ENVIRONMENT MAJOR - RENEWABLE RESOURCE MANAGEMENT (B.SC.(AG.ENV.SC.)) OR (B.SC.) (63 CREDITS)

Offered by: Bieler School of Environment
Degree: Bachelor of Science (Agricultural and Environmental Sciences)
Program credit weight: 63

Program Description

This domain (63 credits including core) is open only to students in the B.Sc.(Ag.Env.Sc.) Major in Environment or B.Sc. Major in Environment program.

Renewable resource management is an emerging field that focuses on the ecosystem structures and processes required to sustain the delivery, to humanity, of ecosystem goods and services such as food, clean water and air, essential nutrients, and the provision of beauty and inspiration. Renewable resource management recognizes humans as integral components of ecosystems and is used to develop goals that are consistent with sustainability and ecosystem maintenance.

The Renewable Resource Management domain provides students with an understanding of:

1. the interactions between physical and biological factors that determine the nature and dynamics of populations and entities in the natural environment;
2. the ways in which ecosystems can be managed to meet specific goals for the provision of goods and services;
3. the economic and social factors that determine how ecosystems are managed;
4. the ways in which management of natural resources can affect the capability of natural ecosystems to continue to supply human needs in perpetuity; and
5. the approaches and technologies required to monitor and analyze the dynamics of natural and managed ecosystems.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Program Prerequisites or Corequisites

All students in this program MUST take the following pre- or corequisite courses:

One of the following biology courses or CEGEP equivalent (e.g., CEGEP objective 00XU):

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Course	Title	Credits
BIOL 112	Cell and Molecular Biology.	3
LSCI 211	Biochemistry 1.	3

One of the following chemistry courses or CEGEP equivalent (e.g., CEGEP objective 00XV):

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Course	Title	Credits
CHEM 212	Introductory Organic Chemistry 1.	4
FDSC 230	Organic Chemistry.	4

Suggested First Year (U1) Courses

For suggestions on courses to take in your first year (U1), you can consult the "Bieler School of Environment Student Handbook" available on the website (http://www.mcgill.ca/environment), or contact Ms. Kathy Roulet, the Program Adviser (kathy.roulet@mcgill.ca).

Program Requirements

Note: Students are required to take a maximum of 30 credits at the 200 level and a minimum of 12 credits at the 400 level or higher in this program. This includes core and required courses, but does not include the domain prerequisites or corequisites listed above.

Location Note: When planning their schedule and registering for courses, students should verify where each course is offered because courses for this program are taught at both McGill's Downtown campus and at the Macdonald campus in Sainte-Anne-de-Bellevue.

Core: Required Courses (18 credits)

Location Note: Core required courses for this program are taught at both McGill's Downtown campus and at the Macdonald campus in Sainte-Anne-de-Bellevue. You should register in Section 001 of an ENVR course that you plan to take on the Downtown campus, and in Section 051 of an ENVR course that you plan to take on the Macdonald campus.

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Course	Title	Credits
ENVR 200	The Global Environment.	3
ENVR 201	Society, Environment and Sustainability.	3
ENVR 202	The Evolving Earth.	3
ENVR 203	Knowledge, Ethics and Environment.	3
ENVR 301	Environmental Research Design.	3
ENVR 400	Environmental Thought.	3

Core: Complementary Course - Senior Research Project (3 credits)

Only 3 credits will be applied to the program; extra credits will count as electives.

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Course	Title	Credits
ENVR 401	Environmental Research.	3
ENVR 451	Research in Panama.	6
FSCI 444	Barbados Research Project.	6

Domain: Complementary Courses (42 credits)

42 credits of complementary courses are selected as follows:

9 credits - Basic Principles of Ecosystem Processes and Diversity

6 credits - 3 credits from each category of Statistics and GIS

6 credits - Advanced Ecosystem Components

6 credits - Advanced Ecological Processes

6 credits - Social Processes

9 credits - Ecosystem Components or Management of Ecosystems

Basic Principles of Ecosystem Processes

9 credits of basic principles of ecosystem processes and diversity are selected as follows:

One of:

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Course	Title	Credits
AEBI 210	Organisms 1.	3
AEBI 211	Organisms 2.	3
BIOL 305	Animal Diversity.	3

One of:

Expand allContract all

Course	Title	Credits
BIOL 308	Ecological Dynamics.	3
ENVB 305	Population and Community Ecology.	3

One of:

Expand allContract all

Course	Title	Credits
ENVB 210	The Biophysical Environment.	3
GEOG 305	Soils and Environment.	3

Statistics

One of:

Expand allContract all

Course	Title	Credits
AEMA 310	Statistical Methods 1.	3
BIOL 373	Biometry.	3

GIS Methods

One of:

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Course	Title	Credits
ENVB 529	GIS for Natural Resource Management.	3
GEOG 201	Introductory Geo-Information Science.	3

Advanced Ecosystem Components

6 credits of advanced ecosystem components selected from:

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Course	Title	Credits
BIOL 553	Neotropical Environments.	3
GEOG 372	Running Water Environments.	3
PLNT 358	Flowering Plant Diversity.	3
SOIL 326	Soils in a Changing Environment.	3
WILD 307	Natural History of Vertebrates.	3

Advanced Ecological Processes

6 credits of advanced ecological processes selected from:

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Course	Title	Credits
BIOL 343	Biodiversity in the Caribean.	3
BIOL 432	Limnology.	3
BIOL 465	Conservation Biology.	3
BREE 217	Hydrology and Water Resources.[1]	3
ENVB 410	Ecosystem Ecology.	3
ENVB 500	Advanced Topics in Ecotoxicology.	3
GEOG 322	Environmental Hydrology.[1]	3
MICR 331	Microbial Ecology.	3
NRSC 333	Pollution and Bioremediation.	3
PLNT 460	Plant Ecology.	3

[1] Note: you can take BREE 217 Hydrology and Water Resources. or GEOG 322 Environmental Hydrology., but not both.

Social Processes

6 credits of social processes selected as follows:

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Course	Title	Credits
AGEC 333	Resource Economics.[1]	3
ANTH 339	Ecological Anthropology.	3
ECON 405	Natural Resource Economics.[1]	3
ENVR 421	Montreal: Environmental History and Sustainability.	3
GEOG 340	Sustainability in the Caribbean.	3
GEOG 382	Principles Earth Citizenship.	3
GEOG 498	Humans in Tropical Environments.	3
RELG 270	Religious Ethics and the Environment.	3

[1] Note: You may take AGEC 333 Resource Economics. and ECON 405 Natural Resource Economics., but not both.

Ecosystem Components or Management of Ecosystems

9 credits of ecosystem components or management of ecosystems selected from:

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Course	Title	Credits
AGRI 452	Water Resources in Barbados.	3
AGRI 550	Sustained Tropical Agriculture.	3
ENVB 437	Assessing Environmental Impact.	3
ENVR 422	Montreal Urban Sustainability Analysis.	3
GEOG 302	Environmental Management 1.	3
GEOG 404	Environmental Management 2.	3
WILD 401	Fisheries and Wildlife Management.	3
WOOD 441	Integrated Forest Management.	3