

# BIOANTHROPOLOGY (BANT)

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Coordinator: M. Roksandic

## DEGREE/PROGRAM OFFERED

3-Year BSc

3-Year BSc (Business Stream)

4-Year BSc

4-Year BSc (Business Stream)

Minor

## INTRODUCTION

This degree combines the information and methodologies of Anatomy, Anthropology, Archaeology, Biochemistry, Biology and Geography with the techniques of the physical sciences to examine human biological systems of the past and present. It is an Anthropology program which also draws on courses from the departments of Biology, Chemistry, Kinesiology, and Geography. Students in the Program will gain an understanding of comparative anatomy, cellular biology, methods in archaeology and human evolution. They will also obtain experience in up-to-date laboratory techniques and procedures. This Program offers students the option of combining experience from different fields in the Sciences and Arts 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 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 Anthropology and related sciences. This Program may also be of interest to students intending to go into medicine, dentistry, or other health-related fields.

## REQUIREMENTS FOR A 3-YEAR BSc IN BIOANTHROPOLOGY

<b>ADMISSION REQUIREMENT</b>	Students must meet with a Program Advisor or the Program Coordinator in planning their courses.		
<b>GRADUATION REQUIREMENT</b>	90 credit hours		
<b>RESIDENCE REQUIREMENT</b>			
Degree:	Minimum 30 credit hours		
Major:	Minimum 18 credit hours		
<b>GENERAL DEGREE REQUIREMENT</b>			
Humanities:	12 credit hours in Humanities		
Writing:	Minimum 3 credit hours of Academic Writing		
Indigenous:	3 credit hours in designated Indigenous requirement courses		
Distribution:	Minimum three (3) credit hours from each of five (5) different subjects.		
Maximum Introductory Courses:	Students may use a maximum of 42 credit hours at the 1000 level. Of these, a maximum of 6 credit hours may be below the 1000 level. As a result, students must take a minimum of 48 credit hours at the 2000-level or above in order to not exceed the maximum number of introductory courses.		
<b>MAJOR REQUIREMENT</b>			
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:			
<b>ANTH-1001(6)</b>	Introductory Anthropology	<b>BIOL-1115(3)</b>	Cells and Cell Processes
<b>OR</b>		<b>BIOL-1116(3)</b>	Evolution, Ecology and Biodiversity
<b>[ANTH-1002(3)</b>	Introductory Cultural Anthropology <b>and</b>	<b>BIOL-2301(3)</b>	Genetics
<b>ANTH-1003(3)]</b>	Introductory Biological Anthropology and Archaeology	<b>CHEM-1111(3)</b>	Introduction to the Chemical Properties of Matter
<b>BANT-2300(3)</b>	Method and Theory in Biological Anthropology	<b>CHEM-1112(3)</b>	Basic Principles of Chemical Reactivity
		<b>STAT-1501(3)</b>	Elementary Biological Statistics I
<b>Students are required to take an additional 6 credit hours from the below courses:</b>			
<b>ANTH-2100(3)</b>	Method and Theory in Cultural Anthropology		
<b>ANTH-2200(3)</b>	Method and Theory in Archaeology		
<b>ANTH-2400(3)</b>	Method and Theory in Linguistic Anthropology		

Minimum of 3 credit hours as chosen from courses in LIST A – listed on following pages

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

## REQUIREMENTS FOR A 4-YEAR BSc IN BIOANTHROPOLOGY

<b>ADMISSION REQUIREMENT</b>	Students must consult with the Program Coordinator when planning their studies.
<b>GRADUATION REQUIREMENT</b>	120 credit hours
<b>RESIDENCE REQUIREMENT</b>	
Degree:	Minimum 60 credit hours
Major:	Minimum 30 credit hours
<b>GENERAL DEGREE REQUIREMENT</b>	
Humanities:	12 credit hours
Writing	Minimum 3 credit hours of Academic Writing
Indigenous:	3 credit hours in designated Indigenous requirement courses
Distribution:	Minimum three (3) credit hours from each of five (5) different subjects.
Maximum Introductory Courses:	Students may use a maximum of 42 credit hours at the 1000 level. Of these, a maximum of 6 credit hours may be below the 1000 level. As a result, students must take a minimum of 78 credit hours at the 2000-level or above in order to not exceed the maximum number of introductory courses.
<b>MAJOR REQUIREMENT</b>	
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:

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

Students are required to take an additional 6 credit hours from the below courses:

<b>ANTH-2100(3)</b>	Method and Theory in Cultural Anthropology
<b>ANTH-2200(3)</b>	Method and Theory in Archaeology
<b>ANTH-2400(3)</b>	Method and Theory in Linguistic 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:

<b>BANT-2119(3)</b>	Medical Anthropology	<b>BANT-4212(3)</b>	Advanced Zooarchaeology
<b>BANT-2304(3)</b>	Introduction to Forensic Anthropology	<b>BANT-4305(3)</b>	Problems in Biological Anthropology
<b>BANT-3206(3)</b>	Origins of Human Culture	<b>BANT-4307(3)</b>	Advanced Human Osteology
<b>BANT-3207(3)</b>	Zooarchaeology	<b>BANT-4311(3)</b>	Human Paleopathology
<b>BANT-3306(3)</b>	Human Osteology	<b>BANT-4001(3)</b>	Directed Readings/Research in Anthropology
<b>BANT-3308(3)/4308(3)</b>	Human Evolution	<b>BANT-4001(6)</b>	Directed Readings/Research in Anthropology
		<b>BANT-4270(3)</b>	International Field School

**LIST B:** Biology, Chemistry, Geography and Kinesiology courses:

<b>BIOL-2111(6)</b>	Comparative Chordate Zoology
<b>BIOL-2451(3)</b>	Introduction to Animal Behaviour
<b>BIOL-3202(3)</b>	Histology
<b>BIOL-3221(3)</b>	Cell Biology
<b>BIOL-3303(3)</b>	Molecular Genetics and Genomics
<b>BIOL-3492(3)</b>	Quantitative and Theoretical Biology
<b>BIOL-3602(3)</b>	Comparative Animal Physiology I

**BIOL-3603(3)** Comparative Animal Physiology II  
**BIOL-3562(3)** Human Reproductive Biology  
**BIOL-3563(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  
**GEOG-2306(3)** Introduction to Geographic Information Systems  
**GEOG-3219(3)** Quaternary Environments  
**KIN-2301(3)** Human Anatomy  
**KIN-3201(2)** Biomechanics

Recommended:

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.**

## REQUIREMENTS FOR A MINOR IN BIOANTHROPOLOGY

Degree: Students completing any undergraduate degree program are eligible to complete the Minor.  
 Minor: 18 credit hours in the Minor subject, with a minimum of 12 credit hours above the 1000 level.  
 Residence requirement: Minimum 12 credit hours in the Minor subject.  
 Required courses: 6 credit hours at the 1000 level:  
     ANTH-1001(6) Introduction to Anthropology  
     or both ANTH-1002(3) Introductory Cultural Anthropology  
     and ANTH-1003(3) Introductory Biological Anthropology and Archaeology  
 6 credit hours at the 2000 level from the following requirements:  
     BANT-2300(3) Method and Theory in Biological Anthropology  
     and one of the following:  
     ANTH-2100(3) Method and Theory in Cultural Anthropology  
     ANTH-2200(3) Method and Theory in Archaeology  
     ANTH-2400(3) Method and Theory in Linguistic Anthropology  
 6 credit hours at the 3000 level from the following courses:  
     BANT-3306(3) Human Osteology  
     BANT-3308(3) Human Evolution  
 Restrictions: Students cannot declare the same subject as a Major and as a Minor

## 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  
 RHET-1103(3) Academic Writing: Science  
 STAT-1501(3) Elementary Biological Statistics I  
 6 credit hours in Humanities

#### **Year 2**

Two of the three core courses

ANTH-2100(3) Method and Theory in Cultural Anthropology  
 ANTH-2200(3) Method and Theory in Archaeology  
 ANTH-2400(3) Method and Theory in Linguistic Anthropology  
 BANT-2300(3) Method and Theory in Biological Anthropology  
 BIOL-2301(3) Genetics

3 credit hours as chosen from LIST A or LIST B above  
6 credit hours in Humanities  
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  
RHET-1103(3) Academic Writing: Science  
STAT-1501(3) Elementary Biological Statistics I  
6 credit hours in Humanities

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

All course descriptions for all undergraduate programs can now be found in one large PDF called "All Course Descriptions" in the Academic Calendar section of the University website: <http://uwinnipeg.ca/academics/calendar/index.html>