Overview

Depending on the module(s) and basic medical science disciplines included in a student’s BMSc degree, the subjects studied can range widely:

- Molecular genetics of human and animal disease
- Molecular biology of DNA, RNA, and proteins
- Respiratory health and disease
- Stem cell biology and regenerative medicine
- Mechanisms of cancer chemotherapy
- Principles of medical and digital imaging
- Human anatomy and physiology
- Mammalian histology
- Pathogenesis of human diseases
- Biology of infection and immunity
- Clinical biochemistry
- Neuropharmacology and cardiovascular pharmacology
- Endocrine, gastrointestinal, and fetal physiology
- Environmental pathology
- Integrative neuroscience
- Neurobiology of mental illness
- Health informatics
- Epidemiology of major diseases

Key Features

- Flexibility
  - Specialize in one discipline from a wide variety of subject areas or choose an interdisciplinary approach.
- Novel Research in Year 4
  - Complete research with a faculty member in a discipline-specific Honors Specialization module.
- Hands-on Experience
  - Gain valuable hands-on experience in problem solving and laboratories, as well as computer, analytical, applied/laboratory, communication and organizational skills.
- Interaction Between Basic and Clinical Medical Sciences
  - Learn and understand the interrelationships between basic science and its application in the clinical medical sciences, as discover how they move from the bench to the bedside.
- Internship Program
  - Gain work and life skills between Years 3 and 4 by completing a paid 8-16 month internship placement.
- Graduate with Two Honors Degrees in Five Years
  - Experience the Ivey Business School and BMSc by completing the combined BMSc/HBA program.

Career Opportunities

Career Choices

BMSc graduates have the background for careers in a variety of specialized areas:

- Law: bioethics and patent development for biological products
- Business: biotechnology – marketing, research & development and quality control
- Government Laboratories: agriculture, marine and environmental sciences
- Industry: pharmaceutical, biotechnology, biosafety regulation and enforcement

Professional Schools

BMSc students develop an excellent foundation to apply for various professional schools and programs:

- Medicine
- Pharmacy
- Dentistry
- Optometry
- Education
- Veterinary Medicine
- Law
- Applied Health Sciences

Graduate Studies

The BMSc (Honors) Degree prepares students for Master of Science or doctoral programs (PhD) in any of the basic medical and biological sciences or for entry into associated fields such as forensic science, molecular genetics, genetic engineering, biomedical engineering, and bioinformatics.

Learn More

To learn more about the BMSc Program, the Basic Medical Science Departments and the modules available, please visit the following websites:

- Bachelor of Medical Sciences (BMSc) Program
  - www.schulich.uwo.ca/bmsc
- Department of Anatomy and Cell Biology
  - www.schulich.uwo.ca/anatomy
- Department of Biochemistry
  - www.schulich.uwo.ca/biochem
- Department of Medical Biophysics
  - www.schulich.uwo.ca/biophysics
- Department of Epidemiology and Biostatistics
  - www.schulich.uwo.ca/epibio
- Department of Microbiology and Immunology
  - www.schulich.uwo.ca/microbiologyandimmunology
- Department of Pathology
  - www.schulich.uwo.ca/path
- Department of Physiology and Pharmacology
  - www.schulich.uwo.ca/physpharm

Other Links

- Schulich School of Medicine & Dentistry
  - www.schulich.uwo.ca
- Faculty of Science
  - www.uwo.ca/sci
- Academic Calendar
  - www.westerncalendars.uwo.ca
- Science Career Services & Internship Program
  - www.uwo.ca/sci/iip

Contact

Basic Medical Sciences Undergraduate Education
Schulich School of Medicine & Dentistry
Western University
Medical Sciences Bldg., Room M138
London, ON, Canada N6A 5C1

t. 519.661.2331 ext. 83169
f. 519.661.3472
e. bmsc@schulich.uwo.ca

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- Department of Medical Biophysics
  - www.schulich.uwo.ca/biophysics
- Department of Epidemiology and Biostatistics
  - www.schulich.uwo.ca/epibio
- Department of Microbiology and Immunology
  - www.schulich.uwo.ca/microbiologyandimmunology
- Department of Pathology
  - www.schulich.uwo.ca/path
- Department of Physiology and Pharmacology
  - www.schulich.uwo.ca/physpharm

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Bachelor of Medical Sciences (BMSc)
Why BMSc?
The Bachelor of Medical Sciences (BMSc) Program is designed for students who want to focus on all aspects of biology that define and influence the human condition.

The BMSc Advantage:
The BMSc Advantage allows students to specialize in one discipline or pursue a broad, interdisciplinary program.

Education is enriched through hands-on experience in the lab in Years 1 and 2, opportunities to design and participate in experiments in Year 3, and a supervised research project in Year 4.

Beyond the classroom, students can apply to participate in an exchange program for an international experience, or a paid internship which supports international experience, or an exchange program for an opportunity to participate in an exchange program.

Applying from High School
Students interested in the BMSc Program at Western University should apply to the Faculty of Science by selecting ESM (Medical Sciences) on the Ontario Universities’ Application Centre (OUAC) application. Registration in the BMSc Program begins in Year 1, following the successful completion of Medical Sciences 1 and 2. See Medical Sciences First Entry in the Academic Calendar.

Medical Sciences 1: completion of 5.0 courses, including biology, chemistry, math and physics (with a minimum mark of 60 per cent in each).

Medical Sciences 2: completion of 5.0 courses, including all 2000-level courses specific to the module of interest.

Admission to Year 3 of the BMSc Program
Admission is assured for students in Medical Sciences 1 and 2.

Basic Medical Sciences Modules Chart
The chart below outlines the modules offered in the Basic Medical Sciences. All (HSP) modules, except IMS, include a Year 4 research project course.

For detailed information about applying for admission to Year 3 BMSc see Admission to the Bachelor of Medical Sciences (BMSc) Program in the Academic Calendar or Admission & Progression under Current Students on the BMSc website.

www.schulich.uwo.ca/bmsc

Rebecca Barnfield, BMSc'15

"Knowledge acquired through the BMSc program provides a great stepping stone to many different postgraduate options including research and professional school. Learning in a supportive atmosphere, with help from professors, academic counsellors, and peers facilitates success in whichever field you wish to pursue."

Rebecca Barnfield, BMSc'15