BASC BIOMEDICAL MECHANICAL ENGINEERING AND BSC COMPUTING TECHNOLOGY

The purpose of the Biomedical Mechanical Engineering program is to graduate engineers proficient in the areas of biomedical engineering related to mechanical engineering. These include the design of medical devices such as artificial hearts, implants and prostheses, the development and selection of bio-compatible metallic and non-metallic materials for implants and medical equipment, robotics for medical applications, biomechanics and rehabilitation engineering.

The program structure parallels that of the regular Mechanical Engineering program, replacing eight courses in the regular program with biomedically-oriented courses.

This program has a broad scope, so that graduates may have a wide range of career choices, not only in the biomedical field but also in conventional mechanical engineering. Biomedical systems are among the most complex of mechanical systems; therefore, a strong and comprehensive education in standard mechanical engineering principles is provided, with emphasis on their application in biomedical systems.

This program is offered in English and in French.

French courses are available in first year and almost all of second year. Most third and fourth year courses are offered in English only.

Program Requirements

Upon completion of a Bachelor of Applied Science in Biomedical Mechanical Engineering, a student who completes the requirements specified below for 30 extra units will be eligible for a BSc in Computing Technology, as a second degree. The remaining 132 units are from their engineering degree; students follow the engineering degree requirements and the Computing Technology degree requirements in parallel. It is not allowed to obtain the Computing Technology degree without also completing the corresponding engineering degree.

Co-operative education 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.

BASc in Biomedical Mechanical Engineering [1]		129 Units
Compulsory Courses:		
CEG 2136	Computer Architecture I	3 Units
CEG 3136	Computer Architecture II	3 Units
CSI 2110	Data Structures and Algorithms	3 Units
CSI 2120	Programming Paradigms	3 Units
CSI 2372	Advanced Programming Concepts With C++	3 Units
CSI 3131	Operating Systems	3 Units
ITI 1100	Digital Systems I	3 Units
ITI 1120	Introduction to Computing I [2]	3 Units
ITI 1121	Introduction to Computing II	3 Units
MAT 1348	Discrete Mathematics for Computing	3 Units

3 course units from computer science (CSI), software engineering (SEG) or computer engineering (CEG) at the 2000, 3000 or 4000 level	3 Units
Total:	**162 Units**

Note(s)

1

Please consult the requirements for the BASc in Biomedical Mechanical Engineering (http://catalogue.uottawa.ca/en/undergrad/basc-biomedical-mechanical-engineering/) program.

2

This course replaces GNG 1106 in the BASc in Biomedical Mechanical Engineering, for the purpose of the double degree, BASc in Biomedical Mechanical Engineering and BSc in Computing Technology.