

GEOGRAPHY MAJOR (B.SC.) (58 CREDITS)

Offered by: Geography (Faculty of Science)

Degree: Bachelor of Science

Program credit weight: 58

Program Description

The BSc Major in Geography provides students with strong training in the theory and tools of physical geography. Students will explore the science of how physical, chemical, and biological processes interact at various spatial and temporal scales to produce distinct environments over the planet, and study different suites of ecosystem services while investigating sustainability challenges for human communities that depend on them. The program includes core training in systematic areas of physical geography (geomorphology, hydrology, soil biogeochemistry, biogeography and climatology), field courses providing hands on exposure to environmental data collection, and courses in quantitative techniques and in GIS and Remote Sensing.

Degree Requirements – B.Sc.

This program is offered as part of a Bachelor of Science (B.Sc.) degree.

To graduate, students must satisfy both their program requirements and their degree requirements.

- The program requirements (i.e., the specific courses that make up this program) are listed under the Course Tab (above).
- The degree requirements—including the mandatory Foundation program, appropriate degree structure, and any additional components—are outlined on the Degree Requirements page.

Students are responsible for ensuring that this program fits within the overall structure of their degree and that all degree requirements are met. Consult the Degree Planning Guide on the SOUSA website for additional guidance.

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.

Required Courses (13 credits)

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Course	Title	Credits
GEOG 201	Introductory Geo-Information Science.	3
GEOG 203	Environmental Systems.	3
GEOG 272	Earth's Changing Surface.	3
GEOG 290	Local Geographical Excursion.	1
GEOG 351	Quantitative Methods.	3

Complementary Courses (45 credits)

3 credits of statistics:

Note: Credit given for statistics courses is subject to certain restrictions. Students in Science should consult the "Course Overlap" information in the "Course Requirements" section for the Faculty of Science.

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Course	Title	Credits
BIOL 373	Biometry.	3
GEOG 202	Statistics and Spatial Analysis.	3
MATH 203	Principles of Statistics 1.	3
PSYC 204	Introduction to Psychological Statistics.	3
SOCI 350	Statistics in Social Research.	3

9 credits of systematic physical geography:

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Course	Title	Credits
GEOG 305	Soils and Environment.	3
GEOG 321	Climatic Environments.	3
GEOG 322	Environmental Hydrology.	3
GEOG 372	Running Water Environments.	3
GEOG 373	Arctic Geomorphology.	3
GEOG 470	Wetlands.	3
GEOG 471	Arctic System Science	3

3 credits of field courses:

(Field course availability is determined each year in February.)

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Course	Title	Credits
GEOG 495	Field Studies - Physical Geography.	3
GEOG 496	Geographical Excursion.	3
GEOG 499	Subarctic Field Studies.	3

Students must take a total of 15 credits from the next 2 blocks; they will choose 9 credits from one block and 6 credits from the other block, depending on their training focus.

6 or 9 credits of environmental analysis/techniques

Expand allContract all

Course	Title	Credits
GEOG 308	Remote Sensing for Earth Observation.	3
GEOG 314	Geospatial Analysis.	3
GEOG 384	Principles of Geospatial Web.	3
GEOG 414	Advanced Geospatial Analysis.	3
GEOG 428	Earth System Geographic Information Science.	3

6 or 9 credits in (Environment, Earth System and Sustainability sciences)

Expand allContract all

Course	Title	Credits
ENVR 200	The Global Environment.	3
ENVR 201	Society, Environment and Sustainability.	3

ENVR 202	The Evolving Earth.	3
ESYS 200	Earth-System Interactions.	3
ESYS 300	Earth Data Analysis.	3
GEOG 302	Environmental Management 1.	3
GEOG 360	Analyzing Sustainability.	3
GEOG 460	Research in Sustainability.	3

9 credits on human-environment linkages

Expand allContract all

Course	Title	Credits
GEOG 210	Global Places and Peoples.	3
GEOG 216	Geography of the World Economy.	3
GEOG 217	Cities in the Modern World.	3
GEOG 221	Environment and Health.	3
GEOG 303	Health Geography.	3
GEOG 310	Development and Livelihoods.	3
GEOG 311	Economic Geography.	3
GEOG 315	Urban Transportation Geography.	3

6 credits of approved advanced courses in Geography, or elsewhere in the Faculty of Science that have been approved by the Program Adviser, including any geography courses from the above complementary lists.

Admission to 500-level courses in Geography requires the instructor's permission. It is not advisable to take more than one 500-level course in a term.

Geography Approved Course List - Major, Honours and Liberal Programs

Expand allContract all

Course	Title	Credits
GEOG 401	Socio-Environmental Systems: Theory and Simulation.	3
GEOG 404	Environmental Management 2.	3
GEOG 505	Global Biogeochemistry.	3
GEOG 506	Advanced Geographic Information Science.	3
GEOG 523	Global Ecosystems and Climate.	3
GEOG 530	Global Land and Water Resources.	3
GEOG 535	Remote Sensing and Interpretation.	3
GEOG 536	Geocryology.	3
GEOG 537	Advanced Fluvial Geomorphology.	3
GEOG 550	Historical Ecology Techniques.	3
GEOG 555	Ecological Restoration.	3