

# Biochemistry B.Sc. Honours Course Map

## First year



**CHEM 1001, CHEM 1002**  
General Chemistry



**BIOL 1103, BIOL 1104**  
Foundations of Biology



**MATH 1007, MATH 1107**  
Elementary Calculus I and Linear Algebra I



**PHYS 1007, PHYS 1008**  
Elementary University Physics

## Second year



**BIOC 2200**  
Cellular Biochemistry



**BIOC 2300**  
Physical Biochemistry  
or  
**CHEM 2103**  
Physical Chemistry I



**BIOL 2104**  
Introductory Genetics  
  
**BIOL 2001**  
Animals: Form and Function  
or  
**BIOL 2002**  
Plants: Form and Function



**CHEM 2203, CHEM 2204**  
Organic Chemistry I & II  
  
**CHEM 2303**  
Analytical Chemistry II  
  
**CHEM 2501**  
Introduction to Inorganic and Bioinorganic  
Chemistry



**STAT 2507**  
Introduction to Statistical Modeling I

## Third year



**BIOC 3101 and 3102**  
General Biochemistry  
  
**BIOC 3103 and 4009**  
Practical Biochemistry

**BIOC 3202**  
Biophysical Techniques  
and Applications



**BIOL 3104**  
Molecular Genetics



0.5 credit from:  
  
**BIOL 3205**  
Plant Biochemistry and Physiology  
  
**BIOL 3033**  
Experimental Microbiology  
  
**BIOL 3305**  
Human and Comparative Physiology  
\*These are a few examples



**CHEM 3201**  
Advanced Organic I  
  
**CHEM 3202**  
Advanced Organic II  
or  
**CHEM 3205**  
Experimental Organic Chemistry

## Fourth year



**BIOC 4001**  
Methods in Biochemistry



0.5 credit from courses such as:  
  
**BIOC 3008**  
Bioinformatics  
  
**BIOC 4200**  
Immunology  
  
**BIOC 4009**  
Biochemistry of Disease  
  
**BIOC 4201**  
Advanced Cell Culture and  
Tissue Engineering  
\*These are a few examples



Honours Project (1.0 credit):  
  
**BIOC 4906**  
Interdisciplinary Research  
Project  
  
**BIOC 4907**  
Honours Essay and  
Research Proposal  
  
**BIOC 4908**  
Research Project

1.0 credit from list of approved courses in BIOL

1.5 credits from list of approved courses in BIOC, BIOL, CHEM, PHYS, MATH or COMP

0.5 credit from Free Electives

2.0 credits in approved courses outside the Faculties of Science and Engineering (may include NSCI 1000)



**Carleton**  
University

Institute of  
Biochemistry