HONOURS BSC IN BIOMEDICAL SCIENCE - BIOANALYTICAL SCIENCE OPTION

Biomedical Science is an interdisciplinary program that focuses on the fundamentals of human structure and function, as well as those of other animals. The first two years provide a background in human anatomy and psychology, in addition to more in-depth knowledge in basic sciences like biology, chemistry, biochemistry, and mathematics. At the end of second year, in addition to courses in biology and biochemistry, students may choose from an array of optional courses and obtain a minor in one of many programs offered, OR they can choose an option within the biomedical sciences (Neuroscience, Cellular and Molecular Medicine, Bioanalytical Science, Medicinal Chemistry or Biostatistics). On graduation, they will be ready for more advanced research training or for admission to a professional program in human health.

Students in the Biomedical Sciences program are also eligible to participate in the Co-Operative Education Programs.

Admission to this program is competitive and higher averages are required.

This program is offered in English and in French.

Program Requirements

Co-operative education is available with this program.

The extended French stream is available with this program.

Requirements for this program have been modified. Please consult the 2015-2016 calendars (http://www.uottawa.ca/academic/info/regist/1516/calendars) for the previous requirements.

**ANP 1105** Human Anatomy and Physiology I \(3\) Units

**ANP 1106** Human Anatomy and Physiology II \(3\) Units

**BIO 1130** Introduction to Organismal Biology \(3\) Units

**BIO 1140** Introduction to Cell Biology \(3\) Units

**CHM 1311** Principles of Chemistry \(3\) Units

**CHM 1321** Organic Chemistry I \(3\) Units

**MAT 1330** Calculus for the Life Sciences I \(3\) Units

**MAT 1332** Calculus for the Life Sciences II \(3\) Units

**PHY 1321** Principles of Physics I \(3\) Units

**PSY 1101** Introduction to Psychology: Foundations \(3\) Units

3 course units from:

**PSY 1102** Introduction to Psychology: Applications \(3\) Units

**PSY 2114** Lifespan Psychology

3 optional course units in English (ENG) at the 1000 or 2000 level, excluding ENG 1112 and ENG 1131

**BCH 2333** Introduction to Biochemistry \(3\) Units

**BIO 2133** Genetics \(3\) Units

**CHM 2120** Organic Chemistry II \(3\) Units

**CHM 2123** Laboratory of Organic Chemistry II \(3\) Units

**CHM 2132** Physical Chemistry for the Life Sciences \(3\) Units

CHM 2356 Molecular Biology Laboratory

**BIO 1151** Molecular Biology Laboratory

9 course units from:

**BIM 4009** Research Project - Biomedical Science \(9\) Units

or 9 optional course units at the 3000 or 4000 level from the list of optional courses

**BIM 4316** Modern Bioanalytical Chemistry \(3\) Units

**BIM 4920** Seminar I Evaluating Science \(1.5\) Units

**BIM 4921** Seminar II Developing and Communicating Science \(1.5\) Units

**CHM 4354** Principles of Instrumental Analysis \(3\) Units

**PHA 4107** Introductory Pharmacology - Drugs and Living Systems \(3\) Units

3 course units from the list of optional courses \(3\) Units

3 optional course units at the 3000 or 4000 level offered by the Faculty of Science \(3\) Units

15 elective course units \(15\) Units

Total: \(120\) Units

List of Optional Courses

**BCH 4123** Pathological Biochemistry \(3\) Units

**BCH 4172** Topics in Biotechnology \(3\) Units

**BIM 4103** Selected Topics in Biomedical Science \(3\) Units

**BIO 4158** Applied Biostatistics \(3\) Units

**BPS 3350** Transition Metal Chemistry \(3\) Units

**BPS 4102** Pharmaceuticals: Federal and International Regulations \(3\) Units

**BPS 4103** Selected Topics in Biopharmaceutical Science \(3\) Units

**BPS 4127** Advanced Techniques in Biosciences \(3\) Units

**BPS 4129** Advanced Chemical Biology \(3\) Units

**BPS 4131** Advanced Biopharmaceutical Science \(3\) Units

**BIM 4319** Enzyme Chemistry and Biocatalysis \(3\) Units

**MAT 3377** Sampling and Surveys \(3\) Units