~Computer Science 4442A/B~~, and Computer Science 4482A/B) require Mathematics 1600A/B as a prerequisite.

Students not registered in the Computer Science program may only enrol in up to 1.5 courses from Computer Science per academic year.

Module

6.0 courses:

3.5 courses: Computer Science 2208A/B, Computer Science 2209A/B, Computer Science 2210A/B, Computer Science 2211A/B, Computer Science 2212A/B/Y, Computer Science 3305A/B, Computer Science 3307A/B/Y.

0.5 course from: Computer Science 2214A/B, Mathematics 2155F/G.

2.0 courses from: Computer Science courses at the 3000 level or above, Data Science 3000A/B, Science 3377A/B, Mathematics 2156A/B, Mathematics 3159A/B.

Program Revision – Effective September 1, 2025, the following changes be made:

MINOR IN COMPUTER SCIENCE

Admission Requirements

Completion of first-year requirements, including the following courses with a mark of at least 60%:

0.5 course: Computer Science 1020A/B.
0.5 course from: Computer Science 1025A/B, Computer Science 1026A/B, Data Science 1200A/B, or Engineering Science 1036A/B (in each case with a mark of at least 65%);
0.5 course from: Computer Science 1027A/B or Computer Science 1037A/B (in either case with a mark of at least 65%);
1.0 course from: Applied Mathematics 1201A/B, Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B, Mathematics 1600A/B, Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B; or the former Applied Mathematics 1411A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1414A/B, the former Applied Mathematics 1413.

Note: Some Computer Science electives (e.g., Computer Science 3388A/B, ~~Computer Science 4442A/B~~, and Computer Science 4482A/B) require Mathematics 1600A/B as a prerequisite.

Registration in the Computer Science program is not required for this module. Students not registered in the Computer Science program may only enrol in up to 1.5 courses from Computer Science per academic year.

Module

4.0 courses:

1.5 courses: Computer Science 2208A/B, Computer Science 2210A/B, Computer Science 2211A/B.

0.5 course from: Computer Science 2214A/B, Mathematics 2155F/G.

2.0 courses from: Computer Science 2209A/B, Computer Science 2212A/B/Y, Computer Science courses at the 3000 level or above, Data Science 3000A/B, Science 3377A/B, Mathematics 2156A/B, Mathematics 3159A/B.

DEPARTMENT OF MATHEMATICS

Course Revision – Effective September 1, 2025, the following change(s) be made:

CALCULUS 1500A/B

CALCULUS I FOR THE MATHEMATICAL SCIENCES

Course Description

~~An enriched version of Calculus 1000A/B.~~ **Calculus for students intending to study Actuarial Science, Applied Mathematics, Astrophysics, Mathematics, Medical Physics, Physics, and Statistics.** Basic set theory and an introduction to mathematical rigour. The precise definition of limit. Derivatives of ~~exponential, logarithmic, rational trigonometric~~ **transcendental** functions. L'Hospital's rule. The definite integral. Fundamental theorem of Calculus. Integration by substitution. Applications.

Antirequisite(s): Calculus 1000A/B, Numerical and Mathematical Methods 1412A/B, the former Applied Mathematics 1412A/B, the former Applied Mathematics 1413.

Prerequisite(s): Ontario Secondary School MCV4U or Mathematics 0110A/B.

Extra Information: 4 lecture hours.
Course Weight: 0.50

Course Revision – Effective September 1, 2025, the following change(s) be made:

**MATHEMATICS 1700A/B
LINEAR ALGEBRA I FOR THE MATHEMATICAL SCIENCES**

Course Description

~~An enriched version of Mathematics 1600A/B. Complex numbers and the integers modulo a prime; vectors, lines, planes; solving linear systems;~~ **Linear algebra for students intending to study Actuarial Science, Applied Mathematics, Astrophysics, Mathematics, Medical Physics, Physics, and Statistics. Vector geometry; linear equations;** spanning sets and linear independence; matrix algebra; ~~elementary matrices;~~ subspaces, bases, dimension and rank; introduction to linear transformations; determinants; eigenvalues and eigenvectors; similarity and diagonalization; Markov chains and other applications.

Antirequisite(s): Mathematics 1600A/B, Mathematics 2211A/B, Numerical and Mathematical Methods 1411A/B, the former Applied Mathematics 1411A/B, the former Applied Mathematics 2811A/B, the former Mathematics 2120A/B.

Prerequisite(s): One of Mathematics 1120A/B (recommended), Calculus 1000A/B or Calculus 1500A/B with a minimum mark of 70% in the case of Calculus 1000A/B or Calculus 1500A/B.

Extra Information: 3 lecture hours, 1 tutorial hour.
Course Weight: 0.50

Course Revision – Effective September 1, 2026, the following change(s) be made:

MATHEMATICS 2250~~A/B~~F/G**
HISTORY OF MATHEMATICS**

Course Description

An overview of the emergence of Mathematics and its impacts. Topics include: the origins of counting, Mathematics in the Ancient World (numbers, geometry, axioms); the emergence of algebra, analytic geometry and calculus; explosive modern growth; contributions by women.

Prerequisite(s): Ontario Secondary School MCV4U or Mathematics 0110A/B; any 0.5 course in Mathematics, Applied Mathematics, or Calculus at the 1000-level.

Extra Information: 3 lecture hours.
Course Weight: 0.50

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN MATHEMATICS

Admission Requirements

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

0.5 course: Calculus 1501A/B (recommended) or Calculus 1301A/B with a mark of at least 85%;

plus 2.0 additional courses, with no mark in these principal courses below 60%. ~~(Mathematics 1600A/B or Mathematics 1700A/B) and Mathematics 1120A/B~~, if taken in first year, will count toward the 3.0 principal courses. Mathematics 1120A/B and Mathematics 1700A/B are recommended.

Note: One of Mathematics 1600A/B, Mathematics 1700A/B, Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B must be completed prior to Mathematics 2700A/B. Consequently, the preferred option here must be completed by the end of Term 1 in Year 2.

Module

9.0 courses:

0.5 course from: Mathematics 2700A/B, the former Mathematics 2120A/B.

4.0 courses: Calculus 2502A/B, Calculus 2503A/B, Mathematics 2122A/B, Mathematics 2155F/G, Mathematics 3020A/B, Mathematics 3120A/B, Mathematics 3122A/B, Mathematics 3124A/B.

1.0 course from: Statistical Sciences 2857A/B, Statistical Sciences 2858A/B, or any courses in Actuarial Science, Applied Mathematics, Data Science, Financial Modelling or Numerical and Mathematical Methods at the 2100 level or above.

2.5 additional courses from: Mathematics 2124A/B, Mathematics 2156A/B or any courses in Mathematics at the 3000 level or above.

1.0 additional course in Mathematics at the 4000 level.

It is strongly recommended that Mathematics 2122A/B be completed in the year of entry into the module.

Note: Those students who plan to apply for graduate studies in Mathematics should take Mathematics 4120A/B, Mathematics 4121A/B, Mathematics 4122A/B, Mathematics 4123A/B, and at least one of Mathematics 4151A/B, Mathematics 4152A/B, Mathematics 4153A/B or Mathematics 4156A/B.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN MATHEMATICS

Admission Requirements

Completion of first-year requirements with no mark below 60% in 3.0 principal courses, including:

0.5 course: Calculus 1000A/B or Calculus 1500A/B;

0.5 course: (Calculus 1501A/B (recommended)) or (Calculus 1301A/B with a mark of at least 85%),

plus 2.0 additional courses.

~~(Mathematics 1600A/B or Mathematics 1700A/B) and Mathematics 1120A/B~~, if taken in first year, will count toward the 3.0 principal courses. Mathematics 1120A/B and Mathematics 1700A/B are recommended.

Note: One of Mathematics 1600A/B, Mathematics 1700A/B, Numerical and Mathematical Methods 1411A/B or the former Applied Mathematics 1411A/B must be completed prior to Mathematics 2700A/B. Consequently, the preferred option here must be completed by the end of Term 1 in Year 2.

Module

6.0 courses:

0.5 course from: Mathematics 2700A/B, the former Mathematics 2120A/B.

2.5 courses: Calculus 2502A/B, Calculus 2503A/B, Mathematics 2122A/B, Mathematics 2155F/G, Mathematics 3020A/B.

0.5 course from: Statistical Sciences 2857A/B or any course in Actuarial Science, Applied Mathematics, Data Science, Financial Modelling or Numerical and Mathematical Methods at the 2100 level or above

1.0 additional course from: Statistical Sciences 2857A/B, Statistical Sciences 2858A/B, Statistical Sciences 3657A/B, or any courses in Mathematics, Actuarial Science, Applied Mathematics, Data Science, Financial Modelling or Numerical and Mathematical Methods at the 2100 level or above.

1.5 additional courses in Mathematics at the 3000 level or above.

FACULTY OF SOCIAL SCIENCE

DAN DEPARTMENT OF MANAGEMENT & ORGANIZATIONAL STUDIES

Program Revision – Effective September 1, 2025, the following changes be made:

HONOURS SPECIALIZATION IN CONSUMER BEHAVIOR

Enrolment in the BMOS Honours Specialization modules is limited. Meeting of minimal requirements does not guarantee admission.

Students may not apply to a BMOS HONOURS SPECIALIZATION when they apply for admission to the University.

Admission Requirements

5.0 first-year courses:

After first year, students may apply for admission upon completion of 5.0 first-year requirements with no failures. Students must have an average of at least 73% on, and no grade less than 60% in, the following

3.0 principal courses:

1.0 course: MOS 1021A/B and MOS 1023A/B.

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B; Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B*.

1.0 course: numbered 1000-1999.

1.0 course: full-course or equivalent numbered 1000-1999 from: Psychology or Sociology.

1.0 course numbered 1000-1999 from: the Faculty of Social Science.

Note: *Students admitted without Calculus should be aware that to enrol in certain courses/modules they may be required to take Mathematics 0110A/B. When considering a course/module in another discipline, please check the Mathematics requirements(s). Students are responsible for ensuring they have completed the Mathematics and other entry requirements and prerequisites of the modules/courses they wish to take.

Note: After first year, Affiliated University College students require the completion of 5.0 courses with an overall cumulative average of 70%, in addition to the above.

After second year, students applying for a BMOS HONOURS SPECIALIZATION must have

- a) achieved an average of at least 73% on the last 5.0 courses;
- b) achieved an average of 73% on the 3.0 principal courses required for the module;
- c) achieved a cumulative modular average of 70%;
- d) obtained a minimum grade of 60% in each course required for the module;
- e) obtained a passing grade in each elective course;
- f) Main Campus Students: a minimum cumulative average of 65%, or Affiliated College Students: a minimum cumulative average of 70%.

Module

10.0 courses:

1.0 course normally taken in second year from: Business Administration 2257 OR MOS 2227A/B and MOS 2228A/B.

0.5 course normally taken in second or third year: MOS 2320A/B.

1.0 course normally taken in second year from: MOS 2242A/B and 0.5 MOS 2000-level or above; ~~Psychology 2820E~~; **OR** Sociology 2205A/B and Sociology 2206A/B; **OR** Statistical Sciences 2035.

1.0 course normally taken in second year: MOS 2181A/B, MOS 2275A/B.

0.5 course normally taken in ~~third~~ **second** year from: MOS 2309A/B, MOS 2310A/B.

0.5 course normally taken in third year: MOS 3330A/B.

~~1.5~~ **1.0 courses** normally taken in third year: MOS 3321F/G, ~~MOS 3322F/G~~, MOS 3420F/G.

0.5 course: **Psychology 2720A/B, the former** Psychology 2070A/B.

~~1.5~~ **0.5 courses** from: Anthropology 2262A/B, Anthropology 2272A/B, Anthropology 2280F/G; Economics 2124A/B, Economics 2128A/B, Economics 2129A/B, Economics 2150A/B, Economics 2152A/B, Economics 2154A/B, Economics 2155A/B, Economics 2156A/B, Economics 2159A/B, Economics 2160A/B, Economics 2162A/B, Economics 2167A/B, Economics 2181A/B, Economics 2191A/B; English 2018A/B, English 2019A/B; Geography 2143A/B, Geography 2144A/B; History 2120A/B, History 2171A/B, History 2807F/G; MOS 2277A/B, MOS 3367A/B; Philosophy 2074F/G, Philosophy 2730F/G; Political Science 2102A/B, Political Science 2140A/B, Political Science 2211E, Political Science 2246E; Psychology 2030A/B, Psychology 2035A/B, ~~Psychology 2070A/B~~; Sociology 2166A/B, Sociology 3308F/G, Sociology 3314F/G, **the former Psychology 2070A/B**, the former Sociology 2172A/B.

1.0 course from: MOS 3322F/G, MOS 4411A/B, MOS 4424A/B.

~~1.0~~ **1.5 courses**: **MOS 4320A/B**, MOS 4410A/B, MOS 4423F/G.

1.0 course: MOS 4999E or MOS 3000-level or above.

Progression Requirements

To remain in a BMOS HONOURS SPECIALIZATION, students must have

- a) maintained a cumulative modular average of 70%;
- b) obtained a minimum grade of 60% in each course required for the module;
- c) obtained a passing grade in each elective course;
- d) maintained a cumulative average of 65%

Students who fail to meet these progression requirements may be eligible to apply to a BMOS Specialization or to another program.

Graduation Requirements

To graduate from a BMOS HONOURS SPECIALIZATION, students must achieve a minimum cumulative modular average of 70% with a minimum mark of 60% in each course, obtain a passing grade in each elective course, and maintain a minimum overall average of 65% on the 20.0 courses counted towards the BMOS HONOURS SPECIALIZATION Degree. Students with advanced standing must achieve an overall average of 65% on courses completed at Western.

All students require 2.0 designated essay courses (E, F or G; at least 1.0 of which must be a senior course numbered 2000-4999) and 1.0 course from each of the Categories A, B and C.

Program Revision – Effective September 1, 2025, the following changes be made:

SPECIALIZATION IN CONSUMER BEHAVIOR

Admission Requirements

5.0 first-year courses:

1.0 course: MOS 1021A/B and MOS 1023A/B.

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B; Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B.

1.0 course: full-course or equivalent numbered 1000-1999 from: Psychology or Sociology.

1.0 course numbered 1000-1999 from: the Faculty of Social Science.

1.0 course: numbered 1000-1999.

Students enrolled in BMOS in Year 1 on Main Campus may apply to a Specialization if they maintain a minimum cumulative average of 65%.

Note: After first year, Affiliated University College students require the completion of 5.0 courses with an overall cumulative average of 70%.

After first, second or third year, to enter a BMOS SPECIALIZATION students must have

- a) achieved an overall average of 70% on the last 5.0 courses;
- b) Main Campus Students: a minimum cumulative average of 65%, or
Affiliated College Students: a minimum cumulative average of 70%.

Module

9.5 courses:

1.0 course normally taken in second year from: Business Administration 2257 OR MOS 2227A/B and MOS 2228A/B.

0.5 course normally taken in second or third year: MOS 2320A/B.

1.0 course normally taken in second year from: MOS 2242A/B and 0.5 MOS 2000-level or above; ~~Psychology 2820E;~~ **OR** Sociology 2205A/B and Sociology 2206A/B; **OR** Statistical Sciences 2035.

0.5 course normally taken in second year from: MOS 2181A/B, Psychology 2061A/B.

0.5 course normally taken in second year: MOS 2275A/B.

0.5 course normally taken in ~~third~~ **second** year from: MOS 2309A/B, MOS 2310A/B.

~~1.0~~ **1.5 courses** normally taken in third year: MOS 3321F/G, MOS 3330A/B, **MOS 3420F/G.**

~~0.5 course normally taken in third year: MOS 3322F/G.~~

~~2.0~~ **1.5 courses** from: Anthropology 2262A/B, Anthropology 2272A/B, Anthropology 2280F/G; Economics 2124A/B, Economics 2128A/B, Economics 2129A/B, Economics 2150A/B, Economics 2152A/B, Economics 2154A/B, Economics 2155A/B, Economics 2156A/B, Economics 2159A/B, Economics 2160A/B, Economics 2162A/B, Economics 2167A/B, Economics 2181A/B, Economics 2191A/B; English 2018A/B, English 2019A/B; Geography 2143A/B, Geography 2144A/B; History 2120A/B, History 2171A/B, History 2807F/G; MOS 2277A/B, MOS 3367A/B; Philosophy 2074F/G, Philosophy 2730F/G; Political Science 2102A/B, Political Science 2140A/B, Political Science 2211E, Political Science 2246E; Psychology 2030A/B, Psychology 2035A/B, ~~Psychology 2070A/B~~; Sociology 2166A/B, Sociology 3308F/G, Sociology 3314F/G, ~~the former Psychology 2070A/B~~, the former Sociology 2172A/B.

1.0 course normally taken in fourth year from: MOS 3322F/G, MOS 4320A/B, MOS 4411A/B, MOS 4424A/B.

~~1.5~~ **1.0 course** normally taken in fourth year from: ~~MOS 3280F/G, MOS 3325A/B, MOS 3342A/B, MOS 3343A/B, MOS 3344A/B, MOS 3352F/G, MOS 3355F/G, MOS 3356F/G, MOS 3384A/B, MOS 3385A/B, MOS 3395A/B, MOS 3398A/B, MOS 3420F/G, MOS 4423F/G, MOS 4479A/B, MOS 4495A/B, MOS 4498A/B~~ **MOS 3000-level or above.**

0.5 course: MOS 4410A/B.

Progression Requirements

To remain in a BMOS SPECIALIZATION students must have

- a) maintained a minimum cumulative average of 65%

In order to be readmitted to a BMOS Specialization students must complete an additional 5.0 courses in another discipline and must meet the Admission Requirements.

Graduation Requirements

To graduate from the BMOS SPECIALIZATION, students must achieve a minimum cumulative average of 65% on the 20.0 courses counted towards the BMOS SPECIALIZATION Degree. Students with advanced standing must achieve an overall average of 65% on courses completed at Western.

All students require 2.0 designated essay courses (E, F or G; at least 1.0 of which must be a senior course numbered 2000-4999) and 1.0 course from each of the Categories A, B and C.

Program Revision – Effective September 1, 2025, the following changes be made:

MAJOR IN CONSUMER BEHAVIOR (must be part of Honours Double Major)

Enrolment in the BMOS Honours Double Major modules is limited. Meeting of minimal requirements does not guarantee admission.

Restricted to students registered in the BMOS Honours Degree. Must be combined with another Major module from a discipline other than Management and Organizational Studies.

Admission Requirements

Students may not apply to a BMOS HONOURS DOUBLE MAJOR when they apply for admission to the University. In addition to meeting MOS Admission Requirements, students must successfully complete the Admission Requirements for a Major module in a discipline other than Management and Organizational Studies. If Admission Requirements are not met in either or both of the Majors, students will not be allowed to register in a BMOS Honours Double Major and will be required to apply to a BMOS Specialization or to another program.

5.0 first-year courses:

After first year, students may apply for admission upon completion of 5.0 first-year requirements with no failures. Students must have an average of at least 70% on, and no grade less than 60% in, the following

3.0 principal courses:

1.0 course: MOS 1021A/B and MOS 1023A/B.

1.0 course from: Calculus 1000A/B, Calculus 1301A/B, Calculus 1500A/B, Calculus 1501A/B; Mathematics 1225A/B, Mathematics 1228A/B, Mathematics 1229A/B, Mathematics 1600A/B*.

1.0 course: numbered 1000-1999.

1.0 course: full-course or equivalent numbered 1000-1999 from: Psychology or Sociology.

1.0 course numbered 1000-1999 from: the Faculty of Social Science.

Note: *Students admitted without Calculus should be aware that to enrol in certain courses/modules they may be required to take Mathematics 0110A/B. When considering a course/module in another discipline, please check the Mathematics requirements(s). Students are responsible for ensuring they have completed the Mathematics and other entry requirements and prerequisites of the modules/courses they wish to take.

Note: After first year, Affiliated University College students require the completion of 5.0 courses with an overall cumulative average of 70%, in addition to the above.

After second year, students applying for a BMOS HONOURS DOUBLE MAJOR must have

- a) achieved an average of at least 70% on the last 5.0 courses;
- b) achieved an average of 70% on the 3.0 principal courses required for the module;
- c) achieved a cumulative modular average of 70%;
- d) obtained a minimum grade of 60% in each course required for the module;
- e) obtained a passing grade in each elective course;
- f) Main Campus Students: a minimum cumulative average of 65%, or Affiliated College Students: a minimum cumulative average of 70%.

Module

6.5 courses:

1.0 course from: Business Administration 2257 OR MOS 2227A/B and MOS 2228A/B.

1.0* course normally taken in second year from: MOS 2242A/B and 0.5 MOS 2000-level or above; ~~Psychology 2820E~~; **OR** Sociology 2205A/B and Sociology 2206A/B; **OR** Statistical Sciences 2035.

0.5 course from: MOS 2309A/B, MOS 2310A/B.

~~2.5~~ **1.5 courses**: MOS 2320A/B, MOS 3321F/G, ~~MOS 3322F/G, MOS 3330A/B,~~ MOS 4410A/B.

1.0 course from: MOS 3322F/G, MOS 3330A/B, MOS 3420F/G, MOS 4320A/B, MOS 4411A/B, MOS 4424A/B.

0.5 course from: MOS 2181A/B, Psychology 2061A/B.

0.5 course: MOS 2275A/B.

0.5 course from: Anthropology 2262A/B, Anthropology 2272A/B, Anthropology 2280F/G; Economics 2124A/B, Economics 2128A/B, Economics 2129A/B, Economics 2150A/B, Economics 2152A/B, Economics 2154A/B, Economics 2155A/B, Economics 2156A/B, Economics 2159A/B, Economics 2160A/B, Economics 2162A/B, Economics 2167A/B, Economics 2181A/B, Economics 2191A/B; English 2018A/B, English 2019A/B; Geography 2143A/B, Geography 2144A/B; History 2120A/B, History 2171A/B, History 2807F/G; MOS 2277A/B, MOS 3367A/B; Philosophy 2074F/G, Philosophy 2730F/G; Political Science 2102A/B, Political Science 2140A/B; Psychology 2030A/B, Psychology 2035A/B, ~~Psychology 2070A/B~~; Sociology 2166A/B, Sociology 3308F/G, Sociology 3314F/G, **the former Psychology 2070A/B**, the former Sociology 2172A/B.

Note: *If a Statistics course 2000-level or above has been completed or is

required for the other module, the MOS Statistics module requirement must be replaced with a 1.0 2200-level or above MOS course.

Progression Requirements

To remain in a BMOS HONOURS DOUBLE MAJOR, students must have

- a) maintained a cumulative modular average of 70%;
- b) obtained a minimum grade of 60% in each course required for the module;
- c) obtained a passing grade in each elective course;
- d) maintained a cumulative average of 65%

Students who fail to meet these progression requirements may be eligible to apply to a BMOS Specialization or to another program.

Graduation Requirements

To graduate from a BMOS HONOURS DOUBLE MAJOR, students must achieve a minimum cumulative modular average of 70% with a minimum grade of 60% in each course of each module, obtain a passing grade in each elective course, and maintain a minimum overall average of 65% on the 20.0 courses counted towards the BMOS HONOURS DEGREE. Students with advanced standing must achieve an overall average of 65% on courses completed at Western.

All students require 2.0 designated essay courses (E, F or G; at least 1.0 of which must be a senior course numbered 2000-4999) and 1.0 course from each of the Categories A, B and C.