

BIOANTHROPOLOGY (BANT)

Updated Jan. 15, 2013

Note: The department/program code BANT replaces the former code 06. The department/program code ANTH replaces the former code 02. Students cannot hold credit in ANTH-xxxx and the former 02.xxxx having the same course number (e.g., ANTH-1001(6) and 02.1001(6)).

Coordinator: M. Roksandic; Program Advisors: M. Wiegand, M. MacKinnon.

DEGREE/PROGRAM OFFERED

3-Year BSc

3-Year BSc (Business Stream)

4-Year BSc

4-Year BSc (Business Stream)

INTRODUCTION

This degree combines the information and methodologies of Anatomy, Anthropology, Archaeology, Biochemistry and Biology with the techniques of the physical sciences to examine human biological systems of the past and present. It is an interdisciplinary program which is founded primarily on courses from the departments of Anthropology and Biology. Students in the Program will gain an understanding of comparative anatomy, cellular biology, methods in archaeology and primate evolution. They will also obtain experience in up-to-date laboratory techniques and procedures. This Program offers students the option of combining two exciting disciplines to create a skill set that is interesting and unique.

The Program offers both a 90 credit hour BSc (General) and a 120 credit hour BSc Four Year. Students pursuing a 3-year or 4-year BSc have the opportunity to take a Business Stream (see the "Science with a Business Stream" section of this Course Calendar).

The Bioanthropology Program may lead to careers in government and hospital laboratories, forensic laboratories, museums and zoos. Graduates in the 4 Year Degree option could also pursue further studies in either Anthropology or Biology. This Program may also be of interest to students intending to go into medicine, or dentistry.

REQUIREMENTS FOR A 3-YEAR BSc IN BIOANTHROPOLOGY

ADMISSION REQUIREMENT	Students must meet with a Program Advisor or the Program Coordinator in planning their courses.		
GRADUATION REQUIREMENT	90 credit hours		
RESIDENCE REQUIREMENT			
Degree:	Minimum 30 credit hours		
Major:	Minimum 18 credit hours		
GENERAL DEGREE REQUIREMENT			
Humanities:	12 credit hours in Humanities		
Writing:	Minimum 3 credit hours of Academic Writing		
Distribution:	Minimum three (3) credit hours from each of five (5) different subjects.		
MAJOR REQUIREMENT			
Single Major:	Minimum 42 credit hours with 33 credit hours to be taken from required courses and 9 credit hours as dictated from listings in LIST A and LIST B, below.		
Double Major:	Minimum 42 credit hours in Bioanthropology and specified number of credit hours in other Major (may vary depending on interdisciplinary courses completed as they may be able to be credited to both Majors).		

Required courses:

ANTH-1001(6)	Introductory Anthropology	ANTH-2300(3)	Method and Theory in Biological Anthropology
OR		BIOL-1115(3)	Cells and Cell Processes
[ANTH-1002(3)	Introductory Cultural Anthropology <u>and</u>	BIOL-1116(3)	Evolution, Ecology and Biodiversity
ANTH-1003(3)]	Introductory Biological Anthropology and Archaeology)	BIOL-2301(3)	Genetics
ANTH-2100(3)	Method and Theory in Cultural Anthropology	CHEM-1111(3)	Introduction to the Chemical Properties of Matter
ANTH-2200(3)	Method and Theory in Archaeology	CHEM-1112(3)	Basic Principles of Chemical Reactivity
		STAT-1501(3)	Elementary Biological Statistics I

Minimum of 3 credit hours as chosen from courses in LIST A – listed below

Minimum of 6 credit hours as chosen from courses in LIST A or LIST B – listed below

REQUIREMENTS FOR A 4-YEAR BSc IN BIOANTHROPOLOGY

ADMISSION REQUIREMENT	Students must consult with the Program Coordinator or a Program Advisor when planning their studies.
GRADUATION REQUIREMENT	120 credit hours
RESIDENCE REQUIREMENT	
Degree:	Minimum 60 credit hours
Major:	Minimum 30 credit hours
GENERAL DEGREE REQUIREMENT	
Humanities:	12 credit hours
Writing	Minimum 3 credit hours of Academic Writing
Distribution:	Minimum three (3) credit hours from each of five (5) different subjects.
MAJOR REQUIREMENT	
Single Major:	Minimum 69 credit hours with 33 credit hours to be taken from required courses and 36 credit hours as dictated from listings in LIST A and LIST B, below.
Double Major:	Minimum 69 credit hours in Bioanthropology and specified number of credit hours in other Major; may vary depending on Interdisciplinary courses completed as they may be able to be credited to both Majors.

Required courses:

ANTH-1001(6)	Introductory Anthropology	BIOL-1115(3)	Cells and Cell Processes
OR		BIOL-1116(3)	Evolution, Ecology and Biodiversity
[ANTH-1002(3)	Introductory Cultural Anthropology and	BIOL-2301(3)	Genetics
ANTH-1003(3)]	Introductory Biological Anthropology and Archaeology)	CHEM-1111(3)	Introduction to the Chemical Properties of Matter
ANTH-2100(3)	Method and Theory in Cultural Anthropology	CHEM-1112(3)	Basic Principles of Chemical Reactivity
ANTH-2200(3)	Method and Theory in Archaeology	STAT-1501(3)	Elementary Biological Statistics I
ANTH-2300(3)	Method and Theory in Biological Anthropology		

Minimum of 18 credit hours as chosen from courses in LIST A – listed below

Minimum of 18 credit hours as chosen from courses in LIST B – listed below

Bioanthropology: LIST A and LIST B course listings

LIST A: Biological Anthropology courses, defined as Area IV by the Department of Anthropology in the current calendar (see below) together with any experimental courses defined by the Department of Anthropology as Biological Anthropology:

ANTH-2304(3)	Introduction to Forensic Anthropology	ANTH-4212(3)	Advanced Zooarchaeology
ANTH-3207(3)	Zooarchaeology	ANTH-4303(3)	Problems in Human and Primate Evolution
ANTH-3302(3)/4302(3)	Primate Adaptation, Biology and Evolution	ANTH-4305(3)	Problems in Biological Anthropology
ANTH-3306(3)	Human Osteology	ANTH-4307(3)	Advanced Human Osteology
ANTH-3308(3)/4308(3)	Human Evolution	ANTH-4311(3)	Human Paleopathology
ANTH-3309(3)/4309(3)	Primate Behaviour	ANTH-4001(3)	Directed Readings/Research in Anthropology
		ANTH-4001(6)	Directed Readings/Research in Anthropology

LIST B: Biology, Chemistry, and Kinesiology courses:

BIOL-2111(6)	Comparative Chordate Zoology
BIOL-2451(3)	Introduction to Animal Behaviour
BIOL-3202(3)	Histology
BIOL-3221(3)	Cell Biology
BIOL-3303(3)	Molecular Genetics and Genomics
BIOL-3492(3)	Quantitative and Theoretical Biology
BIOL-3602(3)	Comparative Animal Physiology I
BIOL-3603(3)	Comparative Animal Physiology II
BIOL-3562(3)	Human Embryology
BIOL-3492(3)	Quantitative and Theoretical Biology
BIOL-4303(3)	Population Genetics
BIOL-4331(3)	Evolutionary Biology
BIOL-4501(3)	Developmental Biology
BIOL-4502(3)	Molecular Cell Biology

BIOL-4601(3) Ecological Animal Physiology
CHEM-2202(3) Organic Chemistry I
CHEM-2203(3) Organic Chemistry II
CHEM-3502(3) Intermediate Biochemistry I: Structure, Function and Energetics of Biomolecules
CHEM-3503(3) Intermediate Biochemistry II: Intermediary Metabolism
KIN-2301(3) Human Anatomy

Recommended: Students planning on graduate studies should seriously consider taking **BIOL-4111(6) Honours Thesis** course.
 Students are advised to take **GEOG-1202(3) Introductory Earth Science**.
Students considering admission to programs in the health sciences (e.g., medical school) are urged to check with the programs to which they plan to apply with respect to their requirements. In particular, such students may need to take more courses in Chemistry than are required.

GENERAL INFORMATION

Prerequisites

Chemistry 40S AND Either Pre-Calculus or Applied Mathematics are required for registration in **BIOL-1115(3)** Cells and Cellular Processes, **BIOL-1116(3)** Evolution, Ecology and Biodiversity, **CHEM-1111(3)** Introduction to the Chemical Properties of Matter and **CHEM-1112(3)** Basic Principles of Chemical Reactivity.

NOTE: Course Listings and Descriptions can be found under the appropriate Departmental Listings: Anthropology (02), Biology (05), Chemistry (08), Statistics (53)

Bioanthropology: Suggested Course Selection for 3-Year Degree

Year 1

ANTH-1001(6) Introductory Anthropology
 BIOL-1115(3) Cells and Cellular Processes
 BIOL-1116(3) Evolution, Ecology and Biodiversity
 CHEM-1111(3) Introduction to the Chemical Properties of Matter
 CHEM-1112(3) Basic Principles of Chemical Reactivity
 xx.xxxx(6) Humanities
 RHET-1103(3) Academic Writing: Science
 STAT-1501(3) Elementary Biological Statistics I

Year 2

ANTH-2100(3) Method and Theory in Cultural Anthropology
 ANTH-2200(3) Method and Theory in Archaeology
 ANTH-2300(3) Method and Theory in Biological Anthropology
 BIOL-2301(3) Genetics
 xx.xxxx(6) Humanities
 3 credit hours as chosen from LIST A or LIST B above
 9 credit hours of electives

Year 3

3 credit hours of Biological Anthropology electives – as chosen from LIST A above
 3 credit hours as chosen from LIST A or LIST B above
 21 credit hours of electives

Bioanthropology: Suggested Course Selection for 4-Year Degree

Year 1

ANTH-1001(6) Introductory Anthropology
 BIOL-1115(3) Cells and Cellular Processes
 BIOL-1116(3) Evolution, Ecology and Biodiversity
 CHEM-1111(3) Introduction to the Chemical Properties of Matter
 CHEM-1112(3) Basic Principles of Chemical Reactivity
 xx.xxxx(6) Humanities
 RHET-1103(3) Academic Writing: Science
 STAT-1501(3) Elementary Biological Statistics I

Year 2

ANTH-2100(3) Method and Theory in Cultural Anthropology
 ANTH-2200(3) Method and Theory in Archaeology
 ANTH-2300(3) Method and Theory in Biological Anthropology
 BIOL-2301(3) Genetics
 xx.xxxx(6) Humanities
 6 credit hours of Biology/Chemistry/Kinesiology electives – as chosen from LIST B above
 6 credit hours of electives

Year 3

9 credit hours of Biological Anthropology electives – as chosen from LIST A above
 6 credit hours of Biology/Chemistry/Kinesiology electives – as chosen from LIST B above
 15 credit hours of electives

Year 4

9 credit hours of Biological Anthropology electives – as chosen from LIST A above

6 credit hours of Biology/Chemistry/Kinesiology electives – as chosen from LIST B above

15 credit hours of electives

NOTE: Certain courses are not offered annually. Therefore, students should seek advising on Year 3 and Year 4 registration.