

Dependencies

Prerequisites

- GEOG 484 - Machine Learning in Geospatial Science [View Program](#)
- GEOG 471 - Remote Sensing Project [View Program](#)

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours) [View Program](#)
- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)
- CIVE-Water Resources Specialization - Water Resources Specialization [View Program](#)

Course Lists

- H-Civil Engineering - Civil Engineering (Bachelor of Applied Science - Honours) [View Program](#)
- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours) [View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

Course Requirements (no units)

- ENVE-Water Resources Specialization - Water Resources Specialization [View Program](#)

GDS 381 - Advanced Geographic Information Systems

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and
Year
Fall 2026

Offering Number

1

Existing

**Effective Term and
Year**

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

GEOG 381 is a core course in our 'Geomatics' stream of courses. We are proposing to change the name of the Geomatics program to 'Geospatial Data Science', with the creation of corresponding course codes (GDS) to support this name and reflect the nature of the GDS courses.

The term Geomatics has a professional identity that is very strongly tied to surveying and traditionally, therefore, to civil engineering. When the Geomatics program was launched at the University of Waterloo, much of the surveying tradition was to be found in civil and environmental engineering department. However, while limited expertise in Geography connected with surveying, historically, since 2005, the dominant identity of the Geomatics plan has reflected the strong and deep expertise of geographical information systems, remote sensing and spatial analysis, with less emphasis on surveying. Over time, the applied GIS and remote sensing technologies have strengthened, and while surveying remains a part of the plan, the dominant interest amongst students and faculty within the Geomatics plan is in the geospatial data science aspects (GIS, remote sensing and geospatial analysis). These are the dominant elements for which our program and graduates are known for, and creates the core of our disciplinary identity.

High school students are aware of data science as a recognizable and viable career path especially with a dominance in AI applications. At Waterloo, the re-branding of geomatics to geospatial data science, which corresponding course codes, better reflects what is actually taught in our program, and is a description that will better connect with potential students from a recruitment perspective. Geospatial data science explicitly deals with the acquisition and analysis of geospatial data and its adoption for environmental, policy and planning applications. For several years now, our introductory course for Geomatics students has been named 'Geospatial Data Science', as an attempt to better communicate to our entering class, the specifics of the plan they are embarking on. Changing the degree name, therefore, to Geospatial Data Science will:

- Better reflect the nature of our teaching and learning expertise in GEM (GIS, remote sensing, geospatial analysis, environmental and policy applications)
- Better resonate with high school students who are interested in the environment applications of geospatial data science
- Better serve students by incorporating professor's research applications into lesson planning. (modified)
- Better prepare students for the co-op positions, so potential employers have a clear sense of the training the student has received.
- Enable us to better leverage our research applications into teaching

- Maintain a strong link which students can leverage through co-op and at post-graduation

Minor change to calendar description to change 'modeling' to 'modelling'.

PLAN381 cross list will automatically be updated upon approval of the new subject code by SUC.

Consultations

Consultations with Planning (since GEOG 381 is cross-listed with PLAN 381). Planning is supportive of the course code change.

Consultation through the process for the introduction of a new subject code.

2025-10-08: Math ADUG Benoit Charbonneau expressed support for program name change on behalf of Faculty of Mathematics.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

	Number	Course Level
Proposed	381	300
Subject Code GDS		
Existing		
Subject Code GEOG		

Title

Advanced Geographic Information Systems

Abbreviated Title

Undergraduate Communication Requirement Identifier

Proposed**Description**

Students learn theoretical and operational approaches to advanced spatial analysis using geographical information systems. Emphasis is placed on the use of automation procedures using models and programming to address a variety of topics that may include but are not limited to digital terrain modelling, suitability analysis, network analysis, and cell-based models. The domain of spatial problems explored may vary by instructor.

Existing**Description**

Students learn theoretical and operational approaches to advanced spatial analysis using geographical information systems. Emphasis is placed on the use of automation procedures using models and programming to address a variety of topics that may include but are not limited to digital terrain modeling, suitability analysis, network analysis, and cell-based models. The domain of spatial problems explored may vary by instructor.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information**Is this course cross-listed?**

Yes,

Cross-Listed Courses

[PLAN 381](#) - Advanced Geographic Information Systems

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Must have completed at least 1 of the following:

- GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
- PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG381

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 481 - Geographic Information Systems Project [View Program](#)
- PLAN 481 - Geographic Information Systems Project [View Program](#)
- GEOG 487 - Management Issues in Geographic Information Systems [View Program](#)
- PLAN 487 - Management Issues in Geographic Information Systems [View Program](#)

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours) [View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems [View Program](#)

Course Requirements (no units)

- Transportation Specialization - Transportation Specialization [View Program](#)

Course Requirements (units)

- Ecological Restoration & Rehabilitation Diploma - Diploma in Ecological Restoration and Rehabilitation [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)
- CIVE-Water Resources Specialization - Water Resources Specialization [View Program](#)

Course Lists

- H-Civil Engineering - Civil Engineering (Bachelor of Applied Science - Honours) [View Program](#)
- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours) [View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)
- ENVE-Water Resources Specialization - Water Resources Specialization [View Program](#)
- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization [View Program](#)

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

GEOG387 is a core course in our 'Geomatics' stream of courses. We are proposing to change the name of the Geomatics program to 'Geospatial Data Science', with the creation of corresponding course codes (GDS) to support this name and reflect the nature of the GDS courses.

The term Geomatics has a professional identity that is very strongly tied to surveying and traditionally, therefore, to civil engineering. When the Geomatics program was launched at the University of Waterloo, much of the surveying tradition was to be found in civil and environmental engineering department. However, while limited expertise in Geography connected with surveying, historically, since 2005, the dominant identity of the Geomatics plan has reflected the strong and deep expertise of geographical information systems, remote sensing and spatial analysis, with less emphasis on surveying. Over time, the applied GIS and remote sensing technologies have strengthened, and while surveying remains a part of the plan, the dominant interest amongst students and faculty within the Geomatics plan is in the geospatial data science aspects (GIS, remote sensing and geospatial analysis). These are the dominant elements for which our program and graduates are known for, and creates the core of our disciplinary identity.

High school students are aware of data science as a recognizable and viable career path especially with a dominance in AI applications. At Waterloo, the re-branding of geomatics to geospatial data science, which corresponding course codes, better reflects what is actually taught in our program, and is a description that will better connect with potential students from a recruitment perspective. Geospatial data science explicitly deals with the acquisition and analysis of geospatial data and its adoption for environmental, policy and planning applications. For several years now, our introductory course for Geomatics students has been named 'Geospatial Data Science', as an attempt to better communicate to our entering class, the specifics of the plan they are embarking on. Changing the degree name, therefore, to Geospatial Data Science will:

- Better reflect the nature of our teaching and learning expertise in GEM (GIS, remote sensing, geospatial analysis, environmental and policy applications)
- Better resonate with high school students who are interested in the environment applications of geospatial data science
- Better serve students by incorporating professor's research applications into lesson planning. (modified)
- Better prepare students for the co-op positions, so potential employers have a clear sense of the training the student has received.
- Enable us to better leverage our research applications into teaching
- Maintain a strong link which students can leverage through co-op and at post-graduation

The course title and description are also changing to reflect up-to-date curriculum needs, with a focus on AI and machine learning methods, and their application to spatial analysis.

Note: Approval of motion to change subject to GDS is pending approval on the adoption of this subject code. Once approved the course subject will be updated for Faculty Council and Senate Undergrad approval.

Minor change to calendar description to change 'modeling' to 'modelling'.

Removal of PLAN387 cross-listing. PLAN387 is being retired.

Related proposal:

- PLAN387

Consultations

Consultations with Planning (since GEOG 387 is cross-listed with PLAN 387).

Consultation through the process for the introduction of a new subject code.

2025-10-08: Math ADUG Benoit Charbonneau expressed support for program name change on behalf of Faculty of Mathematics.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Proposed
Subject Code GDS
Existing
Subject Code GEOG

Number

387

Course Level

300

Proposed
Title Artificial Intelligence in Geospatial Data Science
Existing
Title Spatial Databases

Proposed
Abbreviated Title AI in Geospatial Data Science
Existing
Abbreviated Title Spatial Databases

Undergraduate Communication Requirement Identifier

No,

Proposed
Description An in-depth study of current machine learning methods and their applications in geospatial science, with a focus on remote sensing and geographical information analysis. The differences between traditional spatial statistical analysis and modelling with artificial intelligence (AI) approaches will be emphasized and their applicability to spatial AI.

Existing

Description

This course focuses on design and development of a GIS database. It addresses theoretical issues regarding data models used in GIS and data modeling techniques used in designing spatial databases. It considers the processing required to input data from a variety of sources and clean and edit a multi-theme database and introduces students to creation and use of internet map services.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Proposed

Is this course cross-listed?

No,

Existing

Is this course cross-listed?

Yes,

Proposed

Is this course cross-listed?

No,

Existing

Is this course cross-listed?

Yes,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Must have completed at least 1 of the following:

- GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
- PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG387

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 481 - Geographic Information Systems Project [View Program](#)
- PLAN 481 - Geographic Information Systems Project [View Program](#)
- GEOG 487 - Management Issues in Geographic Information Systems [View Program](#)
- PLAN 487 - Management Issues in Geographic Information Systems [View Program](#)

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours) [View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems [View Program](#)
- Ecological Restoration & Rehabilitation Diploma - Diploma in Ecological Restoration and Rehabilitation [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)
- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)
- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization [View Program](#)

GDS 471 - Remote Sensing Project

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

GEOG 471 is a core course in our 'Geomatics' stream of courses. We are proposing to change the name of the Geomatics program to 'Geospatial Data Science', with the creation of corresponding course codes (GDS) to support this name and reflect the nature of the GDS courses.

The term Geomatics has a professional identity that is very strongly tied to surveying and traditionally, therefore, to civil engineering. When the Geomatics program was launched at the University of Waterloo, much of the surveying tradition was to be found in civil and environmental engineering department. However, while limited expertise in Geography connected with surveying, historically, since 2005, the dominant identity of the Geomatics plan has reflected the strong and deep expertise of geographical information systems, remote sensing and spatial analysis, with less emphasis on surveying. Over time, the applied GIS and remote sensing technologies have strengthened, and while surveying remains a part of the plan, the dominant interest amongst students and faculty within the Geomatics plan is in the geospatial data science aspects (GIS, remote sensing and geospatial analysis). These are the dominant elements for which our program and graduates are known for, and creates the core of our disciplinary identity.

High school students are aware of data science as a recognizable and viable career path especially with a dominance in AI applications. At Waterloo, the re-branding of geomatics to geospatial data science, which corresponding course codes, better reflects what is actually taught in our program, and is a description that will better connect with potential students from a recruitment perspective. Geospatial data science explicitly deals with the acquisition and analysis of geospatial data and its adoption for environmental, policy and planning applications. For several years now, our introductory course for Geomatics students has been named 'Geospatial Data Science', as an attempt to better communicate to our entering class, the specifics of the plan they are embarking on. Changing the degree name, therefore, to Geospatial Data Science will:

- Better reflect the nature of our teaching and learning expertise in GEM (GIS, remote sensing, geospatial analysis, environmental and policy applications)

- Better resonate with high school students who are interested in the environment applications of geospatial data science
- Better serve students by incorporating professor's research applications into lesson planning. (modified)
- Better prepare students for the co-op positions, so potential employers have a clear sense of the training the student has received.
- Enable us to better leverage our research applications into teaching
- Maintain a strong link which students can leverage through co-op and at post-graduation

Related agenda proposals: N/A

Consultations

Consultation through the process for the introduction of a new subject code.

2025-10-08: Math ADUG Benoit Charbonneau expressed support for program name change on behalf of Faculty of Mathematics.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

	Number	Course Level
Proposed	471	400
Subject Code GDS		
Existing		
Subject Code GEOG		

Title

Remote Sensing Project

Abbreviated Title

Remote Sensing Project

Undergraduate Communication Requirement Identifier

No,

Description

Digital image analysis for resource mapping and evaluation using remote sensing data. Topics range from initial data selection to final map production and assessment. Using commercial image analysis software, students will analyse data for a selected area and produce a portfolio of results. In addition, they will undertake a literature review on a selected topic and present highlights of the review at an end-of-term mini-conference.

Units

1.00

Exceptions to Fees or Academic Progress Units

No,

Components

SeminarTutorial

Primary Component

Seminar

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
 - GEOG371 - Advanced Remote Sensing Techniques (0.50)
- Students must be in level 3A or higher

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG471

Course Notes

Fee Statement

This course may have additional fees. See academic unit for details.

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours)
- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours)

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[View Program](#)

Course Lists

- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science -

Honours)

[View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization
- GEM-Geomatics Specialization - Geomatics Specialization
- GA-Geomatics Specialization - Geomatics Specialization

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GDS 481 - Geographic Information Systems Project

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Effective Date & Career

Career

Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

GEOG 481 is a core course in our 'Geomatics' stream of courses. We are proposing to change the name of the Geomatics program to 'Geospatial Data Science', with the creation of corresponding course codes (GDS) to support this name and reflect the nature of the GDS courses.

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High school students are aware of data science as a recognizable and viable career path especially with a dominance in AI applications. At Waterloo, the re-branding of geomatics to geospatial data science, which corresponding course codes, better reflects what is actually taught in our program, and is a description that will better connect with potential students from a recruitment perspective. Geospatial data science explicitly deals with the acquisition and analysis of geospatial data and its adoption for environmental, policy and planning applications. For several years now, our introductory course for Geomatics students has been named 'Geospatial Data Science', as an attempt to better communicate to our entering class, the specifics of the plan they are embarking on. Changing the degree name, therefore, to Geospatial Data Science will:

- Better reflect the nature of our teaching and learning expertise in GEM (GIS, remote sensing, geospatial analysis, environmental and policy applications)
- Better resonate with high school students who are interested in the environment applications of geospatial data science
- Better serve students by incorporating professor's research applications into lesson planning. (modified)
- Better prepare students for the co-op positions, so potential employers have a clear sense of the training the student has received.
- Enable us to better leverage our research applications into teaching
- Maintain a strong link which students can leverage through co-op and at post-graduation

PLAN481 cross-list will automatically be updated upon approval of the new subject code by SUC.

A new Faculty level symposium will be hosted annually for students who have worked on a thesis, capstone, or project course in their fourth year - to celebrate student achievements throughout the faculty. The symposium will most likely require students to print off research/project posters for presentation at this annual symposium. Adding the 'additional fees' note so that students are aware of the potential printing fee.

Related agenda item:

- PLAN481

Consultations

Consultations with Planning (since GEOG 481 is cross-listed with PLAN 481). Planning is supportive of the course code change.

Consultation through the process for the introduction of a new subject code.

2025-10-08: Math ADUG Benoit Charbonneau expressed support for program name change on behalf of Faculty of Mathematics.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Proposed

Number

481

Course Level

400

Subject Code

GDS

Existing

Subject Code

GEOG

Title

Geographic Information Systems Project

Abbreviated Title

GIS Project

Undergraduate Communication Requirement Identifier

No,

Description

The development, implementation, and presentation of a response to a set of GIS related project requirements is the focus of this course. Students work in small teams to enhance and develop their abilities to work with GIS and related spatial technologies and analytical methods in an advanced project setting. The nature of the project requirements and themes varies with faculty and student strengths and interests. Projects may emphasize development of software applications, use of programming, or advanced GIS analysis methods, and draw from theme areas such as environment studies and management, human and physical geography, or planning.

Units

1.00

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryProjectSeminarTutorial

Primary Component

Seminar

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[PLAN 481](#) - Geographic Information Systems Project

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
 - ENVS278 - Applied Statistics for Environmental Research (0.50)
- Must have completed at least 1 of the following:
 - GEOG381 - Advanced Geographic Information Systems (0.50)
 - PLAN381 - Advanced Geographic Information Systems (0.50)
- Must have completed at least 1 of the following:
 - GEOG387 - Spatial Databases (0.50)
 - PLAN387 - Spatial Databases (0.50)

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG481

Course Notes

Proposed

Fee Statement

This course may have additional fees. See academic unit for details.

Existing

Fee Statement

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours)

[View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems

[View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours)

[View Program](#)

- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)
- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization [View Program](#)

GEOG 100 - Changing Human Environments and Introduction to Geography and Environmental Management

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Effective Date & Career

Career

Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2024

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG100 is being retained as a degree requirement for the Geography & Environmental Management program, although the title, calendar description are being adjusted to better align with GEOG101, as lectures for these two courses will be scheduled as held with.

GEOG100 will be the cohort building course for GEM. As such a tutorial section specifically for GEM students will be scheduled with GEOG100 - hence the need for this additional component. A field component has also been added for future flexibility for this cohort building course.

Related agenda proposal:

- GEOG101

Consultations

No consultations necessary

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

100

Course Level

100

Proposed

Title

Changing Human Environments and Introduction to Geography and Environmental Management

Existing

Title

On Becoming a Geographer

Proposed

Abbreviated Title

Changing Human Env & GEM Intro

Existing

Abbreviated Title

On Becoming a Geographer

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

An introduction to human geography through key subfields of the discipline, examining population change, the rise of cities, our relationship to nature, social inequalities, economic forms, cultural differences and environmental change at the local and global scale. The course will include components used to introduce Geography and Environmental Management students to university life, learning resources, and peer networks.

Existing

Description

An introduction to geographic themes and methods of inquiry. The emphasis will be placed on practical skills including literature searches, field observation, scholarly debate, and professional writing.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Proposed

Components

Tutorial Field Studies

Existing

Components

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - Complete 1 of the following
 - Students must be in level 1A
 - Students must be in level 1B
 - Students must be in level 2A
 - Students must be in level 2B
 -
 - **Enrolled in H-Geography & Environmental Management**
 - **Enrolled in H-Geography & Environmental Management, JH-Geography & Environmental Management, or Geography & Environmental Management Minor**

Corequisites

No Rules

Antirequisites

1. Not completed nor concurrently enrolled in:
 - o **GEOG101 - Human Geographies: People, Space and Change (0.50)**

Course Notes

Fee Statement

This course may have additional fees. See academic unit for details.

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

GEOG 101 - Changing Human Environments

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and
Year
Fall 2026

Offering Number

1

Existing

**Effective Term and
Year**
Fall 2023

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our courses to streamline and scaffold learning throughout our course offerings. GEOG101 title and calendar description is being modified slightly to better reflect the concepts covered in the course. Added tutorial and laboratory components for future flexibility in how the course is offered.

Anti-req also added for GEOG100, as these two courses will be heldwith in the future. Also, the desire is for GEM students to be enrolled in GEOG100 for cohort building; therefore, a negative prereq preventing them from adding the course has been added.

Related agenda proposal:

- GEOG100

Consultations

No consultations necessary

Course Information

Faculty

Faculty of Environment

Academic Unit

Subject Code	Number	Course Level
GEOG	101	100

Proposed

Title

Changing Human Environments

Existing

Title

Human Geographies: People, Space and Change

Proposed

Abbreviated Title

Changing Human Environments

Existing

Abbreviated Title

Human Geographies

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

An introduction to human geography through key subfields of the discipline, examining population change, the rise of cities, our relationship to nature, social inequalities, economic forms, cultural differences, and environmental change at the local and global scale.

Existing

Description

An introduction to human geography through key subfields of the discipline, examining population change, the rise of cities, our relationship to nature, social inequalities, economic forms, cultural difference and environmental change at the local and global scale.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Proposed

Components

Laboratory Lecture Tutorial

Existing

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

No Rules

Corequisites

No Rules

Antirequisites

1. No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 203 - Environment and Development in a Global Perspective [View Program](#)
- GEOG 325 - Geographies of Health [View Program](#)
- GEOG 349 - Urban Form and Spatial Structure [View Program](#)
- PLAN 349 - Urban Form and Spatial Structure [View Program](#)
- GEOG 336 - Space, Power, and Politics: Citizenship in a Changing World [View Program](#)
- GEOG 202 - Geography of the Global Economy [View Program](#)
- GEOG 233 - Geography of Tourism [View Program](#)

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor [View Program](#)
- International Development Minor - International Development Minor [View Program](#)
- H-International Development - International Development (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Lists

• Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

• Studies in Islamic & Arab Cultures Minor - Studies in Islamic and Arab Cultures Minor

[View Program](#)

GEOG 102 - Changing Physical Environments

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and
Year

Fall 2026

Existing

Effective Term and
Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are revamping our core foundational courses. Our first year physical geography course (GEOG 102) is being renamed to "Changing Physical Environments". This corresponds to a calendar change for our first year human geography course which is being renamed to "Changing Human Environments". The revised course titles more clearly and succinctly articulate the course content. Minor changes to the course description are also being made to reflect the content and focus of the revamped curriculum.

Tutorial and laboratory components added for future offering flexibility.

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

102

Course Level

100

Proposed

Title

Changing Physical Environments

Existing

Title

Global Environmental Systems: Processes and Change

Proposed

Abbreviated Title

Changing Physical Environments

Existing

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

An introductory course examining the forces that drive and change Earth's climate and its impacts on the physical environments of the planet. These factors are explored for systems including the atmosphere, biosphere, hydrosphere, and cryosphere, and the interconnections between them.

Existing

Description

An introductory course in the study of the energy and mass flows that impact the climate and landscape of the Earth system. There is focus on understanding processes of change and variability as well as the impacts of humans on these systems that increasingly define the Anthropocene.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Proposed

Components

Laboratory Lecture Tutorial

Existing

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

No Rules

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

This course may have additional fees. See academic unit for details.

Workflow Information

Workflow Path

Faculty/AFIW Path(s) for Workflow

Dependencies

Prerequisites

- GEOG 309 - Physical Climatology [View Program](#)
- GEOG 205 - Principles of Geomorphology [View Program](#)
- GEOG 209 - Hydroclimatology [View Program](#)

Course Requirements (units)

- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- 3G-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Three-Year General) [View Program](#)

Course Requirements (no units)

- JH-Geography & Environmental Management - Geography and Environmental Management (Joint Honours) [View Program](#)

Course Requirements (units)

- H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours)
- H-Climate & Environmental Change - Climate and Environmental Change [View Program](#)
(Bachelor of Sciences - Honours) [View Program](#)
- Climate & Sustainability Specialization - Climate and Sustainability Specialization [View Program](#)

GEOG 202 - Economy and Development: Spaces of Global Transformation

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Effective Date & Career

Career
Undergraduate,

Proposed

Offering Number

1

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG 202 will become the core foundational course for a revised specialization focused on 'Economy & Development'. The title and calendar description are changing to reflect the course's role providing this foundation. The pre-req is also being adjusted to make the course more open (and reflects that students in our program will already have these degree requirements anyways).

Related agenda proposals:

- CEC-Economy and Society Specialization
- G-Economy and Society Specialization
- GA-Economy and Society Specialization
- GEM-Economy and Society Specialization

Consultations

No consultations necessary. However, Peace and Conflict Studies and BASc were informed of the calendar description change (email sent on Sept 24).

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

202

Course Level

200

Proposed

Title

Economy and Development: Spaces of Global Transformation

Existing

Title

Geography of the Global Economy

Proposed

Abbreviated Title

Econ & Dev Glob Transformation

Existing

Abbreviated Title

Geography of Global Economy

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

This course examines global economic and developmental change. It explores key issues related to spaces of international transformation with a focus on inequality and efforts to address it. The course uses international examples with a focus on global capitalism, resource management, international development, and tourism.

Existing

Description

An introduction to globalization of the world economy through an examination of its causes, patterns, and consequences in a variety of geographic contexts.

Units

0.50

**Exceptions to Fees or Academic Progress
Units**

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. No Rules

- [ENVS195 – Introduction to Environmental Studies \(0.50\)](#)
- [GEOG101 – Human Geographies: People, Space and Change \(0.50\)](#)

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

This course may have additional fees. See academic unit for details.

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 311 - Economic Geography and Society [View Program](#)
- GEOG 426 - Geographies of Development [View Program](#)
- GEOG 436 - Feminist Economic Geography: Gender, Identities and Social Change [View Program](#)
- GEOG 356 - Resources Management [View Program](#)
- GEOG 415 - Economy and Society Project [View Program](#)

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor [View Program](#)
- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- 3G-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Three-Year General) [View Program](#)

Course Lists

- Peace & Conflict Studies Minor - Peace and Conflict Studies Minor [View Program](#)

Course Requirements (no units)

- JH-Geography & Environmental Management - Geography and Environmental Management (Joint Honours) [View Program](#)

Course Requirements (units)

- H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours)
- G-Aviation Specialization - Aviation Specialization [View Program](#) [View Program](#)
- GEM-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Aviation Specialization - Aviation Specialization [View Program](#)
- G-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- GEM-Aviation Specialization - Aviation Specialization [View Program](#)
- GA-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Lists

- Global Affairs Minor - Global Affairs Minor [View Program](#)
- 4G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Four-Year General)
- H-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Honours) [View Program](#) [View Program](#)
- Degree Reqs: BASc - Bachelor of Applied Science Degree Requirements [View Program](#)
- 3G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Three-Year General) [View Program](#)

GEOG 205 - Landscape Dynamics

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, our department is revamping our courses and specializations. GEOG 205 is a foundational course for the Earth System Sciences specialization, and the title change and calendar description change reflects how the course focus will shift to meet the needs of the program/specialization.

Related agenda proposals: N/A

Consultations

Knowledge Integration has been consulted.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

205

Course Level

200

Proposed

Title

Landscape Dynamics

Existing

Title

Principles of Geomorphology

Proposed

Abbreviated Title

Landscape Dynamics

Existing

Abbreviated Title

Principles of Geomorphology

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

This course provides an understanding of the foundational principles of geomorphology, and how climatological, hydrological, and ecological processes shape landscape evolution. The role of these processes in shaping the landscape and the influence of land use change will be explored.

Existing

Description

This course introduces underlying principles of geomorphology using examples from subfields of the discipline. Topics include the role of time and scale in geomorphic processes, as well as the role of water, hill-slope processes, soils, wind, and glaciation and ice in polar and alpine environs.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete all of the following

- Must have completed at least 1 of the following:
 - EARTH121 - Introductory Earth Sciences (0.50)
 - EARTH123 - Introductory Hydrology (0.50)
 - GEOG102 - Global Environmental Systems: Processes and Change (0.50)
- Obtained all of the following milestones: Workplace Hazardous Materials Information System Milestone

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 305 - Fluvial Geomorphology [View Program](#)
- GEOG 320 - The Cryosphere [View Program](#)
- GEOG 403 - Eutrophication: From Process to Water-Quality Management [View Program](#)

Course Requirements (units)

- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- 3G-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Three-Year General) [View Program](#)

Course Requirements (no units)

- JH-Geography & Environmental Management - Geography and Environmental Management (Joint Honours) [View Program](#)

Course Requirements (units)

- H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- GA-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- GEM-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- G-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences -

Honours)

[View Program](#)

- Climate & Sustainability Specialization - Climate and Sustainability Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

GEOG 225 - Global Environment and Health

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG 225 will become the core foundational courses for a revised specialization focused on 'Environment, Society, and Wellbeing'. Some minor changes to the calendar description of this course are being made to reflect the course's role providing this foundation.

Related agenda proposals:

- G-Environment, Society and Well-being specialization
- GA-Environment, Society and Well-being specialization
- GEM-Environment, Society and Well-being specialization

Consultations

No consultations necessary. Departments/Faculties who have this course in an elective list have been notified of the revised course description.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

225

Course Level

200

Title

Global Environment and Health

Abbreviated Title

Global Environment & Health

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

This course addresses the range of environmental issues that affect human health and well-being, with a global focus. This course will use a range of case studies from around the globe to address issues of measurement (of exposures and outcomes), evaluation (study designs), operationalization of well-being, and policy responses.

Existing

Description

This course addresses the range of environmental issues that affect human health, with a global focus. This course will use a range of case studies from around the globe to address issues of measurement (of exposures and outcomes), evaluation (study designs), and policy responses.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureOnline

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

No Rules

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 325 - Geographies of Health

[View Program](#)

Course Requirements (units)

- Sustainability Diploma - Diploma in Sustainability

[View Program](#)

Course Lists

- H-Software Engineering - Software Engineering (Bachelor of Software Engineering - Honours)

[View Program](#)

Course Requirements (units)

- GEM-Economy & Society Specialization - Economy and Society Specialization
- G-Economy & Society Specialization - Economy and Society Specialization
- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

Course Lists

- Global Affairs Minor - Global Affairs Minor
- Degree Reqs: BASc - Bachelor of Applied Science Degree Requirements

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[View Program](#)

GEOG 304 - Carbon in the Biosphere

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Effective Date & Career

Career

Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we have made adjustments to all the specializations offered for our various programs. In order to reflect how students will progress through the Earth Systems Science specialization, we are adjusting pre-requisites to streamline the courses. Students will no longer have a choice of either GEOG 205 or GEOG 209 as a pre-req, and will instead be required to take GEOG 205 as the pre-req.

Related agenda proposals: N/A

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

304

Course Level

300

Title

Carbon in the Biosphere

Abbreviated Title

Carbon in the Biosphere

Undergraduate Communication Requirement Identifier

No,

Description

This course investigates stocks and fluxes of carbon in forests, wetlands, and lakes through directed readings and field investigations. This field-based course will focus on measurement methods, data collection and interpretation, and study design. Topics include forest biomass inventory, soil organic matter, soil carbon dioxide and methane exchange, and dissolved organic carbon.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Field StudiesLaboratoryLectureOnline

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - **Must have completed the following:**
 - **GEOG205 - Principles of Geomorphology (0.50)**
 -
 - Students must be in level 2B or higher
 - ~~Must have completed at least 1 of the following:~~
 - ~~GEOG209 – Hydroclimatology (0.50)~~
 - ~~GEOG305 – Fluvial Geomorphology (0.50)~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Fee Statement

This course may have additional fees. See academic unit for details.

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Lists

- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours) [View Program](#)

Course Requirements (no units)

- Pollution & Restoration Specialization - Pollution and Restoration Specialization [View Program](#)
- GA-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- GEM-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- G-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

Course Requirements (no units)

- Energy & Climate Change Specialization - Energy and Climate Change Specialization [View Program](#)

GEOG 307 - Societal Adaptation to Climate Change

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

A new course was added, SCI205, and cross-listed with GEOG 207. Pre-req is being adjusted to add SCI 205, the new cross-listed course.

Related agenda items:

- GEOG207
- SCI205

Consultations

Science was consulted.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

307

Course Level

300

Title

Societal Adaptation to Climate Change

Abbreviated Title

Climate Change: Soc Adaptation

Undergraduate Communication Requirement Identifier

No,

Description

Climate change is a pervasive factor affecting the future of society. Recognizing that dangerous climate

change cannot be avoided through greenhouse gas emissions reductions alone, adaptation to climate change has emerged as a central component of global climate policy. An in depth understanding of the diverse impacts of climate change on communities, economic sectors and society will provide a foundation for examining adaptation strategies to build resilience to accelerated climate change. Examples will draw from multiple sectors in both developed and developing world contexts, with an emphasis on solutions and the limits to adaptation.

Units

0.50

**Exceptions to Fees or Academic Progress
Units**

No,

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Must have completed at least 1 of the following:
 - GEOG207 - Climate Change Fundamentals (0.50)
 - **Course Not Found**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- G-Aviation Specialization - Aviation Specialization [View Program](#)
- GEM-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Aviation Specialization - Aviation Specialization [View Program](#)

Course Requirements (no units)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization
- GEM-Aviation Specialization - Aviation Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours)
- Climate & Sustainability Specialization - Climate and Sustainability Specialization
- Science, Technology, & Society Specialization - Science, Technology, and Society Specialization

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[View Program](#)

GEOG 311 - The Global Economy

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG 311 will be revised to merge content from some courses that are being retired (e.g., GEOG 302). To better align the course content with the revised Economy and Development specialization, some changes to the course title, calendar description, and pre-reqs are required. The previous calendar description also required some revisions to outdated examples/ areas of focus.

Prerequisite is being changed to open this course to all students at the level of 2B or higher, as well as removing course prerequisites as they are no longer required to be successful in this course.

Related agenda proposals: N/A

Consultations

Consulted with Economics department regarding title change and revised calendar description. Economics has indicated no concerns with the title change.

Associated programs were notified of the change.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code**Number****Course Level**

Proposed

Title

The Global Economy

Existing

Title

Economic Geography and Society

Proposed

Abbreviated Title

The Global Economy

Existing

Abbreviated Title

Economic Geography & Society

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

An introduction to the global economy from a spatial perspective. This course uses a range of examples from around the world to explore and conceptualize the global economic system. Emphasis will be on issues related to capitalism; wealth, poverty, and inequality; production and consumption; and the environment.

Existing

Description

This lecture and discussion course covers topics of importance for understanding economic geography today including the spatial, social, cultural, and economic dimensions of economic development, the 2007/2008 sub-prime mortgage crisis, debt and finance, deindustrialization, the role of work and unions, economic justice, and the role of the state.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 2B or higher
 - ~~Must have completed at least 1 of the following:~~
 - ~~GEOG202 – Geography of the Global Economy (0.50)~~
 - ~~GEOG203 – Environment and Development in a Global Perspective (0.50)~~
 -
 - ~~Students must be in level 3A or higher~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor

[View Program](#)

Course Lists

- Peace & Conflict Studies Minor - Peace and Conflict Studies Minor

[View Program](#)

Course Requirements (units)

- GEM-Economy & Society Specialization - Economy and Society Specialization
- G-Economy & Society Specialization - Economy and Society Specialization
- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

Course Lists

- 4G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Four-Year General)
- H-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Honours)

[View Program](#)

[View Program](#)

Course Requirements (units)

- Science, Technology, & Society Specialization - Science, Technology, and Society Specialization

[View Program](#)

Course Lists

- 3G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Three-Year General)

[View Program](#)

GEOG 314 - Climate Services

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

A new course was added, SCI205, and cross-listed with GEOG 207. Pre-req is being adjusted to add SCI 205, the new cross-listed course.

Related agenda items:

- GEOG207
- SCI205

Consultations

Consultation with Science.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

314

Course Level

300

Title

Climate Services

Abbreviated Title

Climate Services

Undergraduate Communication Requirement Identifier

No,

Description

This course provides an overview of the key concepts related to climate services (i.e., useful, timely, and robust information about climatic trends that can support decision-making) and the development of the United Nations' Global Framework for Climate Services. The value of climate-informed decision-making across diverse sectors of the economy are examined, both for climate variability and extremes today and in an era of accelerating climate change. The scientific and practical challenges of utilizing climate information for decision-making in government policy, community planning, business operations, and international development, as well as the technical standards and professional ethics associated with providing climate services, are examined. Students gain practical experience in the development and application of climate services through climate data assembly and interpretation.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Must have completed at least -1 of the following:
 - GEOG207 - Climate Change Fundamentals (0.50)
 - **Course Not Found**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

Course Lists

- Degree Reqs: BAsC - Bachelor of Applied Science Degree Requirements

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GEOG 320 - The Cryosphere

[Top](#)

Effective Date & Career

Career
Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Rationale for Change

After an extensive curriculum review, we have made adjustments to all the specializations offered for our various programs. In order to reflect how students will progress through the Earth Systems Science specialization, we are adjusting pre-requisites to streamline the courses. Since GEOG 320 is part of this specialization, students will no longer have a choice if either GEOG 205 or GEOG 209 as a pre-req, and will instead be required to take GEOG 209 as the pre-req.

Related agenda proposals: N/A

Consultations

No consultations needed.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

320

Course Level

300

Title

The Cryosphere

Abbreviated Title

Undergraduate Communication

The Cryosphere

Requirement Identifier

No,

Description

This course provides a comprehensive overview of the cryosphere and cryosphere-atmosphere interactions. Topics covered include the material and thermodynamic properties of snow and ice, the role of the cryosphere in weather and climate, and the response of the cryosphere to climate change (past, present, and future). Students will be introduced to, and experiment with, snow and ice process models.

Units

0.50

**Exceptions to Fees or Academic Progress
Units**

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

Consent to Drop

No consent required,

No consent required,

Prerequisites

1. Must have completed the following:

- GEOG209 - Hydroclimatology (0.50)
- ~~GEOG205 - Principles of Geomorphology (0.50)~~
- ~~GEOG207 - Climate Change Fundamentals (0.50)~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- GA-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- GEM-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- G-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences -

Honours)

- Climate & Sustainability Specialization - Climate and Sustainability Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

GEOG 323 - Tourism Impacts - International Perspectives

[Top](#)

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Rationale for Change

After an extensive curriculum review, Geography is proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG 202 added as a pre-requisite to streamline the foundational course that leads into the specialization that GEOG 323 is included in (Economy and Development).

Related agenda proposals:

- REC 383

Consultations

Consultations with Rec and Leisure have taken place.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

323

Course Level

300

Title

Tourism Impacts - International Perspectives

Abbreviated Title

Tourism: Intl Perspectives

Undergraduate Communication Requirement Identifier

No,

Description

The course examines the nature, significance, and costs and benefits of tourism in the context of tourism destinations in developed and developing countries. It employs an international perspective to assess the economic, environmental, social, and cultural impacts of tourism in diverse settings.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[REC 383](#) - Tourism Impacts - International Perspectives

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Must have completed at least 1 of the following:
 - **GEOG202 - Geography of the Global Economy (0.50)**
 - GEOG233 - Geography of Tourism (0.50)
 - REC230 - Outdoor Recreation and Land-Based Learning (0.50)

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Faculty of Health

Dependencies

Prerequisites

- GEOG 423 - Sustainable Tourism

[View Program](#)

Course Requirements (units)

- Sustainability Diploma - Diploma in Sustainability

[View Program](#)

Course Requirements (no units)

- Tourism Minor - Tourism Minor

[View Program](#)

Course Requirements (units)

- G-Aviation Specialization - Aviation Specialization
- GEM-Economy & Society Specialization - Economy and Society Specialization
- CEC-Aviation Specialization - Aviation Specialization

[View Program](#)

[View Program](#)

[View Program](#)

Course Requirements (no units)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization
- GEM-Aviation Specialization - Aviation Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements [View Program](#)

GEOG 325 - Geographies of Health [Top](#)

Effective Date & Career

Career

Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. We are making minor adjustments to the pre-requisites on this course to reflect movement throughout the Environment, Society, and Wellbeing specialization. GEOG 225 is the foundational course that provides the knowledge/skills to succeed in the specialization. We are adjusting the pre-reqs to reflect changes to the foundational courses that set students up for success in upper-year courses. In addition, we are removing GEOG101 as a pre-req and making the level requirement 2B or higher, rather than 3A.

Related agenda proposals: N/A

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

325

Course Level

300

Title

Geographies of Health

Abbreviated Title

Geographies of Health

Undergraduate Communication Requirement Identifier

No,

Description

A critical examination of major themes related to the distribution, diffusion, determinants and delivery of health and health care with a particular emphasis on the roles of space, place and environment.

Units

Exceptions to Fees or Academic Progress

0.50

Units

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete 1 of the following
 - o **Must have completed the following:**
 - o GEOG225 - Global Environment and Health (0.50)
 - o
 - o **Students must be in level 2B or higher**
 - o **Must have completed at least 1 of the following:**
 - o **GEOG101 - Human Geographies: People, Space and Change (0.50)**
 - o **Students must be in level 3A or higher**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 432 - Health and the Built Environment
- HLTH 420 - Health and the Built Environment
- PLAN 432 - Health and the Built Environment

[View Program](#)

[View Program](#)

[View Program](#)

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor
- G-Aviation Specialization - Aviation Specialization
- GEM-Economy & Society Specialization - Economy and Society Specialization
- CEC-Aviation Specialization - Aviation Specialization

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

Course Requirements (no units)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization

[View Program](#)

Course Requirements (units)

- GEM-Aviation Specialization - Aviation Specialization

[View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization
- GEM-Geomatics Specialization - Geomatics Specialization
- GA-Geomatics Specialization - Geomatics Specialization

[View Program](#)

[View Program](#)

[View Program](#)

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

GEOG 326 - Environment and Development in a Global Perspective

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. GEOG203 (new GEOG326) is shifting to the 300-level to be part of a revised specialization focused on 'Economy & Development'. The title and calendar description are remaining the same while adjusting the level to reflect scaffolding and progression of learning in this specialization (we will also ensure materials are taught at a 300-level).

Prerequisite is being changed to open this course to all students at the level of 2B or higher, as well as removing course prerequisites as they are no longer required to be successful in this course.

New numbering will automatically be reflected on listed dependencies, including the revised specialization.

Related agenda items:

- H-Environment and Business

Consultations

Consultations with SEED, since GEOG 203 is a required course for their department. They will be changing the degree requirement to GEOG 202 instead of GEOG 203 (new GEOG326). Confirmed via meeting with Dan Murray on Sept 12 at 10am.

All the program administrators with programs that include GEOG 203 as a degree option were notified of the level change and new course number (e.g., Peace and Conflict studies).

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Proposed

Number

326

Existing

Number

203

Proposed

Course Level

300

Existing

Course Level

200

Title

Environment and Development in a Global Perspective

Abbreviated Title

Env & Dev Global Perspective

Undergraduate Communication Requirement Identifier

No,

Description

Examines the interface between human development and the environment in a global context. Various perspectives are explored to link environmental issues to wealth, poverty, consumption, population, and economic globalization. Case studies, with an emphasis on developing countries, are used to illustrate linkages.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 2B or higher
 - ~~ENVS195 – Introduction to Environmental Studies (0.50)~~
 - ~~ENVS205 – Sustainability: The Future We Want (0.50)~~
 - ~~GEOG101 – Human Geographies: People, Space and Change (0.50)~~

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG203

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 311 - Economic Geography and Society [View Program](#)
- GEOG 426 - Geographies of Development [View Program](#)
- GEOG 356 - Resources Management [View Program](#)
- GEOG 415 - Economy and Society Project [View Program](#)

Course Requirements (units)

- H-Environment & Business - Environment and Business (Bachelor of Environmental Studies - Honours) [View Program](#)
- Urban Studies Minor - Urban Studies Minor [View Program](#)
- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- 3G-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Three-Year General) [View Program](#)
- Sustainability Diploma - Diploma in Sustainability [View Program](#)
- Future Cities Diploma - Diploma in Future Cities [View Program](#)

Course Lists

- Peace & Conflict Studies Minor - Peace and Conflict Studies Minor [View Program](#)
- H-Software Engineering - Software Engineering (Bachelor of Software Engineering - Honours) [View Program](#)

Course Requirements (no units)

- JH-Geography & Environmental Management - Geography and Environmental Management (Joint Honours) [View Program](#)

Course Requirements (units)

- International Development Minor - International Development Minor [View Program](#)
- H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours)
- GEM-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

[View Program](#)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Lists

- Global Affairs Minor - Global Affairs Minor
- 4G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Four-Year General)
- H-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Honours)
- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours)
- Science, Technology, & Society Specialization - Science, Technology, and Society Specialization

[View Program](#)

[View Program](#)

Course Lists

- Studies in Islamic & Arab Cultures Minor - Studies in Islamic and Arab Cultures Minor
- 3G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Three-Year General)

[View Program](#)

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GEOG 351 - Transportation, Mobility, and Sustainability

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Effective Date & Career

Career
Undergraduate,

Proposed

Offering Number

1

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-24

Rationale for Change

After an extensive curriculum review, our department is proposing changes to a number of our courses/ programs. The course title and calendar description for GEOG 351 is changing to reflect a greater focus on Aviation, and to remove 'Geography' from the title (as this has not been found to resonate with students).

Related agenda proposals: N/A

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

351

Course Level

300

Proposed

Title

Transportation, Mobility, and Sustainability

Existing

Title

Geography of Transportation

Proposed

Abbreviated Title

Transpo, Mobility, & Sust

Existing

Abbreviated Title

Transportation Geography

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

Focuses on transportation systems and issues and explores the links between transportation and economic development; sustainable transportation; and transportation, travel, and mobility. Particular attention is paid to trends in aviation and related topics through domestic and international case studies.

Existing

Description

Focuses on Canadian transportation systems and issues and is organized into three modules: links between transportation and regional economic development, urban land use - transportation interactions, and sustainable transportation. Approximately one-quarter of the course focuses on analytic techniques including network analysis, category analysis, and the gravity model. Particular attention is paid to trends in air travel and related issues.

Units**Exceptions to Fees or Academic Progress Units**

0.50

No,

Components

Field StudiesLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Students must be in level 2A or higher

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor
- G-Aviation Specialization - Aviation Specialization
- CEC-Aviation Specialization - Aviation Specialization
- GEM-Aviation Specialization - Aviation Specialization

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GEOG 356 - Natural Resources Management

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and

Offering Number

1

Year Fall 2026
Existing
Effective Term and Year Fall 2024

Proposal Details

Proposal Type
Change,

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. One of the original prerequisites for this course, GEOG 203, is being shifted to a 300-level course.

Prerequisite is being changed to open this course to all students at the level of 2B or higher, as well as removing course prerequisites as they are no longer required to be successful in this course.

A minor title change to add the word 'Natural' to reflect the topic of the course.

Related agenda proposals: N/A

Consultations

No consultations necessary.

Course Information

Faculty

Academic Unit

Subject Code	Number	Course Level
GEOG	356	300

Proposed

Title

Natural Resources Management

Existing

Title

Resources Management

Proposed

Abbreviated Title

Natural Resources Management

Existing

Abbreviated Title

Resources Management

**Undergraduate Communication
Requirement Identifier**

No,

Description

Reviews selected theories, methods, and terminology related to economic, behavioural, institutional and decision-making aspects of resources and environmental problems.

Units

0.50

**Exceptions to Fees or Academic Progress
Units**

No,

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 2B or higher
 - ~~Must have completed at least 1 of the following:~~
 - ~~GEOG202 – Geography of the Global Economy (0.50)~~
 - ~~GEOG203 – Environment and Development in a Global Perspective (0.50)~~
 -
 - ~~Complete all of the following~~
 - ~~Enrolled in a program offered by Faculty of Environment~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Lists

- Environmental Assessment Diploma - Diploma in Environmental Assessment [View Program](#)

Course Requirements (units)

- GEM-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

GEOG 359 - Low Carbon Transition

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

A new course was added, SCI205, and cross-listed with GEOG 207. Pre-req is being adjusted to add SCI 205, the new cross-listed course.

Related agenda items:

- GEOG207
- SCI205

Consultations

Science was consulted.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

359

Course Level

300

Title

Low Carbon Transition

Abbreviated Title

Low Carbon Transition

Undergraduate Communication Requirement Identifier

No,

Description

The world is undergoing a fundamental transition to a low-carbon economy as countries strive to reach the greenhouse gas emission reduction targets agreed to in the Paris Climate Agreement. This course examines how this rapid transformation influences all sectors in society and provides students with essential knowledge to assess associated risks and opportunities for communities, government, and business. Policy, economic and social dimensions of low carbon societal transitions are critically examined and debated using Canadian and international case studies. Evolving carbon regulatory frameworks and markets are reviewed, and students engage with techniques related to carbon accounting and carbon risk assessment.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Lecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

Consent to Drop

No consent required,

No consent required,

Prerequisites

1. Must have completed at least 1 of the following:
 - GEOG207 - Climate Change Fundamentals (0.50)
 - **Course Not Found**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

There are no dependencies

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Rationale for Change

After an extensive curriculum review, we are proposing some changes to scaffolding of courses, and to align specializations. As the original prerequisite course for GEOG408 is being retired (GEOG309), this necessitated a pre-req change. In order to meet specialization requirements and ensure students can take this course option, we are adjusting the prerequisite to one of GEOG207/SCI205 (now cross-listed courses).

Related agenda proposals:

- GEOG207
- SCI205
- GEOG309

Consultations

No consultations necessary

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

408

Course Level

400

Title

Earth's Future Climates

Abbreviated Title

Earth's Future Climates

Undergraduate Communication Requirement Identifier

No,

Description

This course provides students with experience using numerical models to understand changes in Earth's climate. Building on their knowledge of the fundamental physical processes governing the climate system, students will construct, apply and evaluate a hierarchy of climate models (from simple energy balance models to full ocean-atmosphere General Circulation Models). The predictive ability of climate models, and their validation, will be considered. The different types of uncertainty inherent in climate projections will be explained and the implications assessed.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Must have completed at least 1 of the following:
 - **GEOG207 - Climate Change Fundamentals (0.50)**
 - **Course Not Found**
 - **GEOG309 - Physical Climatology (0.50)**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Lists

- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours) [View Program](#)

Course Requirements (no units)

- GA-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- GEM-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- G-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

Course Lists

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours) [View Program](#)

Course Requirements (units)

- Climate & Sustainability Specialization - Climate and Sustainability Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

Course Requirements (no units)

- Energy & Climate Change Specialization - Energy and Climate Change Specialization [View Program](#)

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2023

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

A new course was added, SCI205, and cross-listed with GEOG 207. Pre-req is being adjusted to add SCI 205, the new cross-listed course.

Related agenda items:

- GEOG207
- SCI205

Consultations

Science was consulted.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

417

Course Level

400

Title

Climate Change Communication

Abbreviated Title

Climate Change Communication

Undergraduate Communication Requirement Identifier

No,

Description

Climate change is a complex phenomenon at the intersection of social and ecological systems. An understanding of the fundamental science of climate change is only part of the challenge; evidence-based decision-making depends on communicating science effectively, and engaging diverse perspectives. Effective communication also helps to uncover the deeper differences in worldviews that may give rise to disagreements about how to respond. This course introduces the fundamentals of climate change communication, moving from linear to dynamic, context-dependent models of communication that draw directly from our knowledge of climate change. We explore the various audiences with whom climate change communicators might engage, strategies for addressing misinformation, and specific communication tools that help to connect science to action.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureSeminarTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - **Must have completed at least 1 of the following:**
 - GEOG207 - Climate Change Fundamentals (0.50)
 - **Course Not Found**
 -
 - Students must be in level 3A or higher
 - ~~Must have completed the following:~~

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in:

- COMMST479 - Media and Environment Communication (0.50)

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours)

[View Program](#)

GEOG 423 - Sustainable Tourism

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Effective Date & Career

Career
Undergraduate,

Proposed

Offering Number

1

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2023

Proposal Details

Proposal Type
Change,

Academic Unit Approval
2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings.

Prerequisite is being changed to open this course to all students at the level of 3A or higher, as well as removing course prerequisites as they are no longer required to be successful in this course.

Related agenda proposals: N/A

Consultations

Consultations over changes to the tourism curriculum have taken place with Rec and Leisure, and impacts on the Tourism minor considered.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

423

Course Level

400

Title

Sustainable Tourism

Abbreviated Title

Sustainable Tourism

Undergraduate Communication Requirement Identifier

No,

Description

This course examines sustainability issues relevant to tourism. In particular, conceptual and practical examples related to economic, environmental, and social/cultural sustainability of tourism are critically appraised, combined with reviews of policy and institutional effects on sustainability practices. The course also focuses on best practices in sustainable tourism within government, non-government and business operations.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Lecture

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information**Is this course cross-listed?**

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 3A or higher
 - ~~GEOG233 – Geography of Tourism (0.50)~~
 - ~~GEOG323 – Tourism Impacts – International Perspectives (0.50)~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Faculty/AFIW Path(s) for Workflow

Dependencies

Course Requirements (no units)

- Tourism Minor - Tourism Minor

[View Program](#)

Course Requirements (units)

- G-Aviation Specialization - Aviation Specialization
- GEM-Economy & Society Specialization - Economy and Society Specialization
- CEC-Aviation Specialization - Aviation Specialization
- G-Economy & Society Specialization - Economy and Society Specialization
- GEM-Aviation Specialization - Aviation Specialization
- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

GEOG 426 - Development and Global Change: Worlds in Transition

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing changes to many of our core courses to streamline and scaffold learning throughout our course offerings. One of the original prerequisites for this course, GEOG 203, is being moved to the 300-level and will no longer be a pre-requisite for other upper year courses. Hence, GEOG 203 removed as a prereq.

Also removed requirement to be a Faculty of Environment student, since the course is included in the list of potential options for Peace and Conflict studies and the Global Affairs minor - the original prereq effectively prevented any of the students in these programs from taking the course.

Title changed for clarity.

Related agenda proposals: N/A

Consultations

No consultations necessary.

Email sent to Peace and Conflict Studies so they are aware of the title change.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code
GEOG

Number
426

Course Level
400

Proposed

Title

Development and Global Change: Worlds in Transition

Existing

Title

Geographies of Development

Proposed

Abbreviated Title

Development & Global Change

Existing

Abbreviated Title

Development Geographies

Undergraduate Communication Requirement Identifier

No,

Description

Examines international development theories and practice, emphasizing the interactions between social, economic, political, and environmental dimensions at the micro- and macro-scales. Selected case studies illustrate divergent outcomes of development and the contested process that development represents.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Seminar

Primary Component

Seminar

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 3A or higher
 - ~~Must have completed at least 1 of the following:~~
 - ~~GEOG202-- Geography of the Global Economy (0.50)~~
 - ~~GEOG203-- Environment and Development in a Global Perspective (0.50)~~
 -
 - ~~Complete all of the following~~
 - ~~Enrolled in a program offered by Faculty of Environment~~

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 450 - Changing Form and Structure of Metropolitan Canada
- PLAN 450 - Changing Form and Structure of Metropolitan Canada

[View Program](#)

[View Program](#)

Course Requirements (units)

- Urban Studies Minor - Urban Studies Minor

[View Program](#)

Course Lists

- Peace & Conflict Studies Minor - Peace and Conflict Studies Minor

[View Program](#)

Course Requirements (units)

- GEM-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

Course Requirements (no units)

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)

[View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

Course Lists

- Global Affairs Minor - Global Affairs Minor [View Program](#)
- 4G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Four-Year General)
- H-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Honours) [View Program](#) [View Program](#)

Course Requirements (units)

- Science, Technology, & Society Specialization - Science, Technology, and Society Specialization [View Program](#)

Course Lists

- 3G-Peace & Conflict Studies - Peace and Conflict Studies (Bachelor of Arts - Three-Year General) [View Program](#)

GEOG 460 - Sustainable Food: Localizing Food Systems

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are proposing a minor change to the title of ERS/GEOG460 to better reflect the course content to prospective students.

Related agenda proposals:

- ERS460

Consultations

Discussed with SERS (due to ERS 460 cross-list). SERS should be putting through a proposal to change the name of ERS 460.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

460

Course Level

400

Proposed

Title

Sustainable Food: Localizing Food Systems

Existing

Title

Sustainable Food: Regional Case Study

Proposed

Abbreviated Title

Sust Food: Local Food Systems

Existing

Abbreviated Title

Undergraduate Communication Requirement Identifier

No,

Description

Agriculture has destabilized the Earth's ecosystems at the planetary scale. Socio-cultural, economic, and political dimensions also shape the sustainability and resilience of our global and local food systems. This seminar course takes a regional focus to ground our discussions of pertinent concepts, challenges, and opportunities. We will explore regional issues and initiatives linked to food security, food sovereignty, resilient agriculture and agro-ecology, the energy-water-food nexus, food policy, food supply chains, urban food systems, alternative food initiatives, sustainable diets, and food waste reduction all within the context of the case study region.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Seminar

Primary Component

Seminar

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[ERS 460](#) - Sustainable Food: Regional Case Study

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Must have completed at least 1 of the following:

- ERS361 - Food Systems and Sustainability (0.50)
- GEOG361 - Food Systems and Sustainability (0.50)

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Lists

- Degree Reqs: BAsc - Bachelor of Applied Science Degree Requirements

[View Program](#)

GEOG 490A - Honours Thesis Proposal

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are revamping the research methods training students receive in our four departmental programs. As part of these shifts, we are adjusting the thesis courses to ensure that:

- 1) Students can obtain credit for completing GEOG490A if they successfully complete a thesis proposal (previously, could only receive credit for GEOG490A if they completed GEOG490B)
- 2) Revised course title and description to reflect point 1.

Departmental consent and pre-reqs have been adjusted to reflect changes to research methods training in

our curriculum. Notes have been added to reflect that students must have a supervisor prior to enrolling in the course.

Additional components added for flexibility in offering course in the future.

Related proposal:

- GEOG390
- GEOG490B

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

490A

Course Level

400

Proposed

Title

Honours Thesis Proposal

Existing

Title

Honours Thesis Preparation

Proposed

Abbreviated Title

Honours Thesis Proposal

Existing

Abbreviated Title

Honours Thesis Preparation

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

The first term of a potential two-term supervised research project in which students prepare a research proposal and conduct preliminary research for their thesis project, which fits within the scope of research in the Department of Geography and Environmental Management.

Existing

Description

Preparatory work and first draft of thesis.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Proposed

Components

Lecture Project Tutorial

Existing

Components

Project

Primary Component

Project

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Proposed

Consent to Add

Department consent required,

Existing

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - **Must have completed the following:**
 - **Course Not Found**
 -
 - **Students must be in level 3B or higher**
 - Enrolled in an Honours program
 - **Must have completed at least 1 of the following:**
 - **GEOG293 – Approaches to Research in Human Geography (0.50)**
 - **GEOG294 – Approaches to Research in Physical Geography (0.50)**
 - **Students must be in level 3A or higher**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Proposed

academic advisor.

- WHMIS may be required pending project lab analysis.

-labelnew" data-gkey="

- Students must secure an agreement with a thesis advisor at least three months prior to the start of the course. See [academic advisor](#).
- WHMIS may be required pending project lab analysis.

">

academic advisor.

- WHMIS may be required pending project lab analysis.

-inputnew" id="

- Students must secure an agreement with a thesis advisor at least three months prior to the start of the course. See [academic advisor](#).
- WHMIS may be required pending project lab analysis.

-labelnew" style="display: inline; color: rgb(64, 64, 65); font-size: 1em; font-weight: 900; margin-bottom: 0px;">**Notes**

- Students must secure an agreement with a thesis advisor at least three months prior to the start of the course. See [academic advisor](#).
- WHMIS may be required pending project lab analysis.

Existing

academic advisor.

- WHMIS may be required pending project lab analysis.

-labelold" data-gkey="

- Students must secure an agreement with a thesis advisor at least three months prior to the start of the course. See [academic advisor](#).
- WHMIS may be required pending project lab analysis.

">

academic advisor.

- WHMIS may be required pending project lab analysis.

-inputold" id="

- Students must secure an agreement with a thesis advisor at least three months prior to the start of the course. See [academic advisor](#).
- WHMIS may be required pending project lab analysis.

-labelold" style="display: inline; color: rgb(64, 64, 65); font-size: 1em; font-weight: 900; margin-bottom: 0px;">**Notes**

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

Prerequisites

- GEOG 490B - Honours Thesis Completion

[View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours)

[View Program](#)

GEOG 490B - Honours Thesis Completion

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

After an extensive curriculum review, we are revamping the research methods training students receive in our four departmental programs. As part of these shifts, we are adjusting the thesis courses to ensure that:

- 1) Students can obtain credit for completing GEOG490A if they successfully complete a thesis proposal (previously, could only receive credit for 490A if they completed 490B)
- 2) Revised course description to reflect point 1.

We have also added departmental consent and a grade pre-reqs for enrolling in GEOG490B, to ensure that only students who are prepared to complete the thesis will continue on.

Added a fee statement to reflect that students will need print a poster as part of the annual ENV Capstone/project/thesis symposium

Related agenda proposal:

- GEOG490A

Consultations

No consultations necessary.

Course Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Subject Code

GEOG

Number

490B

Course Level

400

Title

Honours Thesis Completion

Abbreviated Title
Honours Thesis Completion

**Undergraduate Communication
Requirement Identifier**
No,

Proposed

Description

An optional second term of a two-term supervised research project in which students complete their GEOG490A thesis project and present their findings in a formal presentation and written thesis.

Existing

Description

Completion of thesis.

Units
1.00

**Exceptions to Fees or Academic Progress
Units**
No,

Components
Project

Primary Component
Project

Grading Information

Standard Course Grading
Yes,

Cross-Listing Information

Is this course cross-listed?
No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Proposed

Consent to Add

Department consent required,

Existing

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Earned a minimum grade of 75% in each of the following:
 - o GEOG490A - Honours Thesis Preparation (0.50)

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Proposed

Fee Statement

This course may have additional fees. See academic unit for details.

Existing

Fee Statement

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Lists

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours) [View Program](#)

INTEG 120 - The Art and Science of Learning

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Academic Unit Approval

Rationale for Change

This course is now taught by a different instructor (Katie Plaisance) and this new description better reflects what is—and is not—included in the course.

RO: Per Senate and Board of Governors meetings (April 2025), changing the department name affiliated with KI plans and courses (INTEG) from Dept of KI (no longer exists) to School of ERS.

Related agenda proposals: N/A

Course Information

Faculty

Faculty of Environment

Proposed

Academic Unit

Existing

Academic Unit

Subject Code

INTEG

Number

120

Course Level

100

Title

The Art and Science of Learning

Abbreviated Title

Art & Science of Learning

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

This course introduces students to cutting-edge scientific research on learning and cognition. We will discuss how to develop “smart” goals, reduce cognitive biases, cultivate a growth mindset, and improve self-regulation to become a more effective learner. These strategies are essential for maximizing your ability to learn effectively and efficiently, but they are not the whole story – you will also discover how your physical health, mental well-being, and social connections affect your ability to learn, remember, create, and problem-solve. By taking this course, you will develop sought-after skills such as critical thinking, create a personalized learning strategy that benefits you personally and professionally, and learn how to thrive in university, both inside and outside the classroom.

Existing

Description

This course introduces students to state-of-the-art scientific research on learning and cognitive adaptability. We will discuss how to develop "smart" goals, improve memory, reduce cognitive biases, cultivate a growth mindset, and enhance self-regulation. These cognitive strategies are essential for becoming a more effective learner; however, they are not the whole story. We will also look at the ways physical health, mental well-being, and social connections affect the ability to learn, remember, create, and problem-solve. Finally, we will discuss how to thrive in university, both inside and outside the classroom. Students who take this course will develop an appreciation for how the psychological sciences can enhance learning, and they will acquire the skills needed to improve one’s own thinking and well-being.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

No Rules

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- Knowledge Integration Diploma - Diploma in Knowledge Integration [View Program](#)

Course Requirements (no units)

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

Course Requirements (units)

- Science, Technology, & Society Specialization - Science, Technology, and Society Specialization
- Collaborative Design Specialization - Collaborative Design Specialization [View Program](#)
- Knowledge Integration Minor - Knowledge Integration Minor [View Program](#) [View Program](#)

PLAN 281 - Introduction to Geographic Information Systems (GIS)

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Rationale for Change

GEOG 281, which is cross-listed with PLAN281, is a core course in our 'Geomatics' stream of courses. We are proposing to change the name of the Geomatics program to 'Geospatial Data Science', with the creation of corresponding course codes (GDS) to support this name and reflect the nature of the GDS courses.

The term Geomatics has a professional identity that is very strongly tied to surveying and traditionally, therefore, to civil engineering. When the Geomatics program was launched at the University of Waterloo, much of the surveying tradition was to be found in civil and environmental engineering department. However, while limited expertise in Geography connected with surveying, historically, since 2005, the dominant identity of the Geomatics plan has reflected the strong and deep expertise of geographical information systems, remote sensing and spatial analysis, with less emphasis on surveying. Over time, the applied GIS and remote sensing technologies have strengthened, and while surveying remains a part of the plan, the dominant interest amongst students and faculty within the Geomatics plan is in the geospatial data science aspects (GIS, remote sensing and geospatial analysis). These are the dominant elements for which our program and graduates are known for, and creates the core of our disciplinary identity.

High school students are aware of data science as a recognizable and viable career path especially with a dominance in AI applications. At Waterloo, the re-branding of geomatics to geospatial data science, which corresponding course codes, better reflects what is actually taught in our program, and is a description that will better connect with potential students from a recruitment perspective. Geospatial data science explicitly deals with the acquisition and analysis of geospatial data and its adoption for environmental, policy and planning applications. For several years now, our introductory course for Geomatics students has been named 'Geospatial Data Science', as an attempt to better communicate to our entering class, the specifics of the plan they are embarking on. Changing the degree name, therefore, to Geospatial Data Science will:

- Better reflect the nature of our teaching and learning expertise in GEM (GIS, remote sensing, geospatial analysis, environmental and policy applications)
- Better resonate with high school students who are interested in the environment applications of geospatial data science
- Better serve students by incorporating professor's research applications into lesson planning. (modified)
- Better prepare students for the co-op positions, so potential employers have a clear sense of the training the student has received.
- Enable us to better leverage our research applications into teaching
- Maintain a strong link which students can leverage through co-op and at post-graduation

For the cross-listed course to be updated, to GDS, there needs to be a panel for this course effective dated 2026 to align these changes. PLAN281 cross list will automatically be updated upon approval of the new subject code by SUC.

Related agenda proposal:

- GDS281 (GEOG281)
- Certificate in Geographic Information Systems

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

281

Course Level

200

Title

Introduction to Geographic Information Systems (GIS)

Abbreviated Title

Intro GIS

Undergraduate Communication Requirement Identifier

No,

Description

Introduction to the fundamental concepts and use of Geographic Information Systems (GIS). Students learn about the nature of geographic information and how to store, manipulate and analyze spatial data in a range of application areas. Students will learn underlying theory in lectures and gain a working knowledge of GIS software in lab sessions.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[GEOG 281](#) - Introduction to Geographic Information Systems (GIS)

Repeatable Courses**Can this course be repeated for credit?**

No,

Enrolment Rules**Consent to Add**

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete 1 of the following

- Must have completed at least 1 of the following:
 - GEOG181 - Designing Effective Maps (0.50)
 - GEOG187 - Geospatial Data Science (0.50)
- Enrolled in H-Planning

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG281

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 428 - Spatial Demography [View Program](#)
- PLAN 418 - Spatial Demography [View Program](#)
- PLAN 416 - Modelling the City [View Program](#)
- GEOG 381 - Advanced Geographic Information Systems [View Program](#)
- PLAN 381 - Advanced Geographic Information Systems [View Program](#)
- PLAN 387 - Spatial Databases [View Program](#)
- GEOG 387 - Spatial Databases [View Program](#)
- PLAN 350 - Research Methods for Planners [View Program](#)

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours) [View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems [View Program](#)
- H-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- 3G-Geography & Environmental Management - Geography and Environmental Management (Bachelor of Environmental Studies - Three-Year General) [View Program](#)
- H-Planning - Planning (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Lists

- Environmental Assessment Diploma - Diploma in Environmental Assessment [View Program](#)

Course Requirements (no units)

- JH-Geography & Environmental Management - Geography and Environmental Management

(Joint Honours)

[View Program](#)

Course Requirements (units)

- H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours)
- G-Aviation Specialization - Aviation Specialization [View Program](#) [View Program](#)
- CEC-Aviation Specialization - Aviation Specialization [View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)

Course Requirements (units)

- GEM-Aviation Specialization - Aviation Specialization [View Program](#)

Course Requirements (no units)

- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)

Course Requirements (units)

- H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours) [View Program](#)
- Climate & Sustainability Specialization - Climate and Sustainability Specialization [View Program](#)

Course Lists

- H-Knowledge Integration - Knowledge Integration (Bachelor of Knowledge Integration - Honours) [View Program](#)

Course Requirements (no units)

- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization [View Program](#)

PLAN 353 - Spatial Statistical Analysis [Top](#)

Effective Date & Career

Career

Undergraduate,

Proposed
Effective Term and Year Fall 2026
Existing
Effective Term and Year Fall 2023

Offering Number

2

Proposal Details

Proposal Type

Change,

Rationale for Change

As part of ongoing collaboration with GEM, we are updating this course to align with updates to their new curriculum and the cross-listed course GEOG 318. The new title and description add clarity for students.

Part of the GEOG318 proposal is to change the subject code to GDS. This change will automatically be updated on the cross-listing for this course, once the new subject code is approved through SUC.

Related agenda proposal:

- GEOG318

Consultations

GEM consulted with PLAN about these changes.

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

353

Course Level

300

Proposed

Title

Spatial Statistical Analysis

Existing

Title

Spatial Analysis

Proposed

Abbreviated Title

Spatial Statistical Analysis

Existing

Abbreviated Title

Spatial Analysis

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

Students taking this course gain experience using spatial statistics to analyze spatial data and describe patterns or understand the relationship among spatial features and their attributes. Techniques related to sampling point pattern analysis, cluster detection, geostatistics, and landscape metrics, among others, will be discussed.

Existing

Description

Advanced quantitative analysis in a spatial context. A selection of techniques from sampling, geostatistics, point pattern analysis and cluster detection, spatial classification, and spatial data mining.

Units

0.50

Exceptions to Fees or Academic Progress

Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[GEOG 318](#) - Spatial Analysis

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Must have completed the following:

- ENVS278 - Applied Statistics for Environmental Research (0.50)

Corequisites

No Rules

Antirequisites

1. Complete all of the following
 - **Not completed nor currently enrolled in: GEOG318**

- Not open to students enrolled in a program offered by Faculty of Mathematics

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours) [View Program](#)

Course Requirements (units)

- G-Aviation Specialization - Aviation Specialization [View Program](#)
- GEM-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Aviation Specialization - Aviation Specialization [View Program](#)

Course Requirements (no units)

- GA-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)
- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- G-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GEM-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

Course Requirements (units)

- GEM-Aviation Specialization - Aviation Specialization [View Program](#)

Course Requirements (no units)

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)

Course Requirements (units)

- GA-Economy & Society Specialization - Economy and Society Specialization [View Program](#)
- CEC-Economy & Society Specialization - Economy and Society Specialization [View Program](#)

Course Requirements (no units)

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization [View Program](#)
- GEM-Geomatics Specialization - Geomatics Specialization [View Program](#)
- GA-Geomatics Specialization - Geomatics Specialization [View Program](#)
- G-Earth Systems Science Specialization - Earth Systems Science Specialization [View Program](#)

PLAN 381 - Advanced Geographic Information Systems

[Top](#)

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Offering Number

2

Proposal Details

Proposal Type

Change,

Rationale for Change

Fix small typo in course description (modeling to modelling).

Course subject code change to GEOG381, which is cross listed with this course, will be updated once approved by SUC. The proposed new subject code for GEOG381 is GDS381.

PLAN381 cross list will automatically be updated upon approval of the new subject code by SUC.

Related agenda proposals:

- GDS381 (GEOG381)

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

381

Course Level

300

Title

Advanced Geographic Information Systems

Abbreviated Title

Advanced GIS

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

Students learn theoretical and operational approaches to advanced spatial analysis using geographical information systems. Emphasis is placed on the use of automation procedures using models and

programming to address a variety of topics that may include but are not limited to digital terrain modelling, suitability analysis, network analysis, and cell-based models. The domain of spatial problems explored may vary by instructor.

Existing

Description

Students learn theoretical and operational approaches to advanced spatial analysis using geographical information systems. Emphasis is placed on the use of automation procedures using models and programming to address a variety of topics that may include but are not limited to digital terrain modeling, suitability analysis, network analysis, and cell-based models. The domain of spatial problems explored may vary by instructor.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLecture

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Is this course cross-listed?

Yes,

Cross-Listed Courses

[GEOG 381](#) - Advanced Geographic Information Systems

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Must have completed at least 1 of the following:

- GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
- PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG381

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Prerequisites

- GEOG 481 - Geographic Information Systems Project

[View Program](#)

- PLAN 481 - Geographic Information Systems Project
- GEOG 487 - Management Issues in Geographic Information Systems
- PLAN 487 - Management Issues in Geographic Information Systems

[View Program](#)

[View Program](#)

[View Program](#)

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours)

[View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems

[View Program](#)

Course Requirements (no units)

- Transportation Specialization - Transportation Specialization

[View Program](#)

Course Requirements (units)

- Ecological Restoration & Rehabilitation Diploma - Diploma in Ecological Restoration and Rehabilitation

[View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours)
- CIVE-Water Resources Specialization - Water Resources Specialization

[View Program](#)

[View Program](#)

Course Lists

- H-Civil Engineering - Civil Engineering (Bachelor of Applied Science - Honours)
- H-Environmental Engineering - Environmental Engineering (Bachelor of Applied Science - Honours)

[View Program](#)

[View Program](#)

Course Requirements (no units)

- CEC-Geomatics Specialization - Geomatics Specialization
- GEM-Geomatics Specialization - Geomatics Specialization
- GA-Geomatics Specialization - Geomatics Specialization
- ENVE-Water Resources Specialization - Water Resources Specialization
- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

PLAN 419 - Climate Change and Community Planning

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Effective Date & Career

Career
Undergraduate,

Proposed

Offering Number

1

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2024

Proposal Details

Proposal Type
Change,

Rationale for Change

Course title approved by the School of Planning was "Climate Change and Community Planning" but the title was incorrectly submitted as "Planning Climate Change and Community" at the November 2023 UGSC meeting. We are now correcting it to the intended title, "Climate Change and Community Planning."

Related agenda proposals: N/A

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

419

Course Level

400

Proposed

Title

Climate Change and Community Planning

Existing

Title

Planning Climate Change and Community

Abbreviated Title

Climate Change & Community

Undergraduate Communication Requirement Identifier

No,

Description

This course will focus on strategies that planners use to reduce greenhouse gas emissions, adapt to climate change, and build resilience to current and future climate. Students will learn about key opportunities and challenges associated with the integration of climate change into urban and rural planning. Students will learn about topics such as urban climate vulnerability, low-carbon transport systems, urban green infrastructure, reducing social vulnerability with regenerative design, use of information and communication technology for system efficiency and resilience, and assessment of synergies and trade-offs between mitigation and adaptation. Students will also examine leading policy and design cases from communities across Canada and internationally and build skills in climate change plan development.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLectureSeminarTutorial

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Students must be in level 3A or higher

Corequisites

No Rules

Antirequisites

Complete all of the following

- Not completed nor concurrently enrolled in:
 - PLAN348 - Planning to Confront Climate Change (0.50)
- Not completed nor concurrently enrolled in: PLAN474 (Topic 38: Climate Change and Community Planning)
- Not open to students enrolled in H-Planning

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Antirequisites

- PLAN 348 - Planning to Confront Climate Change

[View Program](#)

Course Requirements (no units)

- Sustainable Cities Specialization - Sustainable Cities Specialization

[View Program](#)

PLAN 441 - Disability and Accessibility in the City

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2024

Offering Number

1

Proposal Details

Proposal Type

Change,

Rationale for Change

As part of ongoing collaboration with GEM, we are adjusting this course to allow for cross-listing with a new GEM course (GEOG 441). This course will contribute to GEM's new curriculum and their Environment, Society & Well-being specialization. We have agreed to adjust the course title to be more inclusive of GEM students and adjusted the pre-requisites to create a pathway for GEM students to enrol in the course.

Related agenda proposal:

- GEOG441

Consultations

Consultations between PLAN and GEM

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

441

Course Level

400

Proposed

Title

Disability and Accessibility in the City

Existing

Title

Disabling Environments and Accessibility in Planning

Proposed

Abbreviated Title

Disability & Accessibility

Existing

Abbreviated Title

Disabling Env & Accessibility

Undergraduate Communication Requirement Identifier

No,

Description

This advanced course enhances students' knowledge on the role of planners and planning in creating supportive and accessible environments for all individuals. Through engagement with critical disability scholarship and theories of person-environment interaction, students will explore planned spaces as disabling/enabling environments for people living with physical, cognitive, and sensory/neuro diversity.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LaboratoryLectureSeminarTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Proposed

Is this course cross-listed?

Yes,

Existing

Is this course cross-listed?

No,

Proposed

Cross-Listed Courses

[GEOG 441](#) - Disability and Accessibility in the City

Existing

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - Must have completed at least 1 of the following:
 - **GEOG225 - Global Environment and Health (0.50)**
 - PLAN133 - Planning for Equity, Justice, and the Public Interest (0.50)
 - PLAN233 - Social Planning and Community Development (0.50)
 -
 - Students must be in level 3A or higher
 - **Enrolled in H-Planning**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- H-Planning - Planning (Bachelor of Environmental Studies - Honours)

[View Program](#)

Course Requirements (no units)

- Social Planning & Community Development Specialization - Social Planning and Community Development Specialization

[View Program](#)

PLAN 445 - Gender and Queer Inclusive Environments

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Offering Number

1

Existing

**Effective Term and
Year**
Fall 2024

Proposal Details

Proposal Type

Change,

Rationale for Change

As part of ongoing collaboration with GEM, we are adjusting this course to allow for cross-listing with a new GEM course (GEOG 445). This course will contribute to GEM's new curriculum and their Environment, Society & Well-being specialization. We have agreed to adjust the course title to be more inclusive of GEM students and adjusted the pre-requisites to create a pathway for GEM students to enrol in the course.

Related agenda proposals:

- GEOG445

Consultations

Consultations between PLAN and GEM

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code

PLAN

Number

445

Course Level

400

Proposed

Title

Gender and Queer Inclusive Environments

Existing

Title

Gender and Queer Inclusive Planning

Proposed

Abbreviated Title

Gender & Queer Inclusive Env

Existing

Abbreviated Title

Gender-Queer Inclusive Plan

Undergraduate Communication Requirement Identifier

No,

Description

This advanced course addresses the intersection between planning, gender, and sexual orientation. Students will learn about strategies for challenging the patriarchal, cis-gendered, and heteronormative assumptions in planning scholarship and practice. Students will explore how urban form shapes experiences of safety and mobility for women and queer communities as well as their sense of belonging. The course will also address how women and queer communities are engaged in planning processes and the profession itself.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

LectureSeminarTutorial

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information

Is this course cross-listed?

No,

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Complete all of the following
 - Must have completed at least 1 of the following:
 - **GEOG225 - Global Environment and Health (0.50)**
 - PLAN133 - Planning for Equity, Justice, and the Public Interest (0.50)
 - PLAN233 - Social Planning and Community Development (0.50)
 -
 - Students must be in level 3A or higher
 - **Enrolled in H-Planning**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (units)

- H-Planning - Planning (Bachelor of Environmental Studies - Honours)

[View Program](#)

Course Requirements (no units)

- Social Planning & Community Development Specialization - Social Planning and Community Development Specialization

[View Program](#)

PLAN 481 - Geographic Information Systems Project

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2023

Offering Number

2

Proposal Details

Proposal Type

Change,

Rationale for Change

A new Faculty level symposium will be hosted annually for students who have worked on a thesis, capstone, or project course in their fourth year - to celebrate student achievements throughout the faculty. The symposium will most likely require students to print off research/project posters for presentation at this annual symposium. Adding the 'additional fees' note so that students are aware of the potential printing fee.

PLAN481 cross-list will automatically be updated upon approval of the new subject code by SUC, for GEOG481 (GDS481).

Related agenda item:

- GEOG481

Consultations

Consultation between GEM and PLAN.

Course Information

Faculty

Faculty of Environment

Academic Unit

School of Planning

Subject Code	Number	Course Level
PLAN	481	400

Title
Geographic Information Systems Project

Abbreviated Title	Undergraduate Communication Requirement Identifier
GIS Project	No,

Description
The development, implementation, and presentation of a response to a set of GIS related project requirements is the focus of this course. Students work in small teams to enhance and develop their abilities to work with GIS and related spatial technologies and analytical methods in an advanced project setting. The nature of the project requirements and themes varies with faculty and student strengths and interests. Projects may emphasize development of software applications, use of programming, or advanced GIS analysis methods, and draw from theme areas such as environment studies and management, human and physical geography, or planning.

Units	Exceptions to Fees or Academic Progress Units
1.00	No,

Components	Primary Component
LaboratoryProjectSeminarTutorial	Seminar

Grading Information

Standard Course Grading
Yes,

Cross-Listing Information

Is this course cross-listed?
Yes,

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete all of the following

- Must have completed the following:
 - ENVS278 - Applied Statistics for Environmental Research (0.50)
- Must have completed at least 1 of the following:
 - GEOG381 - Advanced Geographic Information Systems (0.50)
 - PLAN381 - Advanced Geographic Information Systems (0.50)
- Must have completed at least 1 of the following:
 - GEOG387 - Spatial Databases (0.50)
 - PLAN387 - Spatial Databases (0.50)

Corequisites

No Rules

Antirequisites

1. Not completed nor currently enrolled in: GEOG481

Course Notes

Proposed

Fee Statement

This course may have additional fees. See academic unit for details.

Existing

Fee Statement

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Course Requirements (no units)

- JH-Geomatics - Geomatics (Joint Honours)

[View Program](#)

Course Requirements (units)

- Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems

[View Program](#)

Course Requirements (no units)

- H-Geomatics - Geomatics (Bachelor of Environmental Studies - Honours)
- CEC-Geomatics Specialization - Geomatics Specialization
- GEM-Geomatics Specialization - Geomatics Specialization
- GA-Geomatics Specialization - Geomatics Specialization
- Decision Support & Geographic Information Systems Specialization - Decision Support and Geographic Information Systems Specialization

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

REC 383 - Tourism Impacts - International Perspectives

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Effective Date & Career

Career
Undergraduate,

Proposed

Offering Number
2

Effective Term and Year
Fall 2026

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change,

Rationale for Change

After an extensive curriculum review, Geography is proposing changes to many of their core courses to streamline and scaffold learning throughout their course offerings. GEOG 202 added as a pre-requisite to streamline the foundational course that leads into the Department of Geography specialization which includes GEOG323/REC383 (Economy and Development).

Related agenda proposals: N/A

Consultations

Consultations with Geography and Environmental Management have taken place.

Course Information

Faculty

Faculty of Health

Academic Unit

Department of Recreation and Leisure Studies

Subject Code

REC

Number

383

Course Level

300

Title

Tourism Impacts - International Perspectives

Abbreviated Title

Tourism: Intl Perspectives

Undergraduate Communication Requirement Identifier

No,

Description

The course examines the nature, significance, and costs and benefits of tourism in the context of tourism destinations in developed and developing countries. It employs an international perspective to assess the economic, environmental, social, and cultural impacts of tourism in diverse settings.

Units

0.50

Exceptions to Fees or Academic Progress Units

No,

Components

Lecture

Primary Component

Lecture

Grading Information**Standard Course Grading**

Yes,

Cross-Listing Information**Is this course cross-listed?**

Yes,

Cross-Listed Courses

[GEOG 323](#) - Tourism Impacts - International Perspectives

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Must have completed at least 1 of the following:
 - **GEOG202 - Geography of the Global Economy (0.50)**
 - GEOG233 - Geography of Tourism (0.50)
 - REC280 - Introduction to Tourism (0.50)

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Faculty of Health

Dependencies

Course Requirements (units)

- Sustainability Diploma - Diploma in Sustainability

[View Program](#)**Course Requirements (no units)**

- Tourism Minor - Tourism Minor

[View Program](#)**Course Requirements (units)**

- G-Aviation Specialization - Aviation Specialization
- GEM-Economy & Society Specialization - Economy and Society Specialization
- CEC-Aviation Specialization - Aviation Specialization

[View Program](#)[View Program](#)[View Program](#)**Course Requirements (no units)**

- G-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)**Course Requirements (units)**

- G-Economy & Society Specialization - Economy and Society Specialization
- GEM-Aviation Specialization - Aviation Specialization

[View Program](#)[View Program](#)**Course Requirements (no units)**

- GA-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)**Course Requirements (units)**

- GA-Economy & Society Specialization - Economy and Society Specialization
- CEC-Economy & Society Specialization - Economy and Society Specialization

[View Program](#)[View Program](#)**Course Requirements (no units)**

- GEM-Climate Change & Environment Specialization - Climate Change and Environment Specialization

[View Program](#)

SDS 260R - Ecology, Society, and Justice: Social Development and the Environment

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Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-04-25

Rationale for Change

Prerequisite revisions will eliminate course barriers to enrolment, while facilitating student success in working through multidisciplinary content by keeping a minimum term-level of 2A. The description now explicitly reflects the course focus on social justice. A cross-listing with ERS260 (new course) was pursued due to thematic overlap between units.

Related agenda proposals:

- ERS260

Consultations

Consultation with Environment, Resources, and Sustainability over spring 2025 (April, May, July) confirmed interest in cross-listing (including submission of new ERS260 code) and minimizing

prerequisites.

Course Information

Faculty

Renison University College

Academic Unit

Renison University College

Subject Code

SDS

Number

260R

Course Level

200

Title

Ecology, Society, and Justice: Social Development and the Environment

Abbreviated Title

Ecology, Society & Justice

Undergraduate Communication Requirement Identifier

No,

Proposed

Description

This course introduces theory and concepts of social ecology, an interdisciplinary approach to understanding the interrelationship of social and environmental well-being. Students critically examine the implications of environment and environmentalism for human society and social justice, and explore ideas for community action and social institutions that reflect a social-ecological ethic.

Existing

Description

This course introduces theory and concepts of social ecology, an interdisciplinary approach to understanding the interrelationship of social and environmental well-being. Students critically examine the implications of environment and environmentalism for human society, as well as explore ideas for community action and social institutions that reflect a social-ecological ethic.

Units

0.50

Proposed

Exceptions to Fees or Academic Progress Units

Existing

Exceptions to Fees or Academic Progress Units

Components
Lecture

Primary Component
Lecture

Grading Information

Standard Course Grading
Yes,

Cross-Listing Information

Proposed

Is this course cross-listed?
Yes,

Existing

Is this course cross-listed?
No,

Proposed

Cross-Listed Courses

[ERS 260](#) - Ecology, Society, and Justice: Social Development and the Environment

Existing

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?
No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

1. Students must be in level 2A or higher
 - **Must have completed at least 1 of the following:**
 - **EARTH122 – Introductory Environmental Sciences (0.50)**
 - **ENVS105 – Environmental Sustainability and Ethics (0.50)**
 - **ENVS205 – Sustainability: The Future We Want (0.50)**
 - **PSCI150 – Introduction to Global Politics (0.50)**
 - **SDS131R – Political Ideologies and Social Development (0.50)**
 - **SOC101 – Introduction to Sociology (0.50)**
 - **SOC101R – Introduction to Sociology (0.50)**
 -
 - **Must have completed the following: ERS100**

Corequisites

No Rules

Antirequisites

No Rules

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Arts Renison University College

Faculty of Environment

Dependencies

Course Requirements (units)

- Sustainability Diploma - Diploma in Sustainability

[View Program](#)

Course Requirements (no units)

- Social Policy & Social Action Specialization - Social Policy and Social Action Specialization

[View Program](#)

SYDE 534 - Electric Energy Systems

[Top](#)

Effective Date & Career

Career

Undergraduate,

Proposed

Effective Term and
Year

Fall 2026

Existing

Effective Term and
Year

Fall 2024

Offering Number

1

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-19

Rationale for Change

SYDE534: Electric Energy Systems has been 'Held With' ENBUS475: Electric Energy Systems for the past few years. ENBUS475 is the special topic course code for the Environment and Business (ENBUS) program. As ENBUS concurrently pursues a new, permanent course code for the course in ENBUS (ENBUS434) the need to change the arrangement from a Held With to a Cross Listed course has emerged.

A cross listed course is the most appropriate at the courses are identical in content, delivery, and assessment.

Related agenda proposal:

- ENVS434

Consultations

Consultations have been made with faculty at SYDE, SEED, and the ENV Associate Director of Undergraduate Studies.

Course Information

Faculty

Faculty of Engineering

Academic Unit

Department of Systems Design Engineering

Subject Code

SYDE

Number

534

Course Level

500

Title

Electric Energy Systems

Abbreviated Title

Electric Energy Systems

Undergraduate Communication Requirement Identifier

No,

Description

Traditional electric energy systems comprising generation, transmission, and distribution are examined. Emerging technologies and trends are considered, such as competition, smart grids, energy storage, demand side management, renewable energy, and P2P. Future challenges and possibilities are then explored. Issues will be explored from technical, economic, environmental, sustainability, and social perspectives.

Units

0.50

**Exceptions to Fees or Academic Progress
Units**

No,

Components

LectureTutorial

Primary Component

Lecture

Grading Information

Standard Course Grading

Yes,

Cross-Listing Information

Proposed

Is this course cross-listed?

Yes,

Existing

Is this course cross-listed?

No,

Proposed

Cross-Listed Courses[ENVS 434 - Electric Energy Systems](#)

Existing

Cross-Listed Courses

Repeatable Courses

Can this course be repeated for credit?

No,

Enrolment Rules

Consent to Add

No consent required,

Consent to Drop

No consent required,

Prerequisites

Complete all of the following

- Students must be in level 3A or higher
- Complete 1 of the following
 - Enrolled in H-Software Engineering
 - Enrolled in a BAsc program

Corequisites

No Rules

Antirequisites

Not completed nor concurrently enrolled in: SYDE599 (Topic 10: Electric Energy Systems)

Course Notes

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Engineering

Faculty of Environment

Dependencies

Course Requirements (no units)

- Societal & Environmental Systems Specialization - Societal and Environmental Systems Specialization

[View Program](#)

Degree Reqs: BES - Bachelor of Environmental Studies Degree Requirements

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students who began their studies in Fall 2023 will be shifted over to the new sequencing. Students will be notified via multiple communication methods, including email, social media, connections with departmental student groups, and student advising meetings. Students will have over one year of notice to prepare for the change in their coop sequencing, since the changes are only for the final work terms - so the change will see first students out on revised work terms in Winter 2027.

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Yes,

Co-operative Education Consultation

Consultation with CEE have occurred on multiple occasions. CEE has completed a feasibility study on the coop sequencing change (see attached) and is supportive of the proposal.

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

The main goal of the proposed change is to improve the consistency and range of course offerings available to students. Considerations by the department that support this include:

1. Streamlining co-op sequencing allows streamlining of course offerings and improved efficiency for the department.
 - Many course offerings are similar between programs, particularly between the GEM and CEC programs. Currently, two separate co-op sequences present challenges when scheduling course offerings for the department. Specifically, to meet sequencing needs certain required courses must be delivered two, or even three, times per year, regardless of enrolment numbers.
2. Balancing the 400-level offerings between Fall and Winter term.
 - Currently, most 400-level course offerings must be offered in the Winter term to meet both the GEM/Geomatics (4B) and CEC (4A/4B) sequencing. This means there are many 400-level offerings in only one term, which reduces choice/flexibility for students, but also increases

- competition/reduces enrollment in some 400-level courses.
3. Participating in interdisciplinary capstone courses.
 - GEM wants students to have the opportunity to enroll in the new interdisciplinary capstone courses. Since these are offered in the fall term, and completed in the winter term, senior students scheduled for a fall work term miss out on this opportunity.
 4. Participating in the thesis option offered across 4A and 4B study terms.
 - The thesis option currently has limited uptake by students since completing the thesis would have to be split between two terms with a co-op work term in between the 4A (spring) and 4B (winter) study terms.

Related Agenda Proposals:

- H-Climate and Environmental Change

Consultations (Departmental)

Consultations with CEE.

Supporting Documentation

- [Considerations for COOP sequence change in GEM, GEOMATICS, CEC Fall 2024.pdf](#)

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Degree Requirements

Program/Plan Name

Bachelor of Environmental Studies Degree Requirements

Admissions

Admissions Entry Point

Direct Entry,

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- See major for required plan averages.

Degree Requirements

Unit Requirements

- Three-Year General degree: Complete a total of 15.0 units, with a minimum of 8.5 units at the 200-

level or above.

- Honours degrees: Complete a total of 20.0 units.
 - Planning major: A minimum of 15.0 units must be at the 200-level or above.
 - All other BES majors: A minimum of 13.5 units must be at the 200-level or above.

Undergraduate Communication Requirement

Students working towards a Bachelor of Environmental Studies are required to complete ENVS131, with a grade of 60.0%, to meet the Undergraduate Communication Requirement (UCR). The UCR milestone on a student's academic record will indicate one of the following rules has been met:

1. ENVS131 has been completed with a final grade of 60.0% or higher.
2. The UCR milestone has been earned by the student while enrolled in another University of Waterloo faculty.
3. At time of admission to the Faculty of Environment, a transfer credit from an external accredited post-secondary institution has been granted for ENVS131.

Notes

1. If a grade of 60.0% or higher is not achieved in ENVS131, a student will be eligible to repeat the course to meet the UCR milestone requirement. See [Faculty of Environment Regulations](#) for information on repeating courses.
2. Earning an UCR milestone and the satisfactory completion of ENVS131 are two unique and distinct degree requirements. Both requirements must be satisfied to be eligible for a Bachelor of Environmental Studies degree.
3. Students who have not attained the UCR milestone by the end of their 2B term must meet with their academic advisor to discuss the completion of this requirement.

Proposed

Co-operative Education Program Requirements

1. Complete a minimum of four credited work terms:
 1. A minimum of three must be standard work terms.
2. Complete a minimum of four Professional Development (PD) courses:
 1. PD1: Must be taken in an academic term prior to the first work term.
 2. PD12: Must be taken during the first work term.
 3. Two additional PD courses: To be taken during the second, third, or fourth work terms.

Additional Constraints and Notes

1. Students missing a co-op requirement by the end of their 3B term will normally be removed from co-op, unless they have successfully been employed for four work terms. These students will remain in co-op but will not be eligible for a co-op degree.
2. Students not meeting their plan's co-op requirements may be considered for transfer to another Faculty of Environment academic regular plan.
3. PD courses are graded with either a CR (credit granted) or NCR (failed, no credit granted). There are no numerical values associated with these grades, and therefore they will not be used in plan average calculations. The unit weighting for PD courses is not counted towards the total minimum unit degree requirements for any Faculty of Environment academic plan.
4. See the table below for the sequencing of academic and work terms. Transfer students may be required to follow a different sequencing.

Legend for Study/Work Sequences Chart

Key	Description
-----	-------------

Key	Description
F,W,S	Terms: F=September-December; W=January-April; S=May-August
1,2,3,4 plus A or B	Academic year and term.
WT	Scheduled work term.
off	Neither an academic term nor a work term.

Study/Work Sequences Chart

Plan	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Environment and Business; Environment, Resources and Sustainability; Geography and Environmental Management; Geomatics	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B
Planning	1A	1B	off	2A	2B	WT	3A	WT	3B	WT	4A	WT	WT	4B

Existing

Co-operative Education Program Requirements

1. Complete a minimum of four credited work terms:
 1. A minimum of three must be standard work terms.
2. Complete a minimum of four Professional Development (PD) courses:
 1. PD1: Must be taken in an academic term prior to the first work term.
 2. PD12: Must be taken during the first work term.
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Additional Constraints and Notes

1. Students missing a co-op requirement by the end of their 3B term will normally be removed from co-op, unless they have successfully been employed for four work terms. These students will remain in co-op but will not be eligible for a co-op degree.
2. Students not meeting their plan's co-op requirements may be considered for transfer to another Faculty of Environment academic regular plan.
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4. See the table below for the sequencing of academic and work terms. Transfer students may be required to follow a different sequencing.

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Key	Description
F,W,S	Terms: F=September-December; W=January-April; S=May-August
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Key	Description
WT	Scheduled work term.
off	Neither an academic term nor a work term.

Study/Work Sequences Chart

Plan	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Environment and Business; Environment, Resources and Sustainability	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	WT	4A	4B
Geography and Environmental Management; Geomatics	1A	1B	off	2A	WT	2B	WT	3A	WT	3B	WT	4A	WT	4B
Planning	1A	1B	off	2A	2B	WT	3A	WT	3B	WT	4A	WT	WT	4B

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

No,

Specializations

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Ecological Restoration & Rehabilitation Diploma - Diploma in Ecological Restoration and Rehabilitation

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2024

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing retired courses and note referring to only one of PLAN240 or PLAN340 could be completed. Adding GEOG402, which is a new course replacing GEOG405. GEOG402 is being cross listed with existing cross listed courses, EARTH444 and BIOL462.

Note: GEOG368 is on the elective list for this diploma, although it is being shown as removed and then re-added. The sequencing of courses has been changed due to the new label to GDS for GEOG381 and GEOG387.

Related agenda proposals:

- PLAN340
- PLAN387
- EARTH444
- BIOL462
- GEOG402
- GEOG405

Consultations (Departmental)

Consultations with Earth Sciences and Biology regarding the new cross listing with GEOG402.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma in Ecological Restoration and Rehabilitation

Admissions

Admissions Entry Point

Both,

Declaration Audience

This credential is open to students enrolled in any degree program. This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 70.0%.

Graduation Requirements

- Complete a minimum of 3.0 units.

1. Required Courses

- 3 - 6Units to Complete
-
- Complete all of the following
- Complete all the following:
- ERS335 - Restoration Ecology (0.50)
- ENVS469 - Landscape Ecology, Restoration and Rehabilitation (0.50)
-
- Complete 4 of the following:
- BIOL351 - Aquatic Ecology (0.50)
- BIOL354 - Environmental Toxicology (0.50)
- BIOL383 - Tropical Ecosystems (0.50)
- BIOL457 - Analysis of Communities (0.50)

- **BIOL462 - Applied Wetland Science (0.50)**
- BIOL470 - Methods of Aquatic Ecology (0.50)
- **EARTH444 - Applied Wetland Science (0.50)**
- ENVS300 - Vascular Plants of Southern Ontario (0.50)
- ENVS444 - Ecosystem and Resource Management in Parks/Natural Areas (0.50)
- ERS234 - Forest Ecosystems (0.50)
- ERS283 - Ontario Natural History: Species and Patterns (1.00)
- ERS337 - ReWilding and Ecological Restoration (0.50)
- ERS340 - Ecosystem Assessment (1.50)
- ERS341 - Professional Conservation and Restoration Practice 1 (1.50)
- ERS342 - Professional Conservation and Restoration Practice 2 (1.00)
- ERS346 - Wildlife Ecology (0.50)
- ERS382 - Ecological Monitoring (1.00)
- ERS383 - Tropical Ecosystems (0.50)
- ERS446 - Wildlife Management (0.50)
- ERS456 - Transforming Canadian Resource Management (1.00)
- ERS484 - Soil Ecosystem Dynamics (0.50)
- GEOG381 - Advanced Geographic Information Systems (0.50)
- GEOG387 - Spatial Databases (0.50)
- GEOG368 - Ecology and Conservation for Planning (0.50)
- **Course Not Found**
- GEOG404 - Soil Ecosystem Dynamics (0.50)
- GEOG456 - Transforming Canadian Resource Management (1.00)
- PLAN240 - Environmental Planning and Policy (0.50)
- PLAN341 - Ecology and Conservation for Planning (0.50)
- PLAN381 - Advanced Geographic Information Systems (0.50)
-
- Grand Total Units: 3 - 6
- ~~GEOG405 - Wetlands (1.00)~~
- ~~PLAN340 - Canadian Environmental Policy and Politics (0.50)~~
- ~~PLAN387 - Spatial Databases (0.50)~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Proposed

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students may complete PLAN240 or PLAN340, but not both.

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Environmental Assessment Diploma - Diploma in Environmental Assessment

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing retired courses and adding ENVS459 which is a new course covering content that was taught in GEOG459. Removing GEOG405 (retired) and adding GEOG402, EARTH444, and BIOL462. GEOG402 is a new course, replacing GEOG405, and being cross-listed with EARTH444 and BIOL462.

Related agenda proposals:

- GEOG459
- ENVS459
- PLAN340
- GEOG402

- GEOG405
- EARTH444
- BIOL462

Consultations (Departmental)

N/A

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma in Environmental Assessment

Admissions

Admissions Entry Point

Both,

Declaration Audience

This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 65.0%.

Graduation Requirements

- Complete a total of 2.5 to 3.5 units:
 - Complete 1.5 units of required courses.
 - Complete 1.0 to 2.0 units of approved courses.

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

Course Requirements (no units)

Required Courses

- Complete all the following:
 - ERS215 - Environmental and Sustainability Assessment 1 (0.50)
 - ERS315 - Environmental and Sustainability Assessment 2 (0.50)
 - ERS415 - Environmental and Sustainability Assessment 3 (0.50)

1. Approved Courses List

-
- Complete 2 courses: 1 course from two of the following lists.
-
- List 1
-
- Choose any of the following:
 - BIOL351 - Aquatic Ecology (0.50)
 - BIOL354 - Environmental Toxicology (0.50)
 - BIOL383 - Tropical Ecosystems (0.50)
 - BIOL447 - Environmental Microbiology (0.50)
 - **BIOL462 - Applied Wetland Science (0.50)**
 - EARTH342 - Geomorphology and GIS Applications (0.50)
 - EARTH358 - Earth System Science (0.50)
 - **EARTH444 - Applied Wetland Science (0.50)**
 - EARTH458 - Physical Hydrogeology (0.50)
 - ERS383 - Tropical Ecosystems (0.50)
 - **Course Not Found**
 - HLTH340 - Environmental Toxicology and Public Health (0.50)
-
- List 2
-
- Choose any of the following:
 - BIOL470 - Methods of Aquatic Ecology (0.50)
 - EARTH456 - Numerical Methods in Hydrogeology (0.50)
 - ENBUS308 - Sustainability Management Standards and Auditing (0.50)
 - ENVE573 - Contaminant Transport (0.50)
 - ENVS278 - Applied Statistics for Environmental Research (0.50)
 - ENVS444 - Ecosystem and Resource Management in Parks/Natural Areas (0.50)
 - ERS375 - Special Readings/Seminar on Select Topics (0.50)
 - ERS382 - Ecological Monitoring (1.00)
 - GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
 - GEOG319 - Economic Analyses for Regional Planning (0.50)
 - LS373 - Indigenous Peoples and Canadian Public Policy (0.50)
 - PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)
 - PLAN320 - Economic Analyses for Regional Planning (0.50)
 - SDS311R - Indigenous Peoples and Canadian Public Policy (0.50)
-
- List 3
-
- Choose any of the following:

- BIOL455 - Ecological Risk Assessment and Management (0.50)
- CIVE230 - Engineering and Sustainable Development (0.50)
- ECON255 - Introduction to Environmental and Natural Resource Economics (0.50)
- ENVE391 - Law and Ethics for Environmental and Geological Engineers (0.50)
- ENVS201 - Introduction to Canadian Environmental Law (0.50)
- ENVS220 - Ecological Economics (0.50)
- ERS335 - Restoration Ecology (0.50)
- ERS372 - First Nations and the Environment (0.50)
- GEOE391 - Law and Ethics for Environmental and Geological Engineers (0.50)
- GEOG356 - Resources Management (0.50)
- LS271 - Conflict Resolution (0.50)
- LS319 - Negotiation: Theories and Strategies (0.50)
- PACS202 - Conflict Resolution (0.50)
- PACS313 - Community Conflict Resolution (0.50)
- PACS323 - Negotiation: Theories and Strategies (0.50)
- PLAN471 - Planning and Municipal Law (0.50)
-
- List 4
-
- Choose any of the following:
- ENVE577 - Engineering for Solid Waste Management (0.50)
- ENVS401 - Canadian Law, Indigenous Peoples, and Natural Resource Development (0.50)
- **Course Not Found**
- ERS221 - Oceans Sustainability (0.50)
- ERS317 - Waste Management (0.50)
- ERS361 - Food Systems and Sustainability (0.50)
- ERS404 - Global Environmental Governance (0.50)
- ERS456 - Transforming Canadian Resource Management (1.00)
- ERS462 - Global Food and Agricultural Politics (0.50)
- ERS484 - Soil Ecosystem Dynamics (0.50)
- GEOG361 - Food Systems and Sustainability (0.50)
- GEOG368 - Ecology and Conservation for Planning (0.50)
- GEOG391 - Field Research (0.50)
- GEOG404 - Soil Ecosystem Dynamics (0.50)
- GEOG407 - Environmental Hydrology of Terrestrial Ecosystems (0.50)
- GEOG432 - Health and the Built Environment (0.50)
- GEOG456 - Transforming Canadian Resource Management (1.00)
- GEOG462 - Global Food and Agricultural Politics (0.50)
- HLTH420 - Health and the Built Environment (0.50)
- PLAN240 - Environmental Planning and Policy (0.50)
- PLAN341 - Ecology and Conservation for Planning (0.50)
- PLAN432 - Health and the Built Environment (0.50)
- PLAN440 - Urban Services (0.50)
- PSCI432 - Global Environmental Governance (0.50)
- PSCI488 - Global Food and Agricultural Politics (0.50)
- ~~GEOG405 - Wetlands (1.00)~~
- ~~GEOG459 - Energy and Sustainability (1.00)~~
- ~~PLAN340 - Canadian Environmental Policy and Politics (0.50)~~

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Excellence in Geographic Information Systems Diploma - Diploma of Excellence in Geographic Information Systems

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2024

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Adding invalid combination with the new Certificate in GIS

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Retiring GEOG487 and integrating that content into the other Geospatial Data Science (GDS) courses and in particular GEOG287 and GEOG387.

GEOG287 focuses on data collection and management, which maps to the "applications" part of the former GEOG487.

GEOG387 is being revised to absorb content from the GEOG484 (Machine Learning in Geospatial Science) and adds depth to the GIS courses. Students are only required to take one of these courses for the diploma as the core skills are in GEOG281, GEOG381, GEOG481. GEOG287 and GEOG387 provide additional depth depending on student interest.

This Diploma can be combined with the H-Geomatics and JH - Geomatics plans.

GEOG281, GEOG381, and GEOG481, course subject will change to GDS upon SUC approval.

Related agenda proposals:

- Certificate in GIS
- GDS287
- GEOG281 (GDS281)
- GEOG381 (GDS381)
- GEOG481 (GDS481)
- PLAN387
- GEOG487
- PLAN487

Consultations (Departmental)

School of Planning and through the proper channels for new subject code.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma of Excellence in Geographic Information Systems

Admissions

Admissions Entry Point

Both,

Declaration Audience

This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Requirements Information

Proposed

Invalid Combinations

Yes,

Existing

Invalid Combinations

No,

Proposed

List of Invalid Combinations

Certificate in Geographic Information Systems

Existing

List of Invalid Combinations

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 80.0%.

Proposed

Graduation Requirements

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 3.0 units.

1. Required Courses

- **2.5Units to Complete**
-
- Complete all of the following
- Complete 1 of the following:
- GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
- PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)
-
- Complete 1 of the following:
- **Course Not Found**
- GEOG387 - Spatial Databases (0.50)
-
- Complete 1 of the following:
- GEOG381 - Advanced Geographic Information Systems (0.50)
- PLAN381 - Advanced Geographic Information Systems (0.50)
-
- Complete 1 of the following:
- GEOG481 - Geographic Information Systems Project (1.00)
- PLAN481 - Geographic Information Systems Project (1.00)
-
- **Grand Total Units: 2.5**
- ~~3Units to Complete~~
- ~~PLAN387 - Spatial Databases (0.50)~~
- ~~GEOG487 - Management Issues in Geographic Information Systems (0.50)~~
- ~~PLAN487 - Management Issues in Geographic Information Systems (0.50)~~
- ~~Grand Total Units: 3~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Future Cities Diploma - Diploma in Future Cities

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing SCI201 as this course is being renumbered to EARTH305, with a prereq of SCI205 or GEOG207 (new crosslisting). SCI205 and GEOG207 will be added in place of SCI201. GEOG203 is being renumbered to GEOG326 which will be reflected upon SUC approval.

Related agenda proposals:

- GEOG207
- SCI205

- GEOG326 (GEOG203)

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma in Future Cities

Admissions

Admissions Entry Point

Both,

Declaration Audience

This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 65.0%.

Graduation Requirements

- Complete a total of 2.5 units.

1. Required Courses

- 2.5Units to Complete
-
- Complete all of the following
- Complete all the following:
- ENVS210 - Future Studies (0.50)
- ENVS410 - Urban Futures Project (1.00)
-
- Complete 1 of the following:
- ENVS310 - Future Cities: Integrating Future Thinking into Urban Decisions (0.50)
- STV305 - Technology, Society and the Modern City (0.50)

-
- Complete 1 of the following:
- EARTH122 - Introductory Environmental Sciences (0.50)
- ENGL208B - Science Fiction (0.50)
- ENGL248 - Literature for an Ailing Planet (0.50)
- ENV5195 - Introduction to Environmental Studies (0.50)
- ERS288 - Literature for an Ailing Planet (0.50)
- ERS294 - Spirituality, Religion, and Ecology (0.50)
- GEOG203 - Environment and Development in a Global Perspective (0.50)
- **GEOG207 - Climate Change Fundamentals (0.50)**
- GEOG219 - How Pandemics Change the World (0.50)
- HLTH370 - Ecological Determinants of Health (0.50)
- PHIL228 - Ethics and Artificial Intelligence (0.50)
- PHIL259 - Philosophy of Technology (0.50)
- PLAN100 - Urbanization Today: Introduction to Cities and Regions (0.50)
- PSYCH372 - Environmental Psychology (0.50)
- RCS285 - Spirituality, Religion, and Ecology (0.50)
- **Course Not Found**
- SOC369J - The Sociology of Community (0.50)
- STV100 - Society, Technology and Values: Introduction (0.50)
-
- Grand Total Units: 2.5
- ~~SCI201 - Global Warming and Climate Change (0.50)~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Faculty/AFIW Path(s) for Workflow

Dependencies

Parks Minor - Parks Minor

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing courses that are being retired.

Related agenda proposals:

- ERS443
- PLAN340

Consultations (Departmental)

N/A

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Minor

Program/Plan Name

Parks Minor

Admissions**Admissions Entry Point**

Declare Plan,

Declaration Audience

This credential is open to students enrolled in any degree program.

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative minor average of 65.0%.

Graduation Requirements

- Complete a minimum of 4.0 units.

1. Required Courses

- **4 - 6Units to Complete**

-

- Complete all of the following

- Complete all the following:

- ENV5444 - Ecosystem and Resource Management in Parks/Natural Areas (0.50)

- ERS431 - Ecological Consequences of Climate Change (0.50)

- ERS454 - Parks and Protected Areas: Issues and Trends (0.50)

- PLAN240 - Environmental Planning and Policy (0.50)

-

- Complete 4 of the following:

- BIOL312 - The Natural History of Aquatic Organisms (0.50)

- BIOL350 - Ecosystem Ecology (0.50)

- BIOL351 - Aquatic Ecology (0.50)

- BIOL383 - Tropical Ecosystems (0.50)

- BIOL450 - Marine Biology (0.50)

- BIOL455 - Ecological Risk Assessment and Management (0.50)

- BIOL456 - Population Biology (0.50)

- BIOL457 - Analysis of Communities (0.50)

- BIOL458 - Quantitative Ecology (0.50)

- BIOL485 - Conservation Biology (0.50)

- BIOL489 - Arctic Ecology (0.50)

- ERS234 - Forest Ecosystems (0.50)

- ERS283 - Ontario Natural History: Species and Patterns (1.00)

- ERS321 - Coastal Social-Ecological Systems (0.50)

- ERS337 - ReWilding and Ecological Restoration (0.50)

- ERS340 - Ecosystem Assessment (1.50)

- ERS346 - Wildlife Ecology (0.50)

- ERS382 - Ecological Monitoring (1.00)

- ERS383 - Tropical Ecosystems (0.50)

- ERS422 - Biosphere Reserves as Social-Ecological Systems (0.50)

- ERS446 - Wildlife Management (0.50)

- GEOG368 - Ecology and Conservation for Planning (0.50)

- PLAN341 - Ecology and Conservation for Planning (0.50)
- REC230 - Outdoor Recreation and Land-Based Learning (0.50)
-
- **Grand Total Units: 4 - 6**
- ~~4-6.5 Units to Complete~~
- ~~Complete 1 of the following:~~
- ~~PLAN340 - Canadian Environmental Policy and Politics (0.50)~~
- ~~ERS443 - Ecosystem Field Research (1.00)~~
- ~~Grand Total Units: 4-6.5~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing courses that are being retired. Adding SCI205 a new cross-listing for GEOG207. Adding ENV5459 which is a new course covering course content previously taught in GEOG459 (being retired). Adding ERS260 a new cross-listing with SDS260R.

SCI201 is being changed to EARTH305, which requires SCI205/GEOG207 as a prereq, so this course is being removed.

Related agenda proposals:

- AVIA416
- ERS370
- GEOG459
- GEOG416
- SCI205
- ENV5459
- ERS260
- SCI201

Consultations (Departmental)

Faculty of Science and Faculty of Arts (for new cross listings)

General Program/Plan Information

Faculty

Academic Unit

Faculty

Faculty of Environment

Undergraduate Credential Type

Diploma

Program/Plan Name

Diploma in Sustainability

Admissions

Admissions Entry Point

Declare Plan,

Declaration Audience

This credential is open to students enrolled in degree programs or any non- or post-degree academic plan.

Declaration Requirements

Before declaring this academic plan, see [invalid credential combinations](#).

Requirements Information

Invalid Combinations

Yes,

List of Invalid Combinations

Environment, Resources and Sustainability
(Bachelor of Environmental Studies - Honours)

Environment, Resources and Sustainability
(Joint Honours)

Sustainability and Financial Management
(Bachelor of Sustainability and Financial
Management - Honours)

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative diploma average of 65.0%.

Graduation Requirements

- Complete a minimum of 2.0 units.

1. Required Courses

- **2 - 2.5 Units to Complete**
-
- Complete all of the following
- Complete all the following:
- ENV5205 - Sustainability: The Future We Want (0.50)
-
- Complete 1 of the following:
- BIOL485 - Conservation Biology (0.50)
- BIOL489 - Arctic Ecology (0.50)
- CHE571 - Industrial Ecology (0.50)

- CIVE230 - Engineering and Sustainable Development (0.50)
- EARTH270 - Disasters and Natural Hazards (0.50)
- ENVE279 - Energy and the Environment (0.50)
- ENVS200 - Field Ecology (0.50)
- **Course Not Found**
- GEOG207 - Climate Change Fundamentals (0.50)
- NE109 - Societal and Environmental Impacts of Nanotechnology (0.50)
- SCI200 - Energy - Its Development, Use, and Issues (0.50)
- **Course Not Found**
- SYDE532 - Introduction to Complex Systems (0.50)
-
- Complete 1 of the following:
- ENGL248 - Literature for an Ailing Planet (0.50)
- ENVS105 - Environmental Sustainability and Ethics (0.50)
- ERS215 - Environmental and Sustainability Assessment 1 (0.50)
- ERS225 - Gendering Environmental Politics (0.50)
- ERS253 - Communities and Sustainability (0.50)
- **Course Not Found**
- ERS270 - Introduction to Sustainable Agroecosystems (0.50)
- ERS288 - Literature for an Ailing Planet (0.50)
- ERS294 - Spirituality, Religion, and Ecology (0.50)
- ERS310 - Peace and the Environment (0.50)
- ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
- ERS361 - Food Systems and Sustainability (0.50)
- ERS372 - First Nations and the Environment (0.50)
- GEOG225 - Global Environment and Health (0.50)
- GEOG361 - Food Systems and Sustainability (0.50)
- GEOG368 - Ecology and Conservation for Planning (0.50)
- GEOG432 - Health and the Built Environment (0.50)
- HLTH420 - Health and the Built Environment (0.50)
- PACS310 - Peace and the Environment (0.50)
- PHIL224 - Environmental Ethics (0.50)
- PLAN341 - Ecology and Conservation for Planning (0.50)
- PLAN432 - Health and the Built Environment (0.50)
- PLAN451 - Environmental Planning in Rural and Regional Systems (0.50)
- RCS285 - Spirituality, Religion, and Ecology (0.50)
- SDS260R - Ecology, Society, and Justice: Social Development and the Environment (0.50)
- THPERF374 - Sustainability in Design (0.50)
-
- Complete 1 of the following:
- AVIA416 - Aviation Sustainability (1.00)
- ECON255 - Introduction to Environmental and Natural Resource Economics (0.50)
- ENBUS102 - Introduction to Environment and Business (0.50)
- ENBUS211 - Principles of Marketing for Sustainability Professionals (0.50)
- ENVS220 - Ecological Economics (0.50)
- ERS320 - Economics and Sustainability (0.50)
- ERS328 - Environmental Politics and System Change (0.50)
- ERS404 - Global Environmental Governance (0.50)
- GEOG203 - Environment and Development in a Global Perspective (0.50)
- GEOG323 - Tourism Impacts - International Perspectives (0.50)
- PSCI432 - Global Environmental Governance (0.50)
- REC383 - Tourism Impacts - International Perspectives (0.50)
-
- **Grand Total Units: 2 - 2.5**
- ~~2-3 Units to Complete~~
- ~~GEOG459 - Energy and Sustainability (1.00)~~
- ~~SCI201 - Global Warming and Climate Change (0.50)~~
- ~~ERS370 - Corporate Sustainability: Issues and Prospects (0.50)~~
- ~~GEOG416 - Aviation Sustainability (1.00)~~
- ~~Grand Total Units: 2-3~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. From one of the three lists, students must take a course from outside of the faculty in which they are enrolled.
2. Courses cross-listed between faculties, one of which is the student's home faculty, will be counted as a home faculty course.

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

Urban Studies Minor - Urban Studies Minor

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Removing retired courses GEOG215 and GEOG302.

Related agenda proposals:

- GEOG215
- GEOG302

Consultations (Departmental)

N/A

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Dean of Environment Office

Faculty

Faculty of Environment

Undergraduate Credential Type

Minor

Program/Plan Name

Urban Studies Minor

Admissions

Admissions Entry Point

Declare Plan,

Declaration Audience

This credential is open to students enrolled in any degree program.

Requirements Information

Invalid Combinations

No,

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative minor average of 65.0%.

Graduation Requirements

- Complete a total of 4.5 units:
 - Complete 2.0 units of required courses.

- Complete 2.5 units of courses from one theme described below.

1. Required Courses

- 4.5 Units to Complete
-
- Complete all of the following
- Complete all the following:
 - ECON101 - Introduction to Microeconomics (0.50)
 - PLAN100 - Urbanization Today: Introduction to Cities and Regions (0.50)
 - PLAN233 - Social Planning and Community Development (0.50)
-
- Complete 1 of the following:
 - ENVS195 - Introduction to Environmental Studies (0.50)
 - GEOG101 - Human Geographies: People, Space and Change (0.50)
-
- Themes
- Complete 1 of the following
- Theme 1: Urban Economics/Finance
- Complete all of the following
- Complete all the following:
 - ECON201 - Microeconomic Theory for Business and Policy (0.50)
-
- Complete 4 of the following:
 - AE392 - Economics and Life Cycle Cost Analysis (0.50)
 - CIVE392 - Economics and Life Cycle Cost Analysis (0.50)
 - ECON241 - Introduction to Public Economics (0.50)
 - ECON351 - Labour Economics (0.50)
 - ECON361 - Cost-Benefit Analysis and Project Evaluation (0.50)
 - ECON437 - Urban Economics (0.50)
 - ECON441 - Public Economics (0.50)
 - ECON451 - Law and Economics (0.50)
 - ENBUS204 - Principles of Industrial Ecology (0.50)
 - ENBUS405 - Introduction to Life Cycle Assessment (0.50)
 - ENVE392 - Economics and Life Cycle Cost Analysis (0.50)
 - ERS320 - Economics and Sustainability (0.50)
 - GEOE392 - Economics and Life Cycle Cost Analysis (0.50)
 - GEOG311 - Economic Geography and Society (0.50)
 - GEOG319 - Economic Analyses for Regional Planning (0.50)
 - MSE261 - Engineering Economics: Financial Management for Engineers (0.50)
 - PLAN103 - Planning Governance and Administration (0.50)
 - PLAN320 - Economic Analyses for Regional Planning (0.50)
 - PLAN416 - Modelling the City (0.50)
 - PLAN483 - Land Development Planning (0.50)
-
- Theme 2: Urban Activity and The Environment
- Complete all of the following
- Complete all the following:
 - ENVS200 - Field Ecology (0.50)
-
- Complete 4 of the following:
 - BIOL225 - Plants and Civilization (0.50)
 - BIOL350 - Ecosystem Ecology (0.50)
 - BIOL455 - Ecological Risk Assessment and Management (0.50)
 - BIOL457 - Analysis of Communities (0.50)
 - CIVE440 - Transit Planning and Operations (0.50)
 - CIVE484 - Physical Infrastructure Planning (0.50)

- EARTH270 - Disasters and Natural Hazards (0.50)
- EARTH281 - Geological Impacts on Human Health (0.50)
- EARTH358 - Earth System Science (0.50)
- ECON255 - Introduction to Environmental and Natural Resource Economics (0.50)
- ENVS469 - Landscape Ecology, Restoration and Rehabilitation (0.50)
- ERS316 - Urban Water and Wastewater Systems: Integrated Planning and Management (0.50)
- GEOG306 - Human Dimensions of Natural Hazards (0.50)
- GEOG349 - Urban Form and Spatial Structure (0.50)
- GEOG351 - Geography of Transportation (0.50)
- GEOG368 - Ecology and Conservation for Planning (0.50)
- GEOG453 - Urban Stormwater Management (0.50)
- PLAN341 - Ecology and Conservation for Planning (0.50)
- PLAN349 - Urban Form and Spatial Structure (0.50)
- PLAN416 - Modelling the City (0.50)
- PLAN451 - Environmental Planning in Rural and Regional Systems (0.50)
- PLAN453 - Urban Stormwater Management (0.50)
- PLAN478 - Transit Planning and Operations (0.50)
- PLAN483 - Land Development Planning (0.50)
- PLAN484 - Physical Infrastructure Planning (0.50)
-
- Theme 3: Urban Societies
- Complete all of the following
- Complete all the following:
- ERS253 - Communities and Sustainability (0.50)
-
- Complete 4 of the following:
- ANTH272 - Issues in Contemporary Indigenous Communities in Canada (0.50)
- EASIA220R - The History of East Asian Communities in Canada (0.50)
- ECON363 - The Economics of Social Problems (0.50)
- ECON437 - Urban Economics (0.50)
- GEOG325 - Geographies of Health (0.50)
- GEOG432 - Health and the Built Environment (0.50)
- GSJ302 - Thinking Through Gender: Feminist Perspectives (0.50)
- HIST231R - The History of East Asian Communities in Canada (0.50)
- HIST260 - Medieval Europe c.300-c.1500 (0.50)
- HIST374 - Canada's Social History (0.50)
- HLTH420 - Health and the Built Environment (0.50)
- INDG272 - Issues in Contemporary Indigenous Communities in Canada (0.50)
- INTEG121 - Collaboration, Design Thinking, and Problem Solving (0.50)
- INTEG221 - The Social Nature of Knowledge (0.50)
- MEDVL260 - Medieval Europe c.300-c.1500 (0.50)
- PACS313 - Community Conflict Resolution (0.50)
- PHIL291 - The Social Nature of Knowledge (0.50)
- PLAN333 - Neighbourhood and Community Planning (0.50)
- PLAN431 - Issues in Housing (0.50)
- PLAN432 - Health and the Built Environment (0.50)
- PLAN433 - Social Issues in Planning (0.50)
- REC422 - Urban Recreation (0.50)
- SDS231R - Introduction to Social Policy Processes (0.50)
- SDS312R - Homelessness and Public Policy (0.50)
- SDS322R - Community Engagement and Social Development (0.50)
- SOC224R - Poverty in Canada and its Social Consequences (0.50)
- SOC248 - Health, Illness, and Society (0.50)
- SOC369J - The Sociology of Community (0.50)
- SOCWK222R - Community Organization (0.50)
- STV305 - Technology, Society and the Modern City (0.50)
-
- Theme 4: Emerging Global Urban Regions
- Complete all of the following
- Complete 1 of the following:
- INDEV262 - Introduction to Global Emerging Cities (0.50)
- PLAN262 - Introduction to Global Emerging Cities (0.50)

-
- Complete 4 of the following:
- ANTH382 - Anthropology of East Asia (0.50)
- EASIA277R - International Relations of East Asia (0.50)
- EASIA301R - The Political Economy of East Asia (0.50)
- EASIA382R - Anthropology of East Asia (0.50)
- ERS404 - Global Environmental Governance (0.50)
- GEOG202 - Geography of the Global Economy (0.50)
- GEOG203 - Environment and Development in a Global Perspective (0.50)
- GEOG311 - Economic Geography and Society (0.50)
- GEOG411 - The Digital Economy (0.50)
- GEOG426 - Geographies of Development (0.50)
- HIST282 - History of Modern South Asia 1750-2000 (0.50)
- INDEV404 - International Development Theory (0.50)
- PLAN440 - Urban Services (0.50)
- PSCI252 - Global South (0.50)
- PSCI277 - International Relations of East Asia (0.50)
- PSCI283 - International Political Economy (0.50)
- PSCI358 - Political Change in China (0.50)
- PSCI359 - Politics of South Asia (0.50)
- PSCI405 - Chinese Political Economy (0.50)
- PSCI432 - Global Environmental Governance (0.50)
- SDS388R - Globalization and Social Development (0.50)
-
- Grand Total Units: 4.5
- ~~GEOG302 – Geographies of Work and Employment (0.50)~~
- ~~GEOG215 – China: Diverse and Dynamic (0.50)~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.

Notes

- See list of [academic advisors](#).

Specializations

Undergraduate Plan Guidelines

Adherence to Academic Plan Guidelines

Yes,

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

H-Environment & Business - Environment and Business (Bachelor of Environmental Studies - Honours)

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-19

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

No,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

ENVS434 is a new permanent course held with SYDE534. In past terms this course has been delivered as an ENBUS475 special topics course, held with SYDE534. This new course is being added to the theme elective list for Environment and Business.

GEOG459 being retired and therefore removed the theme electives list and being replaced with ENVS459. ENVS459 includes similar deliverables as GEOG459, as well as additional learning outcomes.

Geography is shifting the current GEOG 203 to a 300-level course (GEOG326) focused more on international development. They are revising GEOG 202 as an introduction to economy and development issues, which better aligns with the requirements of the ENBUS program. The change in the ENBUS plan is to ensure that the learning objectives of the program are met, albeit with a slightly different course.

Related agenda proposals:

- ENVS434
- ENVS459
- GEOG202
- GEOG203 (renumbered to GEOG326)

Consultations (Departmental)

The course instructor, SEED faculty, Systems Design Engineering (ENVS432), ERS (ENVS459), and the ENV Associate Dean Undergrad have been consulted on this change.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

School of Environment, Enterprise and Development

Faculty

Faculty of Environment

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Environmental Studies

Program/Plan Name

Environment and Business (Bachelor of Environmental Studies - Honours)

Systems of Study

Co-operative, Regular,

Admissions

Admissions Entry Point

Both,

Requirements Information

Invalid Combinations

Yes,

List of Invalid Combinations

Business Option

Management Studies Minor

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0%: required courses and all ENBUS and ENVS courses.

Graduation Requirements

- See [Bachelor of Environmental Studies degree-level requirements](#).
- Complete a total of 20.0 units:
 - 13.5 units of required courses.
 - 1.5 units of approved courses.
 - 5.0 units of elective courses.

Co-operative Education Program Requirements

For students in the co-operative system of study, see [Bachelor of Environmental Studies co-operative education program requirements](#).

1. Required Courses

- 13.5Units to Complete
-
- Complete all of the following
- Complete all the following:
 - ENBUS102 - Introduction to Environment and Business (0.50)
 - ENBUS103 - Economics and Sustainability 1 (0.50)
 - ENBUS104 - Economics and Sustainability 2 (0.50)
 - ENBUS112 - Operationalizing Sustainable Development within Business (0.50)
 - ENBUS202 - Environmental Management Systems (0.50)
 - ENBUS203 - Green Entrepreneurship (0.50)
 - ENBUS204 - Principles of Industrial Ecology (0.50)
 - ENBUS211 - Principles of Marketing for Sustainability Professionals (0.50)
 - ENBUS302 - Strategies for Environment and Business (0.50)
 - ENBUS306 - Research Design (0.50)
 - ENBUS310 - Introduction to Sustainable Finance (0.50)
 - ENVS105 - Environmental Sustainability and Ethics (0.50)
 - ENVS131 - Communications for Environmental Professions (0.50)
 - ENVS178 - Environmental Applications of Data Management and Statistics (0.50)
 - ENVS195 - Introduction to Environmental Studies (0.50)
 - ENVS200 - Field Ecology (0.50)
 - ENVS201 - Introduction to Canadian Environmental Law (0.50)
 - ENVS220 - Ecological Economics (0.50)
 - ENVS278 - Applied Statistics for Environmental Research (0.50)
 - ERS215 - Environmental and Sustainability Assessment 1 (0.50)
 - **GEOG202 - Geography of the Global Economy (0.50)**
-
- Complete 1 of the following:
 - AFM123 - Accounting Information for Managers (0.50)
 - ARBUS102 - Accounting Information for Managers (0.50)
-
- Complete 1 of the following:
 - AFM131 - Introduction to Business in North America (0.50)
 - ARBUS101 - Introduction to Business in North America (0.50)
-
- Complete 2 of the following:
 - ARBUS202 - Professional and Business Ethics (0.50)
 - ENBUS304 - Circular Economy (0.50)
 - ENBUS308 - Sustainability Management Standards and Auditing (0.50)
 - ENBUS309 - Behaviour Change and Sustainability (0.50)
 - ENBUS314 - Sustainable Business Models (0.50)
 - ENBUS315 - Fashion, Consumption, and Sustainability (0.50)
 - ENBUS375 - Special Topics in Environment and Business (0.50)
 - HRM200 - Basic Human Resources Management (0.50)
 - PHIL215 - Professional and Business Ethics (0.50)
-
- Complete 1 of the following
- Complete all the following:
 - ENBUS409A - Environment and Business Project (0.50)
 - ENBUS409B - Environment and Business Project (0.50)
-
- Complete all the following:
 - ENVS403A - Interdisciplinary Project (0.50)
 - ENVS403B - Interdisciplinary Project (0.50)
-

- Grand Total Units: 13.5
- ~~GEOG203 – Environment and Development in a Global Perspective (0.50)~~

Course Requirements (no units)

Required Courses

- No Rules

1. Approved Courses List

- Complete all of the following
- Complete 1.5 units from the following list.
- Choose any of the following:
- ENBUS405 - Introduction to Life Cycle Assessment (0.50)
- ENBUS406 - Industrial Ecology: Sustainable Materials (0.50)
- ENBUS407 - Corporate Sustainability Accounting and Reporting (0.50)
- ENBUS408 - Policy Instruments for Sustainability (0.50)
- ENBUS410 - Engaging Stakeholders (0.50)
- ENBUS411 - Corporate Social Responsibility in Practice (0.50)
- ENBUS475 - Special Topics in Environment and Business (0.50)
- ENVS401 - Canadian Law, Indigenous Peoples, and Natural Resource Development (0.50)
- **Course Not Found**
- **Course Not Found**
- ~~GEOG459 – Energy and Sustainability (1.00)~~

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. If a minimum grade of 60.0% is achieved in ENVS131, the Undergraduate Communication Requirement (UCR) milestone will be granted. If the minimum grade is not met, see [Bachelor of Environmental Studies degree-level requirements](#) and contact the Environment and Business academic advisor.

Notes

- See list of [academic advisors](#).
- See Environment and Business website for [recommended course sequence](#).

Specializations

Specializations for this Major

Yes - Optional,

Specialization Details

Students may choose to focus their elective choices by completing the available specialization.

Specializations List

Sustainable Finance Specialization

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

H-Environment, Resources & Sustainability - Environment, Resources and Sustainability (Bachelor of Environmental Studies - Honours)

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-08-01

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students currently in both the ERS Honours and ERS joint plans, will no longer be required to take ERS401 (retired). Students in the ERS honours plan will take an elective 300-400 ERS course instead. Students will be emailed about the change. This substitution will be handled through the petition process, in which a blanket petition will be approved and transcript text added to the student's record. For students who entered the plans in F2025, the requirement term will be changed to F2026.

Is the credential name changing?

No,

Co-operative System of Study and Requirements

No,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

To streamline course offerings, reduce content overlap and provide additional flexibility.

Related agenda proposals:

- ERS401

Consultations (Departmental)

N/A

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

School of Environment, Resources and Sustainability

Faculty

Faculty of Environment

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Environmental Studies

Program/Plan Name

Environment, Resources and Sustainability (Bachelor of Environmental Studies - Honours)

Systems of Study

Co-operative, Regular,

Admissions

Admissions Entry Point

Direct Entry,

Requirements Information

Invalid Combinations

Yes,

List of Invalid Combinations

Diploma in Sustainability

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0% in all ERS and ENVS courses.

Graduation Requirements

- See [Bachelor of Environmental Studies degree-level requirements](#).
- Complete a total of 20.0 units:
 - 11.0 units of required courses.

- 9.0 units of elective courses.

Co-operative Education Program Requirements

For students in the co-operative system of study, see [Bachelor of Environmental Studies co-operative education program requirements](#).

Course Requirements (units)

Required Courses

- 0Units to Complete
- No Rules

1. Required Courses

-
- Complete all of the following
- Complete all the following:
 - ENVS131 - Communications for Environmental Professions (0.50)
 - ENVS178 - Environmental Applications of Data Management and Statistics (0.50)
 - ENVS195 - Introduction to Environmental Studies (0.50)
 - ENVS200 - Field Ecology (0.50)
 - ERS101 - Approaches: Environment, Resources and Sustainability (0.50)
 - ERS102 - At Home in the Universe (0.50)
 - ERS201 - Environmental Policy, Politics and Governance (0.50)
 - ERS202 - Natural Resources Ecology (0.50)
 - ERS215 - Environmental and Sustainability Assessment 1 (0.50)
 - ERS300 - Social Ecological Systems Analysis (0.50)
 - ERS301 - Sustainability Thought, Practice and Prospects (0.50)
 - ERS302 - Research Methods and Design (0.50)
 - ERS400 - Social-Ecological Approaches to Sustainability (0.50)
-
- Complete 1 of the following
- Complete all of the following
- Complete all the following:
 - ERS402 - Senior Honours Research Seminar (0.50)
-
- **Complete 1 additional ERS course at the 300- level or above**
-
- Complete all the following:
 - ERS403A - Senior Honours Thesis (0.50)
 - ERS403B - Senior Honours Thesis (0.50)
-
- **Complete 2.5 units of additional ERS courses, of which at least 0.5 unit must be at the 300- level or above**
- Complete 1.0 unit of additional ENVS and/or ERS courses
 - ~~ERS401 - Translational Ecology (0.50)~~
 - ~~Complete 1 additional ERS course at the 300-level or above~~
 - ~~Complete 2.0 units of additional ERS courses~~

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

No,

Additional Constraints

1. If a minimum grade of 60.0% is achieved in ENVS131, the Undergraduate Communication Requirement (UCR) milestone will be granted. If the minimum grade is not met, see [Bachelor of Environmental Studies degree-level requirements](#) and contact the Environment, Resources and Sustainability academic advisor.

Notes

- See list of [academic advisors](#).
- See Environment, Resources and Sustainability website for [recommended course sequences](#).

- For further information, visit the [Environment, Resources and Sustainability website](#).

Specializations

Specializations for this Major

No,

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

JH-Environment, Resources & Sustainability - Environment, Resources and Sustainability (Joint Honours)

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-08-01

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students currently in both the ERS Honours and ERS joint plans, will no longer be required to take ERS401 (retired). For the ERS Joint plan, ERS401 will be replaced with ERS302, Research Methods Design. With School approval, students may be able to substitute the Research Methods Design course from their home department for ERS302. An email will be sent to all students who have declared the ERS Joint plan, notifying them of this change. This substitution will be handled through the petition process, in which a blanket petition will be approved and transcript text added to the student's record indicating this substitution.

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

To streamline course offerings, reduce content overlap and provide additional flexibility.

Related agenda proposals:

- ERS401

Consultations (Departmental)

N/A

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

School of Environment, Resources and Sustainability

Faculty

Faculty of Environment

Undergraduate Credential Type

Major

Program Type

Joint Honours

Program/Plan Name

Environment, Resources and Sustainability (Joint Honours)

Systems of Study

Co-operative, Regular,

Admissions**Admissions Entry Point**

Declare Plan,

Requirements Information**Invalid Combinations**

Yes,

List of Invalid Combinations

Diploma in Sustainability

Average Requirement

Yes,

Minimum Average(s) Required

- A minimum cumulative overall average of 70.0%.
- Must satisfy the major average requirement for the first major.

Graduation Requirements

- Complete a total of 8.5 units.

Course Requirements (units)

Required Courses

- 0 Units to Complete
- No Rules

1. Required Courses

-
- Complete all of the following
- Complete all the following:
- ENVS178 - Environmental Applications of Data Management and Statistics (0.50)
- ENVS195 - Introduction to Environmental Studies (0.50)
- ENVS200 - Field Ecology (0.50)
- ERS101 - Approaches: Environment, Resources and Sustainability (0.50)
- ERS102 - At Home in the Universe (0.50)
- ERS201 - Environmental Policy, Politics and Governance (0.50)
- ERS202 - Natural Resources Ecology (0.50)
- ERS215 - Environmental and Sustainability Assessment 1 (0.50)
- ERS300 - Social Ecological Systems Analysis (0.50)
- ERS301 - Sustainability Thought, Practice and Prospects (0.50)
- **ERS302 - Research Methods and Design (0.50)**
- ERS400 - Social-Ecological Approaches to Sustainability (0.50)
-
- Complete 1 of the following
- Complete all of the following
- Complete all the following:
- ERS402 - Senior Honours Research Seminar (0.50)
-
- Complete 1 additional ERS course at the 300-level or above
-
- Complete all the following:
- ERS403A - Senior Honours Thesis (0.50)
- ERS403B - Senior Honours Thesis (0.50)
-
- Complete 1.5 units of additional ENVS and/or ERS courses
- ~~ERS401 - Translational Ecology (0.50)~~

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

No,

Proposed

Additional Constraints

1. Students may substitute their home department's equivalent research methods course for ERS302, and/or their home department's equivalent senior honours essay, thesis, or senior seminar for ERS403A and ERS403B with approval of the Associate Director, Undergraduate Studies, School of Environment, Resources and Sustainability.

Existing

Additional Constraints

1. Students may substitute their home department's equivalent senior honours essay, thesis, or senior seminar for ERS403A and ERS403B, with approval of the Associate Director, Undergraduate Studies, School of Environment, Resources and Sustainability.

Notes

- See list of [academic advisors](#).
- For further information, visit the [Environment, Resources and Sustainability website](#).

Specializations

Specializations for this Major

No,

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

CEC-Aviation Specialization - Aviation Specialization

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Science is introducing a new Aviation Minor. Upon approval this minor needs to be added as an invalid combination with the CEC-Aviation Specialization.

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

GEM currently has five specializations aligning with the thematic pillars in the department (Aviation, Climate Change, Earth System Science, Economy and Society, and Geomatics), with several 100- and 200-level courses connecting to each. All current specializations require 5.5 units (10 or 11 courses) across all levels from 200-400.

An in-depth curriculum review of all GEM programs, specializations, and courses was conducted in Winter and Spring 2025. The changes presented here are in line with the overall changes to all GEM specializations.

Additional constraints have been updated to reflect the curriculum.

Science's new Aviation Minor has been added as an invalid combination.

Total units will be 2.5 units once AVIA416 proposal to lessen the unit weight from 1.0 to 0.50 is approved.

GEOG270 subject code will automatically change to GDS270, upon SUC approval.

Related agenda proposals:

- GEOG270 (GDS270)
- AVIA310 (AVIA210)
- AVIA417 (AVIA317)
- AVIA416
- GEOG416
- CEC-Aviation Specialization
- G-Aviation Specialization

Consultations (Departmental)

The department of Geography and Environmental Management had a curriculum retreat and collaborative session. The changes to this specialization reflects those consultations.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Program/Plan Name

Aviation Specialization

Admissions

Specialization is available for students in the following majors

H-Climate & Environmental Change

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Proposed

Invalid Combinations

Yes,

Existing

Invalid Combinations

No,

List of Invalid Combinations

Aviation Minor

Average Requirement

No,

Proposed

Graduation Requirements

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5 - 3.5 Units to Complete**
-
- Complete all of the following
- Complete all the following:
- AVIA100 - Introduction to Aviation (0.50)
-
- Complete 4 of the following:
- AVIA310 - Human Factors in Aviation (0.50)
- AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
- **AVIA417 - Aviation Safety (0.50)**
- **Course Not Found**
- AVIA374 - Special Topics in Aviation (0.50)
- AVIA416 - Aviation Sustainability (1.00)
- **Course Not Found**
- AVIA474 - Special Topics in Aviation (0.50)
- AVIA475 - Independent Studies of Selected Topics (0.50)
- GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
- GEOG351 - Geography of Transportation (0.50)
- GEOG416 - Aviation Sustainability (1.00)
-
- **Grand Total Units: 2.5 - 3.5**
- **5.5 Units to Complete**
- ~~GEOG207 - Climate Change Fundamentals (0.50)~~
- ~~Complete 1 of the following:~~
- ~~GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
- ~~PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
- ~~Complete 1 of the following:~~
- ~~GEOG202 - Geography of the Global Economy (0.50)~~
- ~~GEOG233 - Geography of Tourism (0.50)~~
- ~~GEOG309 - Physical Climatology (0.50)~~
- ~~Complete 2 of the following:~~
- ~~GEOG306 - Human Dimensions of Natural Hazards (0.50)~~
- ~~GEOG307 - Societal Adaptation to Climate Change (0.50)~~
- ~~GEOG316 - Multivariate Statistics (0.50)~~
- ~~GEOG318 - Spatial Analysis (0.50)~~
- ~~GEOG323 - Tourism Impacts - International Perspectives (0.50)~~
- ~~GEOG325 - Geographies of Health (0.50)~~
- ~~GEOG423 - Sustainable Tourism (0.50)~~
- ~~PLAN351 - Multivariate Statistics (0.50)~~
- ~~PLAN353 - Spatial Analysis (0.50)~~
- ~~REC383 - Tourism Impacts - International Perspectives (0.50)~~
- ~~Grand Total Units: 5.5~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Proposed

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students may complete a maximum of one course from GEOG316/PLAN351 and GEOG318/PLAN353.
3. GEOG490A and GEOG490B Thesis (1.5 units) topics - if related to the specialization - may be approved to count towards the AVIA416/GEOG416 specialization course by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).
4. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

G-Aviation Specialization - Aviation Specialization

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Science is introducing a new Aviation Minor. Upon approval this minor needs to be added as an invalid combination with the G -Aviation Specialization.

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

GEM currently has five specializations aligning with the thematic pillars in the department (Aviation, Climate Change, Earth System Science, Economy and Society, and Geomatics), with several 100- and 200-level courses connecting to each. All current specializations require 5.5 units (10 or 11 courses) across all levels from 200-400.

An in-depth curriculum review of all GEM programs, specializations, and courses was conducted in Winter and Spring 2025. The changes presented here are in line with the overall changes to all GEM specializations.

Additional constraints have been updated to reflect the curriculum.

Science's new Aviation Minor has been added as an invalid combination.

Total units will be 2.5 units once AVIA416 proposal to lessen the unit weight from 1.0 to 0.50 is approved.

GEOG270 subject code will automatically change to GDS270, upon SUC approval.

Related agenda proposals:

- GEOG270 (GDS270)
- AVIA310 (AVIA210)
- AVIA417 (AVIA317)
- AVIA416
- GEOG416
- CEC-Aviation Specialization
- G-Aviation Specialization

Consultations (Departmental)

The department of Geography and Environmental Management had a curriculum retreat and collaborative session. The changes to this specialization reflects those consultations.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Program/Plan Name

Aviation Specialization

Admissions

Specialization is available for students in the following majors

H-Geomatics

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Proposed

Invalid Combinations

Yes,

Existing

Invalid Combinations

No,

List of Invalid Combinations

Aviation Minor

Average Requirement

No,

Proposed

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5 - 3.5 Units to Complete**
-
- Complete all of the following
- Complete all the following:
 - AVIA100 - Introduction to Aviation (0.50)
 -
 - Complete 4 of the following:
 - AVIA310 - Human Factors in Aviation (0.50)
 - AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
 - **AVIA417 - Aviation Safety (0.50)**
 - **Course Not Found**
 - AVIA374 - Special Topics in Aviation (0.50)
 - AVIA416 - Aviation Sustainability (1.00)
 - **Course Not Found**
 - AVIA474 - Special Topics in Aviation (0.50)
 - AVIA475 - Independent Studies of Selected Topics (0.50)
 - GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
 - GEOG351 - Geography of Transportation (0.50)
 - GEOG416 - Aviation Sustainability (1.00)
 -
 - **Grand Total Units: 2.5 - 3.5**
 - **5.5 Units to Complete**
 - ~~GEOG207 - Climate Change Fundamentals (0.50)~~
 - **Complete 1 of the following:**
 - ~~GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
 - ~~PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
 - **Complete 1 of the following:**
 - ~~GEOG202 - Geography of the Global Economy (0.50)~~
 - ~~GEOG233 - Geography of Tourism (0.50)~~
 - ~~GEOG309 - Physical Climatology (0.50)~~
 - **Complete 2 of the following:**
 - ~~GEOG306 - Human Dimensions of Natural Hazards (0.50)~~
 - ~~GEOG307 - Societal Adaptation to Climate Change (0.50)~~
 - ~~GEOG316 - Multivariate Statistics (0.50)~~
 - ~~GEOG318 - Spatial Analysis (0.50)~~
 - ~~GEOG323 - Tourism Impacts - International Perspectives (0.50)~~
 - ~~GEOG325 - Geographies of Health (0.50)~~
 - ~~GEOG423 - Sustainable Tourism (0.50)~~
 - ~~PLAN351 - Multivariate Statistics (0.50)~~
 - ~~PLAN353 - Spatial Analysis (0.50)~~
 - ~~REC383 - Tourism Impacts - International Perspectives (0.50)~~
 - **Grand Total Units: 5.5**

1. Required Courses

-
- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Proposed

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students may complete a maximum of one course from GEOG316/PLAN351 and GEOG318/PLAN353.
3. GEOG490A and GEOG490B Thesis (1.5 units) topics - if related to the specialization - may be approved to count towards the AVIA416/GEOG416 specialization course by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).
4. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

GEM-Aviation Specialization - Aviation Specialization

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Science is introducing a new Aviation Minor. Upon approval this minor needs to be added as an invalid combination with the GEM -Aviation Specialization.

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

GEM currently has five specializations aligning with the thematic pillars in the department (Aviation, Climate Change, Earth System Science, Economy and Society, and Geomatics), with several 100- and 200-level courses connecting to each. All current specializations require 5.5 units (10 or 11 courses) across all levels from 200-400.

An in-depth curriculum review of all GEM programs, specializations, and courses was conducted in Winter and Spring 2025. The changes presented here are in line with the overall changes to all GEM specializations.

Additional constraints have been updated to reflect the curriculum.

Science's new Aviation Minor has been added as an invalid combination.

Total units will be 2.5 units once AVIA416 proposal to lessen the unit weight from 1.0 to 0.50 is approved.

GEOG270 subject code will automatically change to GDS270, upon SUC approval.

Related agenda proposals:

- GEOG270 (GDS270)
- AVIA310 (AVIA210)
- AVIA417 (AVIA317)
- AVIA416
- GEOG416
- CEC-Aviation Specialization

- G-Aviation Specialization

Consultations (Departmental)

The department of Geography and Environmental Management had a curriculum retreat and collaborative session. The changes to this specialization reflects those consultations.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Program/Plan Name

Aviation Specialization

Admissions

Specialization is available for students in the following majors

3G-Geography & Environmental Management, H-Geography & Environmental Management, or JH-Geography & Environmental Management

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Proposed

Invalid Combinations

Yes,

Existing

Invalid Combinations

No,

List of Invalid Combinations

Aviation Minor

Average Requirement

No,

Proposed

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5 - 3.5 Units to Complete**
-
- Complete all of the following
- Complete all the following:
 - AVIA100 - Introduction to Aviation (0.50)
 -
 - Complete 4 of the following:
 - AVIA310 - Human Factors in Aviation (0.50)
 - AVIA270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
 - **AVIA417 - Aviation Safety (0.50)**
 - **Course Not Found**
 - AVIA374 - Special Topics in Aviation (0.50)
 - AVIA416 - Aviation Sustainability (1.00)
 - **Course Not Found**
 - AVIA474 - Special Topics in Aviation (0.50)
 - AVIA475 - Independent Studies of Selected Topics (0.50)
 - GEOG270 - Remotely Piloted Aircraft Systems (RPAS) Knowledge Requirements (0.50)
 - GEOG351 - Geography of Transportation (0.50)
 - GEOG416 - Aviation Sustainability (1.00)
 -
 - **Grand Total Units: 2.5 - 3.5**
 - **5.5 Units to Complete**
 - ~~GEOG207 - Climate Change Fundamentals (0.50)~~
 - Complete 1 of the following:
 - ~~GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
 - ~~PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)~~
 - Complete 1 of the following:
 - ~~GEOG202 - Geography of the Global Economy (0.50)~~
 - ~~GEOG233 - Geography of Tourism (0.50)~~
 - ~~GEOG309 - Physical Climatology (0.50)~~
 - Complete 2 of the following:
 - ~~GEOG306 - Human Dimensions of Natural Hazards (0.50)~~
 - ~~GEOG307 - Societal Adaptation to Climate Change (0.50)~~
 - ~~GEOG316 - Multivariate Statistics (0.50)~~
 - ~~GEOG318 - Spatial Analysis (0.50)~~
 - ~~GEOG323 - Tourism Impacts - International Perspectives (0.50)~~
 - ~~GEOG325 - Geographies of Health (0.50)~~
 - ~~GEOG423 - Sustainable Tourism (0.50)~~
 - ~~PLAN351 - Multivariate Statistics (0.50)~~
 - ~~PLAN353 - Spatial Analysis (0.50)~~
 - ~~REC383 - Tourism Impacts - International Perspectives (0.50)~~
 - **Grand Total Units: 5.5**

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Proposed

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Students may complete a maximum of one course from GEOG316/PLAN351 and GEOG318/PLAN353.
3. GEOG490A and GEOG490B Thesis (1.50 units) topics - if related to the specialization - may be approved to count towards the AVIA416/GEOG416 specialization course by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).
4. Students who have either successfully completed or received transfer credit for AVIA121 (0.50 unit), and/or AVIA141 (0.25 unit) and AVIA142 (0.25 unit), may use these courses towards the four of course requirement. Note that credit must have been received for both AVIA141 (0.25 unit) and AVIA142 (0.25 unit) to count as one course towards this requirement. Proof of a valid Transport Canada Pilot Licence must be provided to the [Aviation Program Manager](#) for transfer credit assessment.

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

H-Geography & Aviation - Geography and Aviation (Bachelor of Environmental Studies - Honours)

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No,

Is the credential name changing?

No,

Co-operative System of Study and Requirements

No,

Creating or Changing Invalid Combinations

Yes,

Invalid Combinations Consultations

Faculty of Science is introducing an Aviation Minor that Geography and Aviation students will not be able to complete.

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

An in-depth curriculum review of all GEM programs, specializations, and courses was conducted in Winter and Spring 2025. The changes to the H-Geography and Aviation plan reflect this review. Courses were added and removed per the outcome of the review. AVIA370 will be replacing GEOG309, which is retiring.

Adding ENV course code types that can be taken by students, (i.e. ENBUS, ERS, GDS, and PLAN) to align better with the One Environment initiative.

As GEM has reduced the specialization requirements from 5.5 to 2.5 units, students can now fit in two specializations within their degree requirements (i.e., they are required to take a certain number of GEOG/ENVS/GDS/AVIA elective courses and can fit in up to two specializations within these requirements). Further, we have removed course overlap between the specializations (and refined the focus) so that specialization titles better reflect student skillsets. Since students may develop more than one skillset within their course requirements, allowing them to reflect this as a credential is important for future career prospects.

Economy and Society specialization is being renamed to Economy and Development - this will be updated upon SUC approval.

GEOG271 and GEOG281 course subject with change to GDS, upon SUC approval.

Related agenda proposals:

- Remote Sensing Specialization
- Environment, Society and Wellbeing Specialization
- Aviation Minor (Faculty of Science)
- AVIA370
- GEOG390
- GEOG207
- SCI205

Consultations (Departmental)

Department of GEM Faculty, Staff, and students over the course of the summer and during curriculum retreats and info sessions. Faculty of Science regarding AVIA Minor.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Environmental Studies

Program/Plan Name

Geography and Aviation (Bachelor of Environmental Studies - Honours)

Systems of Study

Regular,

Admissions

Admissions Entry Point

Direct Entry,

Requirements Information

Invalid Combinations

Yes,

Proposed

List of Invalid Combinations

Geography and Environmental Management
Minor

Geography and Environmental Management
(Joint Honours)

Geomatics (Joint Honours) Aviation Minor

Existing

List of Invalid Combinations

Geography and Environmental Management
Minor

Geography and Environmental Management
(Joint Honours)

Average Requirement

Yes,

Proposed

Minimum Average(s) Required

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0% in all AVIA, ENBUS, ENVS, ERS, GDS, GEOG, and PLAN courses.

Existing

Minimum Average(s) Required

- A minimum cumulative overall average of 65.0%.
- A minimum cumulative major average of 70.0% in all AVIA, ENVS, and GEOG courses.

Proposed

Graduation Requirements

- See [Bachelor of Environmental Studies degree-level requirements](#).
- Complete a total of 20.0 units:
 - Complete 13.5 units of required courses.
 - Complete 4.0 units of additional AVIA, ENBUS, ENVS, ERS, GDS, GEOG, or PLAN courses:
 - 0.5 unit must be at the 200-level or above.
 - 1.5 units must be at the 300-level or above.
 - 2.0 units must be at the 400-level.
 - Complete 2.5 units of elective courses.
- Complete Aviation Milestones 1 through 7.

Aviation Milestone Requirements

An aviation milestone is earned upon the successful completion of the requirements specified in Flight Training Phases 1 through 7 of the aviation Program Outline, which is a document provided to students by the Flight Training Unit.

Existing

Graduation Requirements

- See [Bachelor of Environmental Studies degree-level requirements](#).
- Complete a total of 20.0 units:
 - Complete 13.0 units of required courses.
 - Complete 5.0 units of additional GEOG, ENVS, or AVIA courses:
 - 0.5 unit must be at the 200-level or above.
 - 2.0 units must be at the 300-level or above.

- 2.5 units must be at the 400-level.
- Complete 2.0 units of elective courses.
- Complete Aviation Milestones 1 through 7.

Aviation Milestone Requirements

An aviation milestone is earned upon the successful completion of the requirements specified in Flight Training Phases 1 through 7 of the aviation Program Outline, which is a document provided to students by the Flight Training Unit.

1. Required Courses

- **12.5Units to Complete**
-
- Complete all of the following
- Complete all the following:
 - AVIA100 - Introduction to Aviation (0.50)
 - AVIA121 - Professional Pilot Program Course 1 (0.50)
 - AVIA141 - Preparatory Ground Instruction 1 (0.25)
 - AVIA142 - Preparatory Ground Instruction 2 (0.25)
 - AVIA222 - Professional Pilot Program Course 2 (0.50)
 - AVIA223 - Professional Pilot Program Course 3 (0.50)
 - AVIA243 - Preparatory Ground Instruction 3 (0.25)
 - AVIA244 - Preparatory Ground Instruction 4 (0.25)
 - AVIA245 - Preparatory Ground Instruction 5 (0.25)
 - AVIA310 - Human Factors in Aviation (0.50)
 - AVIA324 - Professional Pilot Program Course 4 (0.50)
 - AVIA325 - Professional Pilot Program Course 5 (0.50)
 - AVIA346 - Preparatory Ground Instruction 6 (0.25)
 - AVIA347 - Preparatory Ground Instruction 7 (0.25)
 - AVIA417 - Aviation Safety (0.50)
 - AVIA426 - Professional Pilot Program Course 6 (0.75)
 - CS100 - Introduction to Computing Through Applications (0.50)
 - ENVS131 - Communications for Environmental Professions (0.50)
 - ENVS178 - Environmental Applications of Data Management and Statistics (0.50)
 - ENVS195 - Introduction to Environmental Studies (0.50)
 - ENVS278 - Applied Statistics for Environmental Research (0.50)
 - GEOG102 - Global Environmental Systems: Processes and Change (0.50)
 - GEOG181 - Designing Effective Maps (0.50)
 - **Course Not Found**
 - **ENVS200 - Field Ecology (0.50)**
 - **Course Not Found**
 -
 - Complete 1 of the following:
 - GEOG202 - Geography of the Global Economy (0.50)
 - **GEOG225 - Global Environment and Health (0.50)**
 -
 - Complete 1 of the following:
 - GEOG205 - Principles of Geomorphology (0.50)
 - GEOG209 - Hydroclimatology (0.50)
 -
 - Complete 1 of the following:
 - **GEOG207 - Climate Change Fundamentals (0.50)**
 - **Course Not Found**
 -
 - Complete 1 of the following:

- GEOG271 - Earth from Space Using Remote Sensing (0.50)
- GEOG281 - Introduction to Geographic Information Systems (GIS) (0.50)
- PLAN281 - Introduction to Geographic Information Systems (GIS) (0.50)
-
- **Grand Total Units: 12.5**
- ~~13 Units to Complete~~
- ~~GEOG309 – Physical Climatology (0.50)~~
- ~~GEOG203 – Environment and Development in a Global Perspective (0.50)~~
- ~~GEOG293 – Approaches to Research in Human Geography (0.50)~~
- ~~GEOG294 – Approaches to Research in Physical Geography (0.50)~~
- ~~Grand Total Units: 13~~

Course Requirements (no units)

Required Courses

- No Rules

Course Lists

Required Courses

- No Rules

Are there cross-listed courses listed in requirements?

Yes,

Cross-Listings Options

All cross-listings to be displayed,

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. Up to three independent study GEOG475 or AVIA475 courses may be taken.
3. If a minimum grade of 60.0% is achieved in ENVS131, the Undergraduate Communication Requirement (UCR) milestone will be granted. If the minimum grade is not met, see [Bachelor of Environmental Studies degree-level requirements](#) and contact the Geography and Aviation academic advisor.
4. Professional Pilot Program courses and Preparatory Ground Instruction courses may take place during the spring term.
5. All costs associated with the Professional Pilot Program courses are paid directly to the Waterloo-Wellington Flight Centre (WWFC).
6. AVIA121, AVIA141, AVIA142, AVIA222, AVIA223, AVIA243, AVIA244, AVIA245, AVIA324, AVIA325, AVIA346, AVIA347, AVIA426 are the Professional Pilot Program flight courses offered by and assessed through the WWFC. These courses are not used in cumulative major and overall average calculations.
7. Students may be granted advanced credits up to and including a Private Pilot Licence.
8. WWFC Program hours will be granted up to licence sign-off and the remaining hours will be logged as career, not program hours. Students are not accepted past the Private Pilot Licence or if they have acquired a Night Rating. Students entering the program with a Private Licence may be required to attend WWFC's Flight Management Basic Courses as a review. Students who apply with the flight qualifications that meet the standards set by WWFC are eligible for the BES degree upon successful completion of the plan curriculum and aviation milestones.

Proposed

Notes

- GEOG202 provides a strong foundation for the Economy & Society Specialization, wherein GEOG225 provides a strong foundation for the Environment, Society, & Well-Being Specialization. Students interested in either or both these specializations are encouraged to complete the respective foundational course(s).
- See list of [academic advisors](#).
- See Geography and Environmental Management website for [recommended course sequences](#).
- For an overview of the career and academic objectives see the [Department of Geography and Environmental Management website](#).
- For more information on the aviation requirements, see the [Aviation website](#).

Existing

Notes

- See list of [academic advisors](#).
- See Geography and Environmental Management website for [recommended course sequences](#).
- For an overview of the career and academic objectives see the [Department of Geography and Environmental Management website](#).
- For more information on the aviation requirements, see the [Aviation website](#).

Specializations

Specializations for this Major

Yes - Optional,

Proposed

Specialization Details

Students may choose to focus their elective choices by completing two of six available specializations.

Existing

Specialization Details

Students may choose to focus their elective choices by completing one of four available specializations.

1. GA-Climate Change & Environment Specialization, GA-Earth Systems Science Specialization, GA-Economy & Society Specialization, GA-Geomatics Specialization,
 - **Not Found**
 - **, or**
 - **Not Found**

Undergraduate Plan Guidelines

Workflow Information

Change to Undergraduate Communication Requirement

No,

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

G-Climate Change & Environment Specialization - Climate Change Specialization

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students who began their studies in Fall 2025 will be shifted over to the Fall 2026 calendar, so this specialization will apply to them as well. No course substitutions will be required.

All students will be communicated about the change in writing via email, as well as through in-class visits by the Associate Chair, Undergraduate, to explain the calendar changes.

Changes also apply to identical specialization for the GEM and Aviation programs.

Is the credential name changing?

Yes,

Impact of Credential Name Change

The name change applies only to future students (current students may opt in),

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.
2. Avoid overlap in course requirements with other specializations.
3. Ensure all courses align with the learning objectives of the specializations.

For the climate change and environment specialization, there was agreement that since the specialization is meant to focus on climate change, a name change clarifies this for students. Further, there was consensus that students should achieve foundational knowledge in climate change (achieved by the pre-req required to take upper-year courses in the specialization: GEOG 207), as well as foundations in each of the three pillars of the IPCC working group (one course from the physical science of climate change, one course on the impacts, adaptations, and vulnerability, and one course on mitigation). Degree requirements have been adjusted to reflect this curriculum.

Additional constraints removed since there is no longer any cross-listed courses, and the thesis will no longer count towards the specialization.

SCI201 will be changed to EARTH305, upon SUC approval of this change.

Related agenda proposals:

- GA-Climate Change & Environment Specialization
- GEM-Climate Change & Environment Specialization
- AVIA371
- ENVS459
- GEOG427

Consultations (Departmental)

Science has been consulted about the use of EARTH305 (formerly SCI201) in the specialization and is in agreement.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Proposed

Program/Plan Name

Climate Change Specialization

Existing

Program/Plan Name

Climate Change and Environment Specialization

Admissions

Specialization is available for students in the following majors

H-Geomatics

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Invalid Combinations

No,

Average Requirement

No,

Proposed

Graduation Requirements

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5 Units to Complete**
-
- **Complete all of the following**
- **Complete all the following:**
- **GEOG307 - Societal Adaptation to Climate Change (0.50)**
- **GEOG359 - Low Carbon Transition (0.50)**
-
- **Complete 1 of the following:**
- **Course Not Found**
- **GEOG408 - Earth's Future Climates (0.50)**
- **SCI201 - Global Warming and Climate Change (0.50)**
-
- **Complete 2 of the following:**
- **Course Not Found**

- **GEOG314 - Climate Services (0.50)**
- **GEOG417 - Climate Change Communication (0.50)**
- **Course Not Found**
-
- **Grand Total Units: 2.5**
- **0 Units to Complete**
- **No Rules**

1. Required Courses

-
- **No Rules**
- Complete all of the following
- Complete all the following:
- **GEOG203 – Environment and Development in a Global Perspective (0.50)**
- **GEOG207 – Climate Change Fundamentals (0.50)**
- **GEOG209 – Hydroclimatology (0.50)**
- Complete 2 of the following:
- **ERS361 – Food Systems and Sustainability (0.50)**
- **GEOG219 – How Pandemics Change the World (0.50)**
- **GEOG316 – Multivariate Statistics (0.50)**
- **GEOG318 – Spatial Analysis (0.50)**
- **GEOG323 – Tourism Impacts – International Perspectives (0.50)**
- **GEOG325 – Geographies of Health (0.50)**
- **GEOG361 – Food Systems and Sustainability (0.50)**
- **GEOG426 – Geographies of Development (0.50)**
- **PLAN351 – Multivariate Statistics (0.50)**
- **PLAN353 – Spatial Analysis (0.50)**
- **REC383 – Tourism Impacts – International Perspectives (0.50)**
- Complete all of the following
- Complete 3.0 units, including at least one 1.0 unit course, from the following course list.
- Choose any of the following:
- **ERS456 – Transforming Canadian Resource Management (1.00)**
- **GEOG304 – Carbon in the Biosphere (0.50)**
- **GEOG306 – Human Dimensions of Natural Hazards (0.50)**
- **GEOG307 – Societal Adaptation to Climate Change (0.50)**
- **GEOG309 – Physical Climatology (0.50)**
- **GEOG356 – Resources Management (0.50)**
- **GEOG357 – River Management (0.50)**
- **GEOG368 – Ecology and Conservation for Planning (0.50)**
- **GEOG408 – Earth's Future Climates (0.50)**
- **GEOG409 – Energy Balance Climatology (0.50)**
- **GEOG420 – Ice Sheets and Glaciers (0.50)**
- **GEOG452 – Climate Change and Environment Project (1.00)**
- **GEOG456 – Transforming Canadian Resource Management (1.00)**
- **GEOG459 – Energy and Sustainability (1.00)**
- **PLAN341 – Ecology and Conservation for Planning (0.50)**

Course Lists

Required Courses

- No Rules

Proposed

Are there cross-listed courses listed in requirements?

No,

Existing

Are there cross-listed courses listed in requirements?

Yes,

Proposed

Additional Constraints

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. GEOG490A and GEOG490B Thesis (1.5 units) topics - if related to the specialization - may be approved to count towards the specialization 1.0 unit course requirement, from the 3.0 units course list, by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

GA-Climate Change & Environment Specialization - Climate Change Specialization

[Top](#)

Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students who began their studies in Fall 2025 will be shifted over to the Fall 2026 calendar, so this specialization will apply to them as well. No course substitutions will be required.

All students will be communicated about the change in writing via email, as well as through in-class visits by the Associate Chair, Undergraduate, to explain the calendar changes.

Changes also apply to identical specialization for the GEM and Geomatics programs.

Is the credential name changing?

Yes,

Impact of Credential Name Change

The name change applies only to future students (current students may opt in),

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.
2. Avoid overlap in course requirements with other specializations.
3. Ensure all courses align with the learning objectives of the specializations.

For the climate change and environment specialization, there was agreement that since the specialization is meant to focus on climate change, a name change clarifies this for students. Further, there was consensus that students should achieve foundational knowledge in climate change (achieved by the pre-req required to take upper-year courses in the specialization: GEOG 207), as well as foundations in each of the three pillars of the IPCC working group (one course from the physical science of climate change, one course on the impacts, adaptations, and vulnerability, and one course on mitigation). Degree requirements have been adjusted to reflect this curriculum.

Additional constraints removed since there are no longer any cross-listed courses, and the thesis will no longer count towards the specialization.

SCI201 will be changed to EARTH305, upon SUC approval of this change.

Related agenda proposals:

- G-Climate Change & Environment Specialization
- GEM-Climate Change & Environment Specialization
- AVIA371
- ENVS459
- GEOG427

Consultations (Departmental)

Science has been consulted about the use of EARTH305 (formerly SCI201) in the specialization and is in agreement.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Proposed

Program/Plan Name

Climate Change Specialization

Existing

Program/Plan Name

Climate Change and Environment Specialization

Admissions**Specialization is available for students in the following majors**

H-Geography & Aviation

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Invalid Combinations

No,

Average Requirement

No,

Proposed

Graduation Requirements

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5Units to Complete**
-
- **Complete all of the following**

- **Complete all the following:**
- **GEOG307 - Societal Adaptation to Climate Change (0.50)**
- **GEOG359 - Low Carbon Transition (0.50)**
-
- **Complete 1 of the following:**
- **Course Not Found**
- **GEOG408 - Earth's Future Climates (0.50)**
- **SCI201 - Global Warming and Climate Change (0.50)**
-
- **Complete 2 of the following:**
- **Course Not Found**
- **GEOG314 - Climate Services (0.50)**
- **GEOG417 - Climate Change Communication (0.50)**
- **Course Not Found**
-
- **Grand Total Units: 2.5**
- ~~Units to Complete~~
- ~~No Rules~~

1. Required Courses

-
- **No Rules**
- Complete all of the following
- Complete all the following:
 - GEOG203 – Environment and Development in a Global Perspective (0.50)
 - GEOG207 – Climate Change Fundamentals (0.50)
 - GEOG209 – Hydroclimatology (0.50)
- Complete 2 of the following:
 - ERS361 – Food Systems and Sustainability (0.50)
 - GEOG219 – How Pandemics Change the World (0.50)
 - GEOG316 – Multivariate Statistics (0.50)
 - GEOG318 – Spatial Analysis (0.50)
 - GEOG323 – Tourism Impacts – International Perspectives (0.50)
 - GEOG325 – Geographies of Health (0.50)
 - GEOG361 – Food Systems and Sustainability (0.50)
 - GEOG426 – Geographies of Development (0.50)
- PLAN351 – Multivariate Statistics (0.50)
- PLAN353 – Spatial Analysis (0.50)
- REC383 – Tourism Impacts – International Perspectives (0.50)
- Complete all of the following
- Complete 3.0 units, including at least one 1.0 unit course, from the following course list.
- Choose any of the following:
 - ERS456 – Transforming Canadian Resource Management (1.00)
 - GEOG304 – Carbon in the Biosphere (0.50)
 - GEOG306 – Human Dimensions of Natural Hazards (0.50)
 - GEOG307 – Societal Adaptation to Climate Change (0.50)
 - GEOG309 – Physical Climatology (0.50)
 - GEOG356 – Resources Management (0.50)
 - GEOG357 – River Management (0.50)
 - GEOG368 – Ecology and Conservation for Planning (0.50)
 - GEOG408 – Earth's Future Climates (0.50)
 - GEOG409 – Energy Balance Climatology (0.50)
 - GEOG420 – Ice Sheets and Glaciers (0.50)
 - GEOG452 – Climate Change and Environment Project (1.00)
 - GEOG456 – Transforming Canadian Resource Management (1.00)
 - GEOG459 – Energy and Sustainability (1.00)
 - PLAN341 – Ecology and Conservation for Planning (0.50)

Course Lists

Required Courses

- No Rules

Proposed

Are there cross-listed courses listed in requirements?

No,

Existing

Are there cross-listed courses listed in requirements?

Yes,

Proposed

Additional Constraints

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. GEOG490A and GEOG490B Thesis (1.5 units) topics - if related to the specialization - may be approved to count towards the specialization 1.0 unit course requirement, from the 3.0 units course list, by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path

Committee approvals,

Faculty/AFIW Path(s) for Workflow

Faculty of Environment

Dependencies

GEM-Climate Change & Environment Specialization - Climate Change Specialization

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Effective Date and Career

Career

Undergraduate,

Proposed

Effective Term and Year

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students who began their studies in Fall 2025 will be shifted over to the Fall 2026 calendar, so this specialization will apply to them as well. No course substitutions will be required.

All students will be communicated about the change in writing via email, as well as through in-class visits by the Associate Chair, Undergraduate, to explain the calendar changes.

Changes also apply to identical specialization for the Geomatics and Aviation programs.

Is the credential name changing?

Yes,

Impact of Credential Name Change

The name change applies only to future students (current students may opt in),

Co-operative System of Study and Requirements

Not Applicable,

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

After an extensive curriculum review, including departmental and student consultation, we are making changes to all our specializations to:

1. Reduce the number of required units to make them more achievable for students and align with the specialization unit requirements in other units in our faculty.
2. Avoid overlap in course requirements with other specializations.
3. Ensure all courses align with the learning objectives of the specializations.

For the climate change and environment specialization, there was agreement that since the specialization is meant to focus on climate change, a name change clarifies this for students. Further, there was consensus that students should achieve foundational knowledge in climate change (achieved by the pre-req required to take upper-year courses in the specialization: GEOG 207), as well as foundations in each of the three pillars of the IPCC working group (one course from the physical science of climate change, one course on the impacts, adaptations, and vulnerability, and one course on mitigation). Degree requirements have been adjusted to reflect this curriculum.

Additional constraints removed since there is no longer any cross-listed courses, and the thesis will no longer count towards the specialization.

SCI201 will be changed to EARTH305, upon SUC approval of this change.

Related agenda proposals:

- G-Climate Change & Environment Specialization
- GA-Climate Change & Environment Specialization
- AVIA371
- ENVS459
- GEOG427

Consultations (Departmental)

Science has been consulted about the use of EARTH305 (formerly SCI201) in the specialization and is in agreement.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Specialization

Proposed

Program/Plan Name

Climate Change Specialization

Existing

Program/Plan Name

Climate Change and Environment Specialization

Admissions**Specialization is available for students in the following majors**

H-Geography & Environmental Management, or JH-Geography & Environmental Management

Admissions Entry Point

Declare Plan,

Declaration Requirements

- It is recommended that students declare the addition of a specialization as early as possible by submitting a [Plan Modification Form](#).

Requirements Information

Invalid Combinations

No,

Average Requirement

No,

Proposed

Graduation Requirements

- Complete a total of 2.5 units.

Existing

Graduation Requirements

- Complete a total of 5.5 units.

1. Required Courses

- **2.5 Units to Complete**
-
- **Complete all of the following**
- **Complete all the following:**
- **GEOG307 - Societal Adaptation to Climate Change (0.50)**
- **GEOG359 - Low Carbon Transition (0.50)**
-
- **Complete 1 of the following:**
- **SCI201 - Global Warming and Climate Change (0.50)**
- **Course Not Found**

- **GEOG408 - Earth's Future Climates (0.50)**
-
- **Complete 2 of the following:**
- **Course Not Found**
- **GEOG314 - Climate Services (0.50)**
- **GEOG417 - Climate Change Communication (0.50)**
- **Course Not Found**
-
- **Grand Total Units: 2.5**
- ~~0~~ **Units to Complete**
- ~~No~~ **Rules**

1. Required Courses

-
- **No Rules**
- Complete all of the following
- Complete all the following:
- ~~GEOG203 – Environment and Development in a Global Perspective (0.50)~~
- ~~GEOG207 – Climate Change Fundamentals (0.50)~~
- ~~GEOG209 – Hydroclimatology (0.50)~~
- Complete 2 of the following:
- ~~ERS361 – Food Systems and Sustainability (0.50)~~
- ~~GEOG219 – How Pandemics Change the World (0.50)~~
- ~~GEOG316 – Multivariate Statistics (0.50)~~
- ~~GEOG318 – Spatial Analysis (0.50)~~
- ~~GEOG323 – Tourism Impacts – International Perspectives (0.50)~~
- ~~GEOG325 – Geographies of Health (0.50)~~
- ~~GEOG361 – Food Systems and Sustainability (0.50)~~
- ~~GEOG426 – Geographies of Development (0.50)~~
- ~~PLAN351 – Multivariate Statistics (0.50)~~
- ~~PLAN353 – Spatial Analysis (0.50)~~
- ~~REC383 – Tourism Impacts – International Perspectives (0.50)~~
- Complete all of the following
- Complete 3.0 units, including at least one 1.0 unit course, from the following course list.
- Choose any of the following:
- ~~ERS456 – Transforming Canadian Resource Management (1.00)~~
- ~~GEOG304 – Carbon in the Biosphere (0.50)~~
- ~~GEOG306 – Human Dimensions of Natural Hazards (0.50)~~
- ~~GEOG307 – Societal Adaptation to Climate Change (0.50)~~
- ~~GEOG309 – Physical Climatology (0.50)~~
- ~~GEOG356 – Resources Management (0.50)~~
- ~~GEOG357 – River Management (0.50)~~
- ~~GEOG368 – Ecology and Conservation for Planning (0.50)~~
- ~~GEOG408 – Earth's Future Climates (0.50)~~
- ~~GEOG409 – Energy Balance Climatology (0.50)~~
- ~~GEOG420 – Ice Sheets and Glaciers (0.50)~~
- ~~GEOG452 – Climate Change and Environment Project (1.00)~~
- ~~GEOG456 – Transforming Canadian Resource Management (1.00)~~
- ~~GEOG459 – Energy and Sustainability (1.00)~~
- ~~PLAN341 – Ecology and Conservation for Planning (0.50)~~

Course Lists

Required Courses

- No Rules

Proposed

Are there cross-listed courses listed in requirements?

No,

Existing

Are there cross-listed courses listed in requirements?

Yes,

Proposed

Additional Constraints

Existing

Additional Constraints

1. Students may only complete one course from any cross-listed set.
2. GEOG490A and GEOG490B Thesis (1.5 units) topics - if related to the specialization - may be approved to count towards the specialization 1.0 unit course requirement, from the 3.0 units course list, by the [Associate Chair, Undergraduate Studies, Department of Geography and Environmental Management](#).

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals,

Faculty/AFIW Path(s) for Workflow
Faculty of Environment

Dependencies

H-Climate & Environmental Change - Climate and Environmental Change (Bachelor of Sciences - Honours)

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Effective Date and Career

Career

Proposed

Undergraduate,

Fall 2026

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change,

Academic Unit Approval

2025-09-24

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

Yes,

Impact on Existing Students

Students who began their studies in Fall 2025 will be shifted over to the Fall 2026 calendar. Transcript text will be added to all Fall 2025 student records to indicate that GEOG 100 can be considered equivalent (or a substitution for) GEOG 199. All students will be communicated about the change in writing via email, as well as through in-class visits by the Associate Chair, Undergraduate, to explain the calendar changes.

Is the credential name changing?

No,

Co-operative System of Study and Requirements

Yes,

Co-operative Education Consultation

Consultation with CEE and students groups has been conducted. A feasibility study was conducted and CEE is in support of the proposed coop sequencing changes.

Creating or Changing Invalid Combinations

No,

Change to Learning Outcomes

No,

Rationale and Background for Change(s)

Currently, our students have many 200-level degree requirements which are centered around obtaining foundational knowledge in the core areas of expertise in our department: human geography, physical geography, geospatial data science, and climate change. We are asking CEC students to take one course from each pillar, except for the physical geography pillar where they must take both foundational courses. We are also shifting research methods requirements to the 300-level.'

Our department has also decided to create a new course code for courses focused on Geomatics/Geospatial Data Science (new course code = GDS). We are also delisting many of the GEOG/AVIA cross-listed courses so that they will just have an AVIA course code. To accommodate this change, we are adding AVIA and GDS course codes in MAV calculations because of this.

The program has also been reviewed as highly prescriptive, with limited choice options for students. Based on feedback from students, faculty, as well as the difficulties in administering the program with so many required courses, we are opening up the elective options so students can pick 'three of' or 'four of' a list of courses, rather than requiring all courses. This allows CEC students to have more elective space. We also removed the requirement for 300-level electives, so adjusted the notes related to GEOG 490A thesis course.

We are also adjusting coop sequencing for the program. The main goal of the proposed change is to improve the consistency and range of course offerings available to students. Considerations by the department that support this include:

1. Streamlining co-op sequencing allows streamlining of course offerings and improved efficiency for the department.
 - Many course offerings are similar between programs, particularly between the GEM and CEC programs. Currently, two separate co-op sequences present challenges when scheduling course offerings for the department. Specifically, to meet sequencing needs certain required courses must be delivered two, or even three, times per year, regardless of enrolment numbers.
2. Balancing the 400-level offerings between Fall and Winter term.
 - Currently, most 400-level course offerings must be offered in the Winter term to meet both the GEM/Geomatics (4B) and CEC (4A/4B) sequencing. This means there are many 400-level offerings in only one term, which reduces choice/flexibility for students, but also increases competition/reduces enrollment in some 400-level courses.
3. Participating in interdisciplinary capstone courses.
 - GEM wants students to have the opportunity to enroll in the new interdisciplinary capstone courses. Since these are offered in the fall term, and completed in the winter term, senior students scheduled for a fall work term miss out on this opportunity.
4. Participating in the thesis option offered across 4A and 4B study terms.
 - The thesis option currently has limited uptake by students since completing the thesis would have to be split between two terms with a co-op work term in between the 4A (spring) and 4B (winter) study terms.

We are also removing BIOL 251 as a BIOL course option. Biology is adding ENVS 200 as an anti-req for

BIOL 251. Since ENVS 200 is required for students in the CEC program, they cannot take BIOL 251 going forward, so the changed is forced. Biology has been notified.

As GEM has reduced the specialization requirements from 5.5 to 2.5 units, students can now fit in two specializations within their degree requirements (i.e., they are required to take a certain number of GEOG/ENVS/GDS/AVIA elective courses and can fit in up to two specializations within these requirements). Further, we have removed course overlap between the specializations (and refined the focus) so that specialization titles better reflect student skillsets. Since students may develop more than one skillset within their course requirements, allowing them to reflect this as a credential is important for future career prospects.

Economy and Society specialization is being renamed to Economy and Development - this will be updated upon SUC approval.

SCI 201 being changed to EARTH305, this will be updated once approved at SUC.

Any GEOG course being relabeled to GDS will be updated once approved at SUC.

The inclusion of GDS in the MAV is pending approval of new course code.

Related proposals:

- ENV Degree Requirements
- CEC-Remote Sensing Specialization
- CEC-Environment, Society and Well-being Specialization
- AVIA370
- ENVS459
- GEOG207
- SCI205
- GEOG390
- GEOG427
- GEOG402
- GEOG405
- EARTH444
- BIOL462

Consultations (Departmental)

No consultations necessary.

Consultations with Science regarding courses that will be cross-listed or open to our students have occurred. Science has supported the addition of EARTH 343 and EARTH 444 as course options for our CEC students.

General Program/Plan Information

Faculty

Faculty of Environment

Academic Unit

Department of Geography and Environmental Management

Faculty

Faculty of Environment

Undergraduate Credential Type

Major

Program Type

Honours

Degree

Bachelor of Science (Environment)

Program/Plan Name

Climate and Environmental Change (Bachelor of Sciences - Honours)

Systems of Study

Co-operative, Regular,

Admissions

Admissions Entry Point

Direct Entry,