### 2011-2012 Undergraduate Calendar

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2011-2012 academic year, including the Summer Semester 2011, the Fall Semester 2011 and the Winter Semester 2012.

For your convenience the Undergraduate Calendar is available in PDF format.

If you wish to link to the Undergraduate Calendar please refer to the Linking Guidelines.

The University is a full member of:

• The Association of Universities and Colleges of Canada

Contact Information:

University of Guelph

Guelph, Ontario, Canada

N1G 2W1

519-824-4120

http://www.uoguelph.ca

Revision Information:

Date	Description
February 1, 2011	Initial Publication
April 4, 2011	Second Publication
July 20, 2011	Third Publication
October 12, 2011	Fourth Publication
March 15, 2014	Updates for AODA Compliance



### **Disclaimer**

#### **University of Guelph 2011**

The information published in this Undergraduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2011-2012 academic year, including the Summer Semester 2011, the Fall Semester 2011 and the Winter Semester 2012.

The University reserves the right to change without notice any information contained in this calendar, including fees, any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs. The publication of information in this calendar does not bind the University to the provision of courses, programs, schedules of studies, or facilities as listed herein.

The University will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by faculty, staff or students of the University or by others, civil unrest or disobedience, public health emergencies, or any other cause of any kind beyond the reasonable control of the University.

In the event of a discrepancy between a print version (downloaded) and the Web version, the Web version will apply,

Published by: Undergraduate Program Services

### Introduction

#### Collection, Use and Disclosure of Personal Information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <a href="http://www.e-laws.gov.on.ca/index.html">http://www.e-laws.gov.on.ca/index.html</a>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes. Certain personal information is disclosed to external agencies, including the Ontario Universities Application Centre, the Ministry of Training, Colleges and Universities, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrarial Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrarial Services at the University at (519) 824-4120 or see <a href="http://www.uoguelph.ca/registrar/registrar/index.cfm?index.">http://www.uoguelph.ca/registrar/registrar/registrar/index.cfm?index.</a>

#### **Statistics Canada - Notification of Disclosure**

For further information, please see Statistics Canada's web site at http://www.statcan.ca and Section XIV Statistics Canada.

#### **Address for University Communication**

Depending on the nature and timing of the communication, the University may use one of these addresses to communicate with students. Students are, therefore, responsible for checking all of the following on a regular basis:

#### **Email Address**

The University issued email address is considered an official means of communication with the student and will be used for correspondence from the University. Students are responsible for monitoring their University-issued email account regularly. See Section I.--Statement of Students' Academic Responsibilities for more information.

#### **Home Address**

Students are responsible for maintaining a current mailing address with the University. Address changes can be made, in writing, through Undergraduate Program Services.

#### **Name Changes**

The University of Guelph is committed to the integrity of its student records, therefore, each student is required to provide either on application for admission or on personal data forms required for registration, his/her complete, legal name. Any requests to change a name, by means of alteration, deletion, substitution or addition, must be accompanied by appropriate supporting documentation.

#### Student Confidentiality and Release of Student Information Policy Excerpt

The University undertakes to protect the privacy of each student and the confidentiality of his or her record. To this end the University shall refuse to disclose personal information to any person other than the individual to whom the information relates where disclosure would constitute an unjustified invasion of the personal privacy of that person or of any other individual. All members of the University community must respect the confidential nature of the student information which they acquire in the course of their work.

Complete policy at <a href="http://www.uoguelph.ca/policies/pdf/ORSInfoReleasePolicy060610.pdf">http://www.uoguelph.ca/policies/pdf/ORSInfoReleasePolicy060610.pdf</a>.

Table of Contents

## **Table of Contents**

Sachelor of Science in Environmental Sciences [B.Sc.(Env.)]	443
Program Information	443
Earth and Atmospheric Science (EAAS)	443
Earth and Atmospheric Science (EAAS:C)	444
Ecology (ECOL)	445
Ecology (ECOL:C)	445
Environmental Biology (ENVB)	446
Environmental Biology (ENVB:C)	447
Environmental Economics and Policy (EEP)	447
Environmental Economics and Policy (EEP:C)	448
Environmental Geography (ENVG)	448
Environmental Geography (ENVG:C)	449
Natural Resources Management (NRM)	449
Natural Resources Management (NRM:C)	450

ii Table of Contents

# **Bachelor of Science in Environmental Sciences** [B.Sc.(Env.)]

#### **Program Information**

#### **Objectives of the Program**

The Environmental Sciences program is designed to provide a strong interdisciplinary grounding in specific environmental sciences including the socioeconomic context in which environmental issues are resolved.

There is an emphasis on management and decision-making skills for the application of scientific knowledge to environmental problems, and the evaluation of appropriate environmental policies. A practical perspective based on defining and resolving problems is central to the program, and this is often done in the context of group work.

Substantial emphasis is placed on communication skills, including the development of competence in both written and oral presentations. These skills will be progressively developed in core courses from the first to the fourth year. Students in the final year of their program will be expected to take part in more intensive communication skill development. Graduates will seek employment in a range of fields, from government agencies to private industry and research.

#### Academic Counselling

General information on the degree program is available from the Program Counsellor. Advising for each major is available through the assigned faculty advisor responsible for the major. Students are encouraged to seek the advice of the faculty advisors when choosing restricted electives and planning course selections.

#### Degree

The degree granted for the successful completion of this honours program will be the Bachelor of Science in Environmental Sciences--B.Sc.(Env.).

#### **Continuation of Study**

Students are advised to consult the regulations for Continuation of Study in Section VIII--Undergraduate Degree Regulations and Procedures of this Calendar.

#### **Conditions for Graduation**

In order to graduate from the B.Sc.(Env.) program, students must successfully complete a minimum of 20.00 credits including all the stated course requirements for the program. As well, students must achieve a cumulative average of 60% or higher over all course attempts.

#### **Environmental Sciences (Co-op)**

A 5-year Honours Program in Environmental Sciences is offered as a Co-operative Education Program. This option is offered within the B.Sc. (Env.) degree and is available to all majors. The course requirements are the same as those listed for the regular B.Sc. (Env.) program, by the Co-operative Education Program and as outlined in the Continuation of Study policy (Section VIII--Undergraduate Degree Regulations & Procedures).

3 co-op work terms (COOP\*1000, COOP\*2000, COOP\*3000) are required. An optional 4th co-op work term (COOP\*4000) is available. COOP\*1100 must be completed during semester 2.

Environmental Sciences Co-op Work Term Schedule

Year	Fall	Winter	Summer
1	Academic Term 1	Academic Term 2	Off
2	Academic Term 3	COOP*1000	Academic Term 4
3	COOP*2000	Academic Term 5	COOP*3000
4	Academic Term 6	Academic Term 7	COOP*4000 (Optional)
5	Academic Term 8	N/A	N/A

Since some of the course requirements in the degree program (core or major) are not offered each semester, careful planning and program consultation with the Faculty Co-op Advisor is essential. In particular, students are encouraged to seek advice when choosing for their Summer academic semester.

#### The Environmental Sciences Program

The degree in Environmental Sciences consists of a minimum of 20.00 credits, as follows:

- 1. 5.00 First Year Curriculum
- 2. 5.00 Environmental Sciences Core
- 3. 7.00 Environmental Sciences Major
- 4. free electives\*

Within these courses, students must include at least 6.00 credits at the 3000 or 4000 level, and no program may include more than 7.00 credits at the 1000 level.

\* There are not specific subject requirements for the elective courses, however, you may NOT select the following: BIOL\*1500, BOT\*1200, CHEM\*1100, CIS\*1000, GEOL\*1100, MET\*1000, MICR\*1020, MBG\*1000, PHYS\*1600.

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

#### First Year Curriculum

[0.501]

The first year courses have been selected to provide students with sufficient background and knowledge to enter any one of the Environmental Sciences majors.

Discovering Biodiversity

#### Semester 1 BIOL\*1070

CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2		
CHEM*1050	[0.50]	General Chemistry II
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
N-4 C 1-		1 . COOD*1100 I . 1 .: C: E1

Note: Co-op students must select COOP\*1100 Introduction to Co-operative Education

#### **Environmental Sciences Core**

In addition to the common first year curriculum, students are required to take the following core Environmental Sciences courses in the semesters recommended in the schedule of studies:

BIOL*2060	[0.50]	Ecology
ENVS*2150	[0.50]	Terrestrial Systems
ENVS*3150	[0.50]	Aquatic Systems
ENVS*4011/2	[0.50]	Project in Environmental Sciences
ENVS*4300	[0.50]	Environmental Law & Regulation
MET*2030	[0.50]	Meteorology and Climatology
PHIL*2070	[0.50]	Philosophy of the Environment
One of:		
ECON*2100	[0.50]	Economic Growth and Environmental Quality
FARE*2700	[0.50]	Survey of Natural Resource Economics
One of:		
BIOL*4040	[0.50]	Natural Resources Policy
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance
One of:		
ECON*2740	[0.50]	Economic Statistics
GEOG*2460	[0.50]	Analysis in Geography
STAT*2040	[0.50]	Statistics I

Note: the statistics course required is prescribed by the student's choice of major.

#### **Environmental Sciences Majors**

Earth and Atmospheric Science

Ecology

Environmental Biology

Environmental Economics and Policy

Environmental Geography

Natural Resources Managment

Requirements for each of these majors are described in the detailed schedules of studies below.

#### Earth and Atmospheric Science (EAAS)

### School of Environmental Sciences, Ontario Agricultural College

#### Majo

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

In this major there are fees charged to cover partial costs of some field trips. Students in need of financial assistance should approach the Chair of the department offering the course

#### Semester 1

BIOL*10/0	[0.50]	Discovering Biodiversity
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2		
CHEM*1050	[0.50]	General Chemistry II
ECON*1050	[0.50]	Introductory Microeconomics

GEOG*1300	[0.50]	Introduction to the Biophysical Environment	List D - Atmos	=	
PHYS*1130 One of:	[0.50]	Physics with Applications	MET*3050 MET*4210	[0.50] [0.50]	Microclimatology Atmospheric Experimentation and Instrumentation
BIOL*1080	[0.50]	Biological Concepts of Health			ic Science (EAAS:C)
BIOL*1090 Semester 3	[0.50]	Introduction to Molecular and Cellular Biology			iences, Ontario Agricultural College
ENVS*2150	[0.50]	Terrestrial Systems	Major		
GEOL*1050	[0.50]	Geology and the Environment	-	ot all cours	es in the "One of:" options are available each semester (I
MET*2030	[0.50]	Meteorology and Climatology			d to seek advice from the appropriate advisor when selectin
STAT*2040 One of:	[0.50]	Statistics I	and scheduling co		
ECON*2100	[0.50]	Economic Growth and Environmental Quality			arged to cover partial costs of some field trips. Students i
FARE*2700	[0.50]	Survey of Natural Resource Economics	course.	assistance s	should approach the Chair of the department offering the
Semester 4			Semester 1 - Fa	all	
BIOL*2060	[0.50]	Ecology	BIOL*1070	[0.50]	Discovering Biodiversity
GEOL*3060 SOIL*2010	[0.50] [0.50]	Groundwater Soil Science	CHEM*1040	[0.50]	General Chemistry I
One of:	[0.50]	Son Science	ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1210	[0.50]	Calculus II	MATH*1080 PHYS*1080	[0.50] [0.50]	Elements of Calculus I Physics for Life Sciences
MATH*2080	[0.50]	Elements of Calculus II	Semester 2 - W		Thysics for Life Sciences
STAT*2050 0.50 electives or r	[0.50] estricted ele	Statistics II ctives	CHEM*1050	[0.50]	General Chemistry II
Semester 5			COOP*1100	[0.00]	Introduction to Co-operative Education
GEOL*2110	[0.50]	Earth Material Science	ECON*1050	[0.50]	Introductory Microeconomics
One of:			GEOG*1300 PHYS*1130	[0.50] [0.50]	Introduction to the Biophysical Environment Physics with Applications
GEOG*3210 POLS*3370	[0.50]	Management of the Biophysical Environment Environmental Politics and Governance	One of:	[0.50]	Thysics with Applications
1.50 electives or r			BIOL*1080	[0.50]	Biological Concepts of Health
		bstituted for GEOG*3210 or POLS*3370 and would be	BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
taken in Semester	8.		Semester 3 - Fa		T 10
Semester 6			ENVS*2150 GEOL*1050	[0.50] [0.50]	Terrestrial Systems Geology and the Environment
ENVS*3150 GEOG*3420	[0.50] [0.50]	Aquatic Systems Remote Sensing of the Environment	MET*2030	[0.50]	Meteorology and Climatology
PHIL*2070	[0.50]	Philosophy of the Environment	STAT*2040	[0.50]	Statistics I
1.00 electives or r			One of:	[0.50]	E
Semester 7			ECON*2100 FARE*2700	[0.50] [0.50]	Economic Growth and Environmental Quality Survey of Natural Resource Economics
ENVS*4011	[0.00]	Project in Environmental Sciences	Winter Semest		Survey of Hadarat Hessource Zeonomies
ENVS*4300 2.00 electives or r	[0.50]	Environmental Law & Regulation	COOP*1000	[0.00]	Co-op Work Term I
Semester 8	estricted ere	ctives	Semester 4 - Su	ımmer	
ENVS*4012	[0.50]	Project in Environmental Sciences	BIOL*2060	[0.50]	Ecology
2.00 electives or r	estricted ele		PHIL*2070 SOIL*2010	[0.50] [0.50]	Philosophy of the Environment Soil Science
Restricted Elec			1.00 electives or r		
Students must cho GEOL*3250		he following: Field Methods in Geosciences	Fall Semester		
MET*4210	[0.50]	Atmospheric Experimentation and Instrumentation	COOP*2000	[0.00]	Co-op Work Term II
SOIL*4250	[0.50]	Soils in the Landscape	Semester 5 - W	inter	
		ospheric Science major are required to choose 3.50 credits	ENVS*3150	[0.50]	Aquatic Systems Remote Sensing of the Environment
		ents are encouraged to seek advice on their choices and are their B.Sc.(Env.) degree must be at the 3000-4000 level.	GEOG*3420 GEOL*3060	[0.50] [0.50]	Groundwater
		may be able to use courses not on this list towards their	One of:	[0.00]	
Earth and Atmosp	heric Scienc	ce restricted electives.	MATH*1210	[0.50]	Calculus II
List A - Enviro			MATH*2080 STAT*2050	[0.50]	Elements of Calculus II Statistics II
GEOL*2020	[0.50]	Stratigraphy	0.50 electives or r		
GEOL*2200 GEOL*3190	[0.50] [0.50]	Glacial Geology Environmental Water Chemistry	Summer Semes	ster	
GEOL*4090	[0.50]	Sedimentology	COOP*3000	[0.00]	Co-op Work Term III
GEOL*4130	[0.50]	Clay and Humic Chemistry	Semester 6 - Fa	all	
GEOL*4240	[0.50]	Geomicrobiology	ENVS*4011	[0.00]	Project in Environmental Sciences
List B - Soil Sci			GEOL*2110 One of:	[0.50]	Earth Material Science
PBIO*4100 SOIL*3060	[0.50] [0.50]	Soil Plant Relationships Environmental Soil Chemistry	GEOG*3210	[0.50]	Management of the Biophysical Environment
SOIL*3070	[0.50]	Environmental Soil Physics	POLS*3370	[0.50]	Environmental Politics and Governance
SOIL*3080	[0.50]	Soil and Water Conservation	1.50 electives or r		
SOIL*3200	[0.50]	Environmental Soil Biology	taken in Semester	•	bstituted for GEOG*3210 or POLS*3370 and would be
One of: SOIL*4090	[0.50]	Soil Management	Semester 7 - W		
SOIL*4130	[0.50]	Soil and Nutrient Management	ENVS*4012	[0.50]	Project in Environmental Sciences
List C - Water			2.00 electives or r		ectives
ENGG*2550	[0.50]	Water Management	Summer Semes	_	
ENGG*3650	[0.50]	Hydrology Sadimentary Processes	COOP*4000	[0.00]	Co-op Work Term IV
GEOG*4150	[0.50]	Sedimentary Processes	Semester 8 - Fa	ııı	
GEOL*3190	[0.50]	Environmental Water Chemistry	ENVS*4300	[0.50]	Environmental Law & Regulation

#### **Restricted Electives**

Students must choose one of the following:

[0.50] GEOL\*3250 Field Methods in Geosciences MET\*4210 [0.50]Atmospheric Experimentation and Instrumentation SOIL\*4250 [0.50]Soils in the Landscape

Students in the Earth and Atmospheric Science major are required to choose 3.50 credits from the following lists. Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of the B.Sc.(Env.) degree must be at the 3000-4000 level. With prior approval, students may be able to use courses not on this list towards their Earth and Atmospheric Science restricted electives.

#### List A - Environmental Geology

GEOL*2020	[0.50]	C++:
GEOL*2020	[0.50]	Stratigraphy
GEOL*2200	[0.50]	Glacial Geology
GEOL*3190	[0.50]	Environmental Water Chemistry
GEOL*4090	[0.50]	Sedimentology
GEOL*4130	[0.50]	Clay and Humic Chemistry
GEOL*4240	[0.50]	Geomicrobiology
T D . C . I C		

List B - Soil Science				
PBIO*4100	[0.50]	Soil Plant Relationships		
SOIL*3060	[0.50]	Environmental Soil Chemistry		
SOIL*3070	[0.50]	Environmental Soil Physics		
SOIL*3080	[0.50]	Soil and Water Conservation		
SOIL*3200	[0.50]	Environmental Soil Biology		
SOIL*4090	[0.50]	Soil Management		
List C - Water				
ENGG*2550	[0.50]	Water Management		
ENGG*3650	[0.50]	Hydrology		
GEOG*4150	[0.50]	Sedimentary Processes		

GEOL*3190	[0.50]	Environmental Water Chemistry
SOIL*3080	[0.50]	Soil and Water Conservation
List D - Atmo	sphere	
MET#2050	FO 501	NC 11 4 1

MET*3050	[0.50]	Microclimatology
MET*4210	[0.50]	Atmospheric Experimentation and Instrumentation

#### Ecology (ECOL)

#### College of Biological Science

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

#### Semester 1

BIOL*1070	[0.50]	Discovering Biodiversity
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2		
CHEM*1050	[0.50]	General Chemistry II
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
Note: ECOL studer	nts are requi	red to take BIOL*1090 in semester 3 if not taken in semester
2.		

#### Semester 3

ENVS*2150	[0.50]	Terrestrial Systems
MET*2030	[0.50]	Meteorology and Climatology
STAT*2040	[0.50]	Statistics I

1.00 electives or restricted electives

Note: ECOL students are required to take BIOL\*1090 in semester 3 if not taken in semester 2

#### Semester 4

BIOC*2580	[0.50]	Introduction to Biochemistry
BIOL*3110	[0.50]	Population Ecology
MBG*2040	[0.50]	Foundations in Molecular Biology and Genetics
STAT*2050	[0.50]	Statistics II

#### 0.50 electives or restricted electives Semester 5

BIOL*3010 One of:	[0.50]	Laboratory and Field Work in Ecology
BOT*2100	[0.50]	Life Strategies of Plants
ZOO*3200	[0.50]	Comparative Animal Physiology I

0	af.
One	

ECON*2100	[0.50]	Economic Growth and Environmental Quality
FARE*2700	[0.50]	Survey of Natural Resource Economics

1.00 electives or restricted electives

#### Semester 6

BIOL*3120	[0.50]	Community Ecology		
ENVS*3150	[0.50]	Aquatic Systems		
PHIL*2070	[0.50]	Philosophy of the Environment		
1.00 electives or restricted electives				

#### Semester 7

BIOL*4110	[0.75]	Ecological Methods
ENVS*4011	[0.00]	Project in Environmental Sciences
ENVS*4300	[0.50]	Environmental Law & Regulation
One of:		
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance

0.75 electives or restricted electives

Note: BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be taken in Semester 8.

#### Semester 8

BIOL*4120	[0.50]	Evolutionary Ecology
ENVS*4012	[0.50]	Project in Environmental Sciences
1.50 electives		

Note: Ecology majors are not required to complete BIOL\*2060 as a core course.

#### **Restricted Electives**

One of:		
BIOL*3020	[0.50]	Population Genetics
BIOL*3400	[0.50]	Evolution
One of:		
BOT*3410	[0.50]	Plant Anatomy
ZOO*2090	[0.50]	Vertebrate Structure and Function
One of:		
CIS*1200	[0.50]	Introduction to Computing
CIS*1500	[0.50]	Introduction to Programming
GEOG*2420	[0.50]	The Earth From Space
GEOG*2480	[0.50]	Mapping and GIS
GEOG*3420	[0.50]	Remote Sensing of the Environment

#### Ecology (ECOL:C)

#### **College of Biological Science**

[0.50]

#### Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

Discovering Biodiversity

#### Semester 1 - Fall

BIOL\*1070

CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2 - Wi	nter	
CHEM*1050	[0.50]	General Chemistry II
COOP*1100	[0.00]	Introduction to Co-operative Education
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
Note: ECOL studer	nts are requi	red to take BIOL*1090 in semester 3 if not taken in semester
2.		

#### Semester 3 - Fall

ENVS*2150	[0.50]	Terrestrial Systems
MET*2030	[0.50]	Meteorology and Climatology
STAT*2040	[0.50]	Statistics I
1.00 1 1		

1.00 electives or restricted electives

Note: ECOL students are required to take BIOL\*1090 in semester 3 if not taken in semester

#### Winter Semester

COOP*1000	[0.00]	Co-op Work Term I
Semester 4 - S	ummer	
BIOC*2580	[0.50]	Introduction to Biochemistry
PHIL*2070	[0.50]	Philosophy of the Environment
1.50 electives or restricted electives		

Fall Semester			
COOP*2000	[0.00]	Co-op Work Term II	
Semester 5 - W	/inter		
BIOL*3110	[0.50]	Population Ecology	
ENVS*3150	[0.50]	Aquatic Systems	
STAT*2050	[0.50]	Statistics II	
1.00 electives or i	restricted ele	ectives	
Summer Seme	ster		
COOP*3000	[0.00]	Co-op Work Term III	
Semester 6 - Fa	all		
BIOL*3010	[0.50]	Laboratory and Field Work in Ecology	
ENVS*4011	[0.00]	Project in Environmental Sciences	
MBG*2040	[0.50]	Foundations in Molecular Biology and Genetics	
One of:			
ECON*2100	[0.50]	Economic Growth and Environmental Quality	
FARE*2700	[0.50]	Survey of Natural Resource Economics	
1.00 electives or i	restricted ele	ectives	
Semester 7 - W	Semester 7 - Winter		
BIOL*3120	[0.50]	Community Ecology	
BIOL*4120	[0.50]	Evolutionary Ecology	
ENVS*4012	[0.50]	Project in Environmental Sciences	
1.00 electives or i	restricted ele	ectives	
Summer Seme	Summer Semester (Optional)		

COOP*4000 [0.00]		[0.00]	Co-op Work Term IV	
	Semester 8- Fal	l		
	BIOL*4110	[0.75]	Ecological Methods	
	ENVS*4300	[0.50]	Environmental Law & Regulation	
	One of:			
	GEOG*3210	[0.50]	Management of the Biophysical Environment	
	POLS*3370	[0.50]	Environmental Politics and Governance	
	0.75 electives or restricted electives			

**Note:** BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be

taken in Semester 8.

Note: Ecology majors are not required to complete as a core course.

#### **Restricted Electives**

Itestricted Elect	1103	
One of:		
BIOL*3020	[0.50]	Population Genetics
BIOL*3400	[0.50]	Evolution
One of:		
BOT*2100	[0.50]	Life Strategies of Plants
ZOO*3200	[0.50]	Comparative Animal Physiology I
One of:		
BOT*3410	[0.50]	Plant Anatomy
ZOO*2090	[0.50]	Vertebrate Structure and Function
One of:		
CIS*1200	[0.50]	Introduction to Computing
CIS*1500	[0.50]	Introduction to Programming
GEOG*2420	[0.50]	The Earth From Space
GEOG*2480	[0.50]	Mapping and GIS
GEOG*3420	[0.50]	Remote Sensing of the Environment
TD • 4	1 D' 1	(ENIVID)

#### **Environmental Biology (ENVB)**

### School of Environmental Sciences, Ontario Agricultural College

#### Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

#### Semester 1

BIOL*1070	[0.50]	Discovering Biodiversity	
CHEM*1040	[0.50]	General Chemistry I	
ENVS*1020	[0.50]	Introduction to Environmental Sciences	
MATH*1080	[0.50]	Elements of Calculus I	
PHYS*1080	[0.50]	Physics for Life Sciences	
Semester 2			
CHEM*1050	[0.50]	General Chemistry II	
ECON*1050	[0.50]	Introductory Microeconomics	
GEOG*1300	[0.50]	Introduction to the Biophysical Environment	
PHYS*1130	[0.50]	Physics with Applications	
One of:			
BIOL*1080	[0.50]	Biological Concepts of Health	
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology	
<b>Note:</b> ENVB students are required to take BIOL*1090 in semester 3 if not taken in			

**Note:** ENVB students are required to take BIOL\*1090 in semester 3 if not taken in semester 2.

Semester	3
----------	---

ENVS*2150	[0.50]	Terrestrial Systems	
MET*2030	[0.50]	Meteorology and Climatology	
TOX*2000	[0.50]	Principles of Toxicology	
One of:			
ECON*2100	[0.50]	Economic Growth and Environmental Quality	
FARE*2700	[0.50]	Survey of Natural Resource Economics	
0.50 electives or restricted electives			

Note: ENVB students are required to take BIOL\*1090 in semester 3 if not taken in semester 2.

#### Semester 4

BIOC*2580	[0.50]	Introduction to Biochemistry	
BIOL*2060	[0.50]	Ecology	
MBG*2040	[0.50]	Foundations in Molecular Biology and Genetics	
STAT*2040	[0.50]	Statistics I	
0.50 electives or restricted electives			

#### Semester 5

O	ne	of

GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance

2.00 electives or restricted electives

[0.50]

**Note:** BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be taken in Semester 8.

Aquatic Systems

#### Semester 6 ENVS\*3150

PHIL*2070	[0.50]	Philosophy of the Environment			
1.50 electives or	1.50 electives or restricted electives				
Semester 7					
ENVS*4011	[0.00]	Project in Environmental Sciences			
ENVS*4300	[0.50]	Environmental Law & Regulation			
2.00 alactives or restricted electives					

#### Semester 8

ENVS\*4012 [0.50] Project in Environmental Sciences 2.00 electives or restricted electives

#### **Restricted Electives**

Students in the Environmental Biology major are required to choose 5.00 credits from the following list. Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of the B.Sc.(Env.) degree must be at the 3000-4000 level.

that 0.00 creams of	the D.De.(L	siv.) degree must be at the 3000 1000 level.
BIOL*3130	[0.50]	Conservation Biology
BIOL*3450	[0.50]	Introduction to Aquatic Environments
BIOL*4150	[0.50]	Wildlife Conservation and Management
BIOL*4350	[0.50]	Biology of Polluted Waters
ENVB*2030	[0.50]	Current Issues in Forest Science
ENVB*2040	[0.50]	Plant Health and the Environment
ENVB*3010	[0.50]	Climate Change Biology
ENVB*3030	[0.50]	Pesticides and the Environment
ENVB*3040	[0.50]	Natural Chemicals in the Environment
ENVB*3230	[0.50]	Agroforestry Systems
ENVB*3250	[0.50]	Forest Health and Disease
ENVB*3270	[0.50]	Forest Biodiversity
ENVB*3280	[0.50]	Waterborne Disease Ecology
ENVB*4020	[0.50]	Water Quality and Environmental Management
ENVB*4130	[0.50]	Chemical Ecology: Principles & Practice *
ENVB*4240	[0.50]	Biological Activity of Pesticides
ENVB*4550	[0.50]	Toxicological Risk Characterization *
ENVB*4780	[0.50]	Forest Ecology *
ENVS*3410	[0.50]	Independent Research I
ENVS*3420	[0.50]	Independent Research II *
ENVS*3430	[1.00]	Independent Research
ENVS*4410	[1.00]	Advanced Independent Research I *
ENVS*4420	[1.00]	Advanced Independent Research II *
ENVS*4430	[2.00]	Advanced Independent Research *
GEOG*3020	[0.50]	Global Environmental Change
GEOL*3190	[0.50]	Environmental Water Chemistry
MICR*4140	[0.50]	Soil Microbiology and Biotechnology
MICR*4180	[0.50]	Microbial Processes in Environmental Management
NRS*2120	[0.50]	Introduction to Environmental Stewardship
PBIO*4530	[0.50]	Environmental Pollution Stresses on Plants *
SOIL*3080	[0.50]	Soil and Water Conservation *
TOX*3360	[0.50]	Environmental Chemistry and Toxicology
* Note: Students sh	ould note th	nat some restricted electives (marked by asterisks *) requ

\* Note: Students should note that some restricted electives (marked by asterisks \*) require other restricted electives as prerequisites. Students should consult the most recent undergraduate calendar for specific requirements.

## **Environmental Biology (ENVB:C)** School of Environmental Sciences, Ontario Agricultural College Major and scheduling courses.

[0.501]

[0.50]

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting

Semester	1	- Fall	
----------	---	--------	--

BIOL\*1070

BIOL*1070	[0.50]	Discovering Biodiversity
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2 - V	Vinter	
CHEM*1050	[0.50]	General Chemistry II
COOP*1100	[0.00]	Introduction to Co-operative Education
ECON*1050	[0.50]	Introductory Microeconomics

GEOG\*1300 PHYS\*1130

One of: BIOL\*1080 Biological Concepts of Health [0.50]BIOL\*1090 [0.50]Introduction to Molecular and Cellular Biology

Note: ENVB students are required to take BIOL\*1090 in semester 3 if not taken in semester 2.

Physics with Applications

Introduction to the Biophysical Environment

#### Semester 3 - Fall

ENVS*2150	[0.50]	Terrestrial Systems
MET*2030	[0.50]	Meteorology and Climatology
TOX*2000	[0.50]	Principles of Toxicology
One of:		

ECON\*2100 [0.50] Economic Growth and Environmental Quality FARE\*2700 [0.50] Survey of Natural Resource Economics

0.50 electives or restricted electives

Note: ENVB students are required to take BIOL\*1090 in semester 3 if not taken in semester 2.

#### Winter Semester

COOP*1000	[0.00]	Co-op Work Term I
Semester 4 - S	Summer	
BIOC*2580	[0.50]	Introduction to Biochemistry
BIOL*2060	[0.50]	Ecology
STAT*2040	[0.50]	Statistics I
1.00 electives or	restricted el	ectives

#### **Fall Semester**

COOP*2000	[0.00]	Co-op Work Term II
Semester 5 - W	inter	
ENVS*3150	[0.50]	Aquatic Systems
MBG*2040	[0.50]	Foundations in Molecular Biology and Genetics
PHIL*2070	[0.50]	Philosophy of the Environment
One of:		
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance
0.50 electives or i	restricted ele	ectives

Note: BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be

taken in Semester	1 /.		
Summer Seme	ster		
COOP*3000	[0.00]	Co-op Work Term III	

### COOP\*3000 [0.00]

Semester 6 - 1	ran	
FNVS*4011	100.001	Project in Environmental Sciences

#### Semester 7 - Winter

ENVS\*4012 [0.50] Project in Environmental Sciences 2.00 electives or restricted electives

#### Summer Semester - (Optional)

2.50 electives or restricted electives

COOP*4000	[0.00]	Co-op Work Term	IV

#### Semester 8 - Fall

ENVS\*4300 [0.50]Environmental Law & Regulation

2.00 electives or restricted electives

Last Revision: March 15, 2014

#### **Restricted Electives**

Students in the Environmental Biology major are required to choose 5.00 credits from the following list. Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of the B.Sc.(Env.) degree must be at the 3000-4000 level.

BIOL*3130	[0.50]	Conservation Biology
BIOL*3450	[0.50]	Introduction to Aquatic Environments
BIOL*4150	[0.50]	Wildlife Conservation and Management

BIOL*4350	[0.50]	Biology of Polluted Waters
ENVB*2030	[0.50]	Current Issues in Forest Science
ENVB*2040	[0.50]	Plant Health and the Environment
ENVB*3010	[0.50]	Climate Change Biology
ENVB*3030	[0.50]	Pesticides and the Environment
ENVB*3040	[0.50]	Natural Chemicals in the Environment
ENVB*3230	[0.50]	Agroforestry Systems
ENVB*3250	[0.50]	Forest Health and Disease
ENVB*3270	[0.50]	Forest Biodiversity
ENVB*3280	[0.50]	Waterborne Disease Ecology
ENVB*4020	[0.50]	Water Quality and Environmental Management
ENVB*4130	[0.50]	Chemical Ecology: Principles & Practice *
ENVB*4240	[0.50]	Biological Activity of Pesticides
ENVB*4550	[0.50]	Toxicological Risk Characterization *
ENVB*4780	[0.50]	Forest Ecology *
ENVS*3410	[0.50]	Independent Research I
ENVS*3420	[0.50]	Independent Research II *
ENVS*3430	[1.00]	Independent Research
ENVS*4410	[1.00]	Advanced Independent Research I *
ENVS*4420	[1.00]	Advanced Independent Research II *
ENVS*4430	[2.00]	Advanced Independent Research *
GEOG*3020	[0.50]	Global Environmental Change
GEOG*4230	[0.50]	Environmental Impact Assessment
GEOL*3190	[0.50]	Environmental Water Chemistry
MICR*4140	[0.50]	Soil Microbiology and Biotechnology
MICR*4180	[0.50]	Microbial Processes in Environmental Management
NRS*2120	[0.50]	Introduction to Environmental Stewardship
PBIO*4530	[0.50]	Environmental Pollution Stresses on Plants *
SOIL*3080	[0.50]	Soil and Water Conservation *
TOX*3360	[0.50]	Environmental Chemistry and Toxicology
* Note: Students	should note	that some restricted electives (marked by asterisks *) req

other restricted electives as prerequisites. Students should consult the most recent undergraduate calendar for specific requirements.

#### **Environmental Economics and Policy (EEP)**

[0.50]

Department of Economics and Finance, College of Management and Economics Department of Food, Agricultural and Resource Economics, Ontario Agricultural College

#### Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

Discovering Biodiversity

#### Semester 1 BIOL\*1070

ECON\*2410

ECON\*2770

FARE\*4290

GEOG\*3210

One of:

[0.50]

[0.50]

[0.50]

[0.50]

	[ o.e o j	
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2		
CHEM*1050	[0.50]	General Chemistry II
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
Semester 3		
ECON*1100	[0.50]	Introductory Macroeconomics
ECON*2100	[0.50]	Economic Growth and Environmental Quality
ENVS*2150	[0.50]	Terrestrial Systems
FARE*2700	[0.50]	Survey of Natural Resource Economics
MET*2030	[0.50]	Meteorology and Climatology
Semester 4		
BIOL*2060	[0.50]	Ecology
ECON*2310	[0.50]	Intermediate Microeconomics
ECON*2740	[0.50]	Economic Statistics
PHIL*2070	[0.50]	Philosophy of the Environment
0.50 electives or re	estricted ele	ectives
Note: STAT*2040	may be sul	ostituted for ECON*2740.
Semester 5		

Intermediate Macroeconomics

Land Economics

Introductory Mathematical Economics

Management of the Biophysical Environment

448		
POLS*3370	[0.50]	Environmental Politics and Governance
0.50 electives or	restricted el	ectives
Note: FARE*4	290 is taught	in even-numbered years.
Note: BIOL*40	40 may be si	abstituted for GEOG*3210 or POLS*3370 and would be
taken in Semeste	er 8.	
Semester 6		
ECON*3740	[0.50]	Introduction to Econometrics
ENVS*3150	[0.50]	Aquatic Systems
FARE*3170	[0.50]	Cost-Benefit Analysis
1.00 electives or	restricted el	ectives

#### Semester 7

ECON*3710	[0.50]	Advanced Microeconomics		
ENVS*4011	[0.00]	Project in Environmental Sciences		
ENVS*4300	[0.50]	Environmental Law & Regulation		
1.50 electives or restricted electives				

#### Semester 8

ECON*4930	[0.50]	Environmental Economics
ENVS*4012	[0.50]	Project in Environmental Sciences
FARE*4310	[0.50]	Resource Economics
1.00 restricted e	lectives or e	lectives

#### **Restricted Electives**

Students in the Environmental Economics and Policy major are required to choose 2.50 credits additional Food, Agricultural and Resource Economics (FARE\*XXXX) or Economics (ECON\*XXXX). Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of their B.Sc.(Env.) degree must be at the 3000 level or higher.

#### **Environmental Economics and Policy (EEP:C)**

#### Department of Economics and Finance, College of Management and Economics Department of Food, Agricultural and Resource Economics, Ontario Agricultural College

#### Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

#### Semester 1 - Fall

beinester i i u	••	
BIOL*1070	[0.50]	Discovering Biodiversity
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2 - Wi	inter	
CHEM*1050	[0.50]	General Chemistry II
COOP*1100	[0.00]	Introduction to Co-operative Education
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
Semester 3 - Fa	ll	
ECON*1100	[0.50]	Introductory Macroeconomics
ECON*2100	[0.50]	Economic Growth and Environmental Quality
ENVS*2150	[0.50]	Terrestrial Systems
FARE*2700	[0.50]	Survey of Natural Resource Economics
MET*2030	[0.50]	Meteorology and Climatology
Winter Semeste	er	
COOP*1000	[0.00]	Co-op Work Term I
Semester 4 - Su	mmer	
BIOL*2060	[0.50]	Ecology
ECON*2310	[0.50]	Intermediate Microeconomics
ECON*2410	[0.50]	Intermediate Macroeconomics
PHIL*2070	[0.50]	Philosophy of the Environment
STAT*2040	[0.50]	Statistics I
Note: ECON*2740	may be su	abstituted for STAT*2040.
Fall Semester		
COOP*2000	[0.00]	Co-op Work Term II
Semester 5 - Wi	inter	
ECON*2770	[0.50]	Introductory Mathematical Economics
ENVS*3150	[0.50]	Aquatic Systems
FARE*3170	[0.50]	Cost-Benefit Analysis
One of:		•

Management of the Biophysical Environment

POLS*3370	[0.50]	Environmental Politics and Governance
-----------	--------	---------------------------------------

Note: BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be

taken in Semester 7.

0.50 electives or restricted electives

#### Summer Semester

COOP*3000	[0.00]	Co-op Work Term III
Semester 6 -	Fall	
ECON*3710	[0.50]	Advanced Microeconomics
ENVS*4011	[0.00]	Project in Environmental Sciences
FARE*4290	[0.50]	Land Economics

1.50 electives or restricted electives

Note: FARE\*4290 is taught in even-numbered years.

#### Semester 7 - Winter

ECON*4930	[0.50]	Environmental Economics
ECON*3740	[0.50]	Introduction to Econometrics
ENVS*4012	[0.50]	Project in Environmental Sciences
FARE*4310	[0.50]	Resource Economics

0.50 electives or restricted electives

## **Summer Semester (Optional)**COOP\*4000 [0.00] Co-op Work Term IV

Semester 8 - Fall

ENVS\*4300 [0.50] Environmental Law & Regulation

2.00 electives or restricted electives

#### **Restricted Electives**

Students in the Environmental Economics and Policy major are required to choose 2.50 credits additional Food, Agricultural and Resource Economics (FARE\*XXXX) or Economics (ECON\*XXXX). Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of their B.Sc.(Env.) degree must be at the 3000 level or higher.

#### **Environmental Geography (ENVG)**

## Department of Geography, College of Social and Applied Human Sciences Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

#### Semester 1

be taken in Semester 8.

BIOL*1070	[0.50]	Discovering Biodiversity
CHEM*1040	[0.50]	General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2		
CHEM*1050	[0.50]	General Chemistry II
ECON*1050	[0.50]	Introductory Microeconomics
GEOG*1300	[0.50]	Introduction to the Biophysical Environment
PHYS*1130	[0.50]	Physics with Applications
One of:		
BIOL*1080	[0.50]	Biological Concepts of Health
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology
Semester 3		
ENVS*2150	[0.50]	Terrestrial Systems
GEOG*2000	[0.50]	Geomorphology
GEOG*2460	[0.50]	Analysis in Geography
MET*2030	[0.50]	Meteorology and Climatology
One of:		
ECON*2100	[0.50]	Economic Growth and Environmental Quality
FARE*2700	[0.50]	Survey of Natural Resource Economics
Semester 4		
BIOL*2060	[0.50]	Ecology
GEOG*2110	[0.50]	Climate and the Biophysical Environment
GEOG*2210	[0.50]	Environment and Resources
GEOG*2480	[0.50]	Mapping and GIS
0.50 electives		
Semester 5		
GEOG*3110	[0.50]	Biotic and Natural Resources
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance
1.00 electives or r	restricted ele	ectives*

**Note**: Environmental Geography majors are required to complete GEOG\*3210 and (POLS\*3370 or BIOL\*4040). BIOL\*4040 may be substituted for POLS\*3370 and would

[0.50]

GEOG\*3210

A. Degree Progra	ms, Bacheio	or of Science in Environmental Sciences [B.Sc.(Env.)]			449
Semester 6			Summer Seme	ster	
ENVS*3150	[0.50]	Aquatic Systems	COOP*3000	[0.00]	Co-op Work Term III
GEOG*3480	[0.50]	GIS and Spatial Analysis	Semester 6 - F		1
PHIL*2070	[0.50]	Philosophy of the Environment	ENVS*4011	[0.00]	Project in Environmental Sciences
1.00 electives or r	estricted ele	ectives*	GEOG*3110	[0.50]	Biotic and Natural Resources
Semester 7			GEOG*3210	[0.50]	Management of the Biophysical Environment
ENVS*4011	[0.00]	Project in Environmental Sciences	GEOG*3480	[0.50]	GIS and Spatial Analysis
ENVS*4300	[0.50]	Environmental Law & Regulation	POLS*3370	[0.50]	Environmental Politics and Governance
GEOG*4690 1.00 electives of	[1.00]	Geography Field Research	0.50 electives or		
OR	or restricted	electives."			phy majors are required to complete GEOG*3210 and . BIOL*4040 may be substituted for POLS*3370 and would
ENVS*4011	[0.00]	Project in Environmental Sciences	be taken in Seme		. BIOL 10 10 may be substituted 1011 OLS 3370 and would
ENVS*4300	[0.50]	Environmental Law & Regulation	Semester 7 - W	Vinter	
		at the 3000 level or higher	ENVS*4012	[0.50]	Project in Environmental Sciences
1.50 electives of	or restricted	electives*	GEOG*4880	[0.50]	Contemporary Geographic Thought
Semester 8			1.50 electives or		
ENVS*4012	[0.50]	Project in Environmental Sciences	Summer Seme	ster (Opti	onal)
GEOG*4880 1.50 electives or r	[0.50]	Contemporary Geographic Thought	COOP*4000	[0.00]	Co-op Work Term IV
		scuves." il Geography major must take at least 4 additional geography	Semester 8 - F	all	
courses at the 300			ENVS*4300	[0.50]	Environmental Law & Regulation
At least one of:		6	GEOG*4690	[1.00]	Geography Field Research
GEOG*3000	[0.50]	Fluvial Processes	1.00 electives OR	or restricted	electives*
GEOG*3610	[0.50]	Environmental Hydrology	ENVS*4300	[0.50]	Environmental Law & Regulation
At least two of:	FO 707	CLLIF			at the 3000 level or higher
GEOG*3020 GEOG*4110	[0.50] [1.00]	Global Environmental Change Environmental Systems Analysis	1.50 electives	or restricted	electives*
GEOG*4110 GEOG*4210	[0.50]	Environmental Governance			al Geography major must take at least 4 additional geography
GEOG*4230	[0.50]	Environmental Impact Assessment	courses at the 300	00 level or h	igher including:
Environment	al Geogr	aphy (ENVG:C)	At least one of:	FO 501	
		College of Social and Applied Human Sciences	GEOG*3000 GEOG*3610	[0.50]	Fluvial Processes Environmental Hydrology
Major	cography,	conege of Social and Applied Human Sciences	At least two of:	[0.50]	Environmental Trydrology
•	. 11		GEOG*3020	[0.50]	Global Environmental Change
		es in the "One of:" options are available each semester (F, acouraged to seek advice from the appropriate advisor when	GEOG*4110	[1.00]	Environmental Systems Analysis
		reses, before Semester 3.	GEOG 4210	[0.50]	Environmental Governance
Semester 1 - Fa	-	ses, before semester s.	GEOG*4230	[0.50]	Environmental Impact Assessment anagement (NRM)
	411				anagement (INRIVI)
	[0.50]	Discovering Riodiversity			
BIOL*1070 CHEM*1040	[0.50] [0.50]	Discovering Biodiversity General Chemistry I	School of Enviro		ciences, Ontario Agricultural College
BIOL*1070		Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences			
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080	[0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I	School of Environment Major Please note that it	onmental Sc	ciences, Ontario Agricultural College es in the "One of:" options are available each semester (F,
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080	[0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences	School of Environment Major Please note that is W, S). Students an	not all cours	ciences, Ontario Agricultural College
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W	[0.50] [0.50] [0.50] [0.50] <b>inter</b>	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences	School of Environment Major Please note that a W, S). Students and and scheduling co	not all cours re encourage ourses.	ciences, Ontario Agricultural College es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050	[0.50] [0.50] [0.50] [0.50] [0.50] (inter	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences General Chemistry II	School of Environment Major Please note that a W, S). Students and scheduling control in this major them	not all cours re encourage ourses. re are fees ch	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050 COOP*1100	[0.50] [0.50] [0.50] [0.50] [0.50] <b>'inter</b> [0.50] [0.00]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education	School of Environment Major Please note that a W, S). Students and scheduling control of the state of the sta	not all cours re encourage ourses. re are fees ch	ciences, Ontario Agricultural College es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050	[0.50] [0.50] [0.50] [0.50] [0.50] <b>'inter</b> [0.50] [0.00] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences General Chemistry II	School of Environment Major Please note that a W, S). Students an and scheduling control of the major there are doff financial course.	not all cours re encourage ourses. re are fees ch	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050 COOP*1100 ECON*1050	[0.50] [0.50] [0.50] [0.50] [0.50] <b>'inter</b> [0.50] [0.00]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics	School of Environment Major Please note that a W, S). Students are and scheduling or In this major there need of financial course. Semester 1	not all cours e encourage ourses. e are fees ch assistance	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of:	[0.50] [0.50] [0.50] [0.50] [0.50] <b>Tinter</b> [0.50] [0.00] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications	School of Environment Major Please note that a W, S). Students are and scheduling or In this major there need of financial course.  Semester 1 BIOL*1070	not all cours re encourage purses. re are fees ch assistance s	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting narged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 <b>Semester 2 - W</b> CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080	[0.50] [0.50] [0.50] [0.50] [0.50] (inter [0.50] [0.00] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health	School of Environment Major Please note that a W, S). Students are and scheduling or In this major there need of financial course. Semester 1	not all cours re encourage purses. re are fees ch assistance s  [0.50] [0.50]	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090	[0.50] [0.50] [0.50] [0.50] [0.50] <b>Tinter</b> [0.50] [0.00] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications	School of Environmann Major Please note that a W, S). Students an and scheduling of In this major ther need of financial course.  Semester 1 BIOL*1070 CHEM*1040	not all cours re encourage purses. re are fees ch assistance s	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting narged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the Discovering Biodiversity General Chemistry I
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa	[0.50] [0.50] [0.50] [0.50] [0.50] <b>Tinter</b> [0.50] [0.00] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology	School of Environmajor Major Please note that a W, S). Students an and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080	not all cours re encourage purses. re are fees ch assistance s  [0.50] [0.50] [0.50]	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.00] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems	School of Environmajor Major Please note that a W, S). Students an and scheduling of In this major ther need of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2	not all cours e encourage ourses. e are fees ch assistance s  [0.50] [0.50] [0.50] [0.50] [0.50]	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting narged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology	School of Environmajor Major Please note that a W, S). Students an and scheduling of In this major ther need of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050	not all cours re encourage purses. re are fees ch assistance s  [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.00] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems	School of Environmajor Major Please note that a W, S). Students an and scheduling of In this major ther need of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050	onmental Scannot all courses encourage ourses. The are fees chassistance is assistance is [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology	School of Environmajor Major Please note that a W, S). Students an and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300	Onmental Scannot all courses	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality	School of Environmajor Major Please note that a W, S). Students an and scheduling of In this major ther need of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050	onmental Scannot all courses encourage ourses. The are fees chassistance is assistance is [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting harged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology	School of Environmajor Major Please note that it will be a series of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130	Onmental Scannot all courses	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics	School of Environmajor Major Please note that it will be a substitute of the substit	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality	School of Environmajor Major Please note that it will be a series of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3	(0.50]   (	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I	School of Environmajor Major Please note that it w, S). Students at and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I	School of Environmajor Major Please note that it w, S). Students at and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources	School of Environmajor Major Please note that it w, S). Students at and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - Sa BIOL*2060 GEOG*2210	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I	School of Environmajor Major Please note that it w, S). Students at and scheduling control of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120 STAT*2040	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - Sa BIOL*2060 GEOG*2210 PHIL*2070	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources	School of Environmajor Major Please note that it w, S). Students at and scheduling content of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources	School of Environmajor Major Please note that it w, S). Students at and scheduling control of the second of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120 STAT*2040 One of: ECON*2100 FARE*2700	[0.50] [0.50]	es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality Survey of Natural Resource Economics
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - Fa ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - Sa BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives Fall Semester	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources Philosophy of the Environment	School of Environmajor Major Please note that it w, S). Students at and scheduling control of the second of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120 STAT*2040 One of: ECON*2100 FARE*2700 Note: GEOG*24	[0.50] [0.50]	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives Fall Semester COOP*2000	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources Philosophy of the Environment  Co-op Work Term II  Aquatic Systems	School of Environmajor Major Please note that it were so that	(0.50)   (	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality Survey of Natural Resource Economics ubstituted for STAT*2040.
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives Fall Semester COOP*2000 Semester 5 - W ENVS*3150 GEOG*2110	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources Philosophy of the Environment  Co-op Work Term II  Aquatic Systems Climate and the Biophysical Environment	School of Environmajor Major Please note that it w, S). Students at and scheduling content of the state of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120 STAT*2040 One of: ECON*2100 FARE*2700 Note: GEOG*24 Semester 4 BIOL*2060	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality Survey of Natural Resource Economics ubstituted for STAT*2040.
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives Fall Semester COOP*2000 Semester 5 - W ENVS*3150 GEOG*2110 GEOG*2480	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources Philosophy of the Environment  Aquatic Systems Climate and the Biophysical Environment Mapping and GIS	School of Environmajor Major Please note that it w, S). Students at and scheduling control of the state of th	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality Survey of Natural Resource Economics ubstituted for STAT*2040.  Ecology Philosophy of the Environment
BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 - W CHEM*1050 COOP*1100 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 - F2 ENVS*2150 GEOG*2000 GEOG*2460 MET*2030 One of: ECON*2100 FARE*2700 Winter Semest COOP*1000 Semester 4 - St BIOL*2060 GEOG*2210 PHIL*2070 1.00 electives Fall Semester COOP*2000 Semester 5 - W ENVS*3150 GEOG*2110	[0.50] [0.50]	General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introduction to Co-operative Education Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Geomorphology Analysis in Geography Meteorology and Climatology  Economic Growth and Environmental Quality Survey of Natural Resource Economics  Co-op Work Term I  Ecology Environment and Resources Philosophy of the Environment  Aquatic Systems Climate and the Biophysical Environment Mapping and GIS	School of Environmajor Major Please note that it w, S). Students at and scheduling content of the state of financial course.  Semester 1 BIOL*1070 CHEM*1040 ENVS*1020 MATH*1080 PHYS*1080 Semester 2 CHEM*1050 ECON*1050 GEOG*1300 PHYS*1130 One of: BIOL*1080 BIOL*1090 Semester 3 ENVS*2150 MET*2030 NRS*2120 STAT*2040 One of: ECON*2100 FARE*2700 Note: GEOG*24 Semester 4 BIOL*2060	Content   Cont	ciences, Ontario Agricultural College  es in the "One of:" options are available each semester (F, d to seek advice from the appropriate advisor when selecting marged to cover partial costs of some field trips. Students in should approach the Chair of the department offering the  Discovering Biodiversity General Chemistry I Introduction to Environmental Sciences Elements of Calculus I Physics for Life Sciences  General Chemistry II Introductory Microeconomics Introduction to the Biophysical Environment Physics with Applications  Biological Concepts of Health Introduction to Molecular and Cellular Biology  Terrestrial Systems Meteorology and Climatology Introduction to Environmental Stewardship Statistics I  Economic Growth and Environmental Quality Survey of Natural Resource Economics ubstituted for STAT*2040.  Ecology Philosophy of the Environment Soil Science

Semester 5		
ENVB*2030	[0.50]	Current Issues in Forest Science
SOIL*3050	[0.50]	Land Utilization
SOIL*3080	[0.50]	Soil and Water Conservation
One of:		
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance
0.50 electives or re	estricted ele	ctives

Note: BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be taken in Semester 8.

#### Semester 6

ENVS*3150	[0.50]	Aquatic Systems		
NRS*3100	[0.50]	Resource Planning Techniques		
One of:				
ENGG*2550	[0.50]	Water Management		
GEOG*3610	[0.50]	Environmental Hydrology		
GEOL*3060	[0.50]	Groundwater		
1.00 electives or restricted electives				

#### Semester 7

ENVS*4011	[0.00]	Project in Environmental Sciences	
ENVS*4300	[0.50]	Environmental Law & Regulation	
NRS*4110	[0.50]	Natural Resources Management Field Camp	
1.50 electives or restricted electives			

#### Semester 8

BIOL*3130	[0.50]	Conservation Biology		
ENVS*4012	[0.50]	Project in Environmental Sciences		
1.50 electives or restricted electives				

#### **Restricted Electives**

Students in the Natural Resources Management major are required to choose 2.50 restricted elective credits from the following list. Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of their B.Sc.(Env.) degree must be at the 3000 level or higher.

_		
CROP*2280	[0.50]	Crops in Land Reclamation
ENVB*3000	[0.50]	Nature Interpretation
ENVB*3230	[0.50]	Agroforestry Systems
ENVB*3270	[0.50]	Forest Biodiversity
ENVB*4780	[0.50]	Forest Ecology
ENVS*3410	[0.50]	Independent Research I
ENVS*3420	[0.50]	Independent Research II *
ENVS*3430	[1.00]	Independent Research
ENVS*4410	[1.00]	Advanced Independent Research I *
ENVS*4420	[1.00]	Advanced Independent Research II *
ENVS*4430	[2.00]	Advanced Independent Research *
GEOG*2420	[0.50]	The Earth From Space
GEOG*3210	[0.50]	Management of the Biophysical Environment
GEOG*3420	[0.50]	Remote Sensing of the Environment
GEOG*3480	[0.50]	GIS and Spatial Analysis
GEOG*4230	[0.50]	Environmental Impact Assessment
LARC*3320	[0.50]	Principles of Landscape Ecology
LARC*4520	[0.50]	Park and Recreation Administration
MET*3050	[0.50]	Microclimatology
SOIL*3060	[0.50]	Environmental Soil Chemistry
SOIL*3070	[0.50]	Environmental Soil Physics
SOIL*3200	[0.50]	Environmental Soil Biology

#### Natural Resources Management (NRM:C)

#### School of Environmental Sciences, Ontario Agricultural College Major

Please note that not all courses in the "One of:" options are available each semester (F, W, S). Students are encouraged to seek advice from the appropriate advisor when selecting and scheduling courses.

In this major there are fees charged to cover partial costs of some field trips. Students in need of financial assistance should approach the Chair of the department offering the course.

#### Semester 1 - Fall

BIOL*1070 CHEM*1040	[0.50] [0.50]	Discovering Biodiversity General Chemistry I
ENVS*1020	[0.50]	Introduction to Environmental Sciences
MATH*1080	[0.50]	Elements of Calculus I
PHYS*1080	[0.50]	Physics for Life Sciences
Semester 2 - W	Vinter	
CHEM*1050	[0.50]	General Chemistry II
COOP*1100	[0.00]	Introduction to Co-operative Education
ECON*1050	[0.50]	Introductory Microeconomics

GEOG*1300	[0.50]	Introduction to the Biophysical Environment	
PHYS*1130	[0.50]	Physics with Applications	
One of:			
BIOL*1080	[0.50]	Biological Concepts of Health	
BIOL*1090	[0.50]	Introduction to Molecular and Cellular Biology	
Semester 3 - Fall			
ENVB*2030	[0.50]	Current Issues in Forest Science	
ENVS*2150	[0.50]	Terrestrial Systems	
MET*2030	[0.50]	Meteorology and Climatology	
NRS*2120	[0.50]	Introduction to Environmental Stewardship	
STAT*2040	[0.50]	Statistics I	
<b>Note</b> : GEOG*2460 may be substituted for STAT*2040.			

#### Winter Semester

COOP*1000	[0.00]	Co-op Work Term I	
Semester 4 - S	Summer		
BIOL*2060	[0.50]	Ecology	
PHIL*2070	[0.50]	Philosophy of the Environment	
1.50 electives or restricted electives			

#### **Fall Semester**

COOP*2000	[0.00]	Co-op Work Term II	
Semester 5 - W	inter		
ENVS*3150	[0.50]	Aquatic Systems	
SOIL*2010	[0.50]	Soil Science	
One of:			
ENGG*2550	[0.50]	Water Management	
GEOG*3610	[0.50]	Environmental Hydrology	
GEOL*3060	[0.50]	Groundwater	
1.00 electives or restricted electives			

#### Summer Semester

Builling Schies	ici	
COOP*3000	[0.00]	Co-op Work Term III
Semester 6 - Fa	11	
ENVS*4011	[0.00]	Project in Environmental Sciences
SOIL*3050	[0.50]	Land Utilization
SOIL*3080	[0.50]	Soil and Water Conservation
One of:		
ECON*2100	[0.50]	Economic Growth and Environmental Quality
FARE*2700	[0.50]	Survey of Natural Resource Economics
One of:		
GEOG*3210	[0.50]	Management of the Biophysical Environment
POLS*3370	[0.50]	Environmental Politics and Governance
0.50 -1		.:

0.50 electives or restricted electives

Note: BIOL\*4040 may be substituted for GEOG\*3210 or POLS\*3370 and would be taken in Semester 7.

### Semester 7 - Winter

BIOL*3130	[0.50]	Conservation Biology	
ENVS*4012	[0.50]	Project in Environmental Sciences	
NRS*3100	[0.50]	Resource Planning Techniques	
1.00 electives or restricted electives			

#### **Summer Semester (Optional)**

[0.50]

COOP*4000	[0.00]	Co-op Work Term IV	
Semester 8 - I	all		
ENVS*4300	[0.50]	Environmental Law & Regulation	
NRS*4110	[0.50]	Natural Resources Management Field Camp	
1.50 electives or restricted electives			

#### **Restricted Electives**

CROP\*2280

Students in the Natural Resources Management major are required to choose 2.50 restricted elective credits from the following list. Students are encouraged to seek advice on their choices and are reminded that 6.00 credits of their B.Sc.(Env.) degree must be at the 3000 level or higher.

Crops in Land Reclamation

[0.50]	Nature Interpretation
[0.50]	Agroforestry Systems
[0.50]	Forest Biodiversity
[0.50]	Forest Ecology
[0.50]	Independent Research I
[0.50]	Independent Research II *
[1.00]	Independent Research
[1.00]	Advanced Independent Research I *
[1.00]	Advanced Independent Research II *
[2.00]	Advanced Independent Research *
[0.50]	The Earth From Space
[0.50]	Management of the Biophysical Environment
[0.50]	Remote Sensing of the Environment
[0.50]	GIS and Spatial Analysis
	[0.50] [0.50] [0.50] [0.50] [0.50] [0.50] [1.00] [1.00] [1.00] [2.00] [0.50] [0.50]

GEOG*4230	[0.50]	Environmental Impact Assessment
LARC*3320	[0.50]	Principles of Landscape Ecology
LARC*4520	[0.50]	Park and Recreation Administration
MET*3050	[0.50]	Microclimatology
SOIL*3060	[0.50]	Environmental Soil Chemistry
SOIL*3070	[0.50]	Environmental Soil Physics
SOIL*3200	[0.50]	Environmental Soil Biology