

BIOANTHROPOLOGY (BANT)

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Coordinator: M. Roksandic, Y. Chinique de Armas

DEGREE/PROGRAM OFFERED

3-Year BSc
3-Year BSc (Business Stream)
4-Year BSc
4-Year BSc (Business Stream)
Honours BSc
Minor

INTRODUCTION

This degree combines the information and methodologies of Anthropology, Archaeology, Anatomy, 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

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

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

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

ADMISSION REQUIREMENT	Students must consult with the Program Coordinator 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
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.
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 <u>and</u>	BIOL-2301(3)	Genetics
ANTH-1003(3)]	Introductory Biological Anthropology and Archaeology	CHEM-1111(3)	Introduction to the Chemical Properties of Matter
BANT-2300(3)	Method and Theory in Biological Anthropology	CHEM-1112(3)	Basic Principles of Chemical Reactivity
		STAT-1501(3)	Elementary Biological Statistics I

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

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

REQUIREMENTS FOR AN HONOURS BSc IN BIOANTHROPOLOGY

ADMISSION REQUIREMENT	Students must have completed a minimum of 30 credit hours. Entry, continuing and graduation minimum GPA is 3.0 (B) in Honours Subject courses and 2.75 (C+) in non-Honours Subject courses. The minimum 3.0 GPA (B) is based on all attempts (including course repeats and failures) in Honours Subject courses. The minimum 2.75 GPA (C+) in all non-Honours Subject courses is calculated as for the general degree (i.e., F's are not included, and in the case of repeated courses, only the highest grade is used).
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GRADUATION REQUIREMENT	120 credit hours
RESIDENCE REQUIREMENT	
Degree:	Minimum 60 credit hours
Honours:	Minimum 30 credit hours, including a minimum of 18 credit hours at the upper level (3000/4000) of which a minimum of 12 credit hours must be at 4000 level.
GENERAL DEGREE REQUIREMENT	
Humanities:	12 credit hours in Humanities
Science:	6 credit hours
Writing:	Minimum 3 credit hours of Academic Writing.
Indigenous:	3 credit hours in designated Indigenous requirement courses

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.

Distribution: Minimum three (3) credit hours from each of five (5) different subjects.

HONOURS SUBJECT REQUIREMENTS

Single Honours: Minimum 72 credit hours with 33 credit hours to be taken from required courses and 39 credit hours as dictated from listings in LIST A and LIST B below.
Minimum 30 credit hours in upper-level (3000/4000) Honours Subject courses of which a minimum of 15 credit hours must be at the 4000 level.

Double Honours: Minimum 72 credit hours in Bioanthropology required, LIST A and B courses, 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. Minimum 24 credit hours at the upper level (3000/4000) in the BANT component of the double Honours of which a minimum of 15 credit hours must be at the 4000 level. For the requirements of the other Honours subject consult the department involved.

Required courses:

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

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

Minimum 21 credit hours as chosen from courses in LIST A - listed below of which one has to be the BANT-4011 Honours Thesis

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:

BANT-2119(3) Medical Anthropology
BANT-2304(3) Introduction to Forensic Anthropology
BANT-3206(3) Origins of Human Culture
BANT-3207(3) Zooarchaeology
BANT-3302/4302(3) Primate Adaptation, Biology and Evolution
BANT-3306(3) Human Osteology
BANT-3308/4308(3) Human Evolution
BANT-3309/4309(3) Primate Behaviour
BANT-4212(3) Advanced Zooarchaeology
BANT-4305(3) Problems in Biological Anthropology
BANT-4307(3) Advanced Human Osteology
BANT-4311(3) Human Paleopathology
BANT-4001(3) Directed Readings/Research in Anthropology
BANT-4001(6) Directed Readings/Research in Anthropology
BANT-4011(6) Honours Thesis
BANT-4230(6) International Field School

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

BIOL-1112(6) Human Anatomy and Physiology
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 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>