# Undergraduate

General Information

At Memorial, you'll learn to investigate environmental systems from human and physical perspectives. The integrated nature and spatial organization of our world are key themes in geography. The undergraduate program is designed for students to learn theories, methods and analytical techniques applicable to a wide range of questions and broad spectrum of occupations.

A set of core courses at first- and second-year levels will provide you with the breadth of knowledge essential for the practice of geography. As you proceed, you'll have the chance to develop your interests through the breadth of geography by selecting specialized third-and fourth-year level courses in fields such as physical geography, economic geography, resource management, cultural geography, cartography, geographic information systems or remote sensing. Field courses will allow you to put your classroom knowledge into practice.

The undergraduate programs in geography are:

* Major (BA or BSc)
* Minor
* Honours (BA or BSc)
* Focus (for BEd)
* GISciences Diploma
* Joint Majors (BA or BSc)
* Joint Honours (BA or BSc)

For more information, contact Dr. Arn Keeling, Undergraduate Co-ordinator, akeeling@mun.ca

# Major

You may complete a Major in Geography as part of either a BA or BSc program.

Students who want to declare a Major in Geography should meet with the [Undergraduate Program Co-Ordinator.](https://www.mun.ca/geography/people/faculty/arn-keeling/#d.en.167975)It's a good idea to declare your major as early as possible in your studies. That will help you in planning the route through your degree.  
  
Program Requirements (B.A. or B.Sc.)

1. Students may complete a Major in Geography as part of either a B.A. or B.Sc. program. See the General Regulations for the B.A. and B.Sc. degrees as appropriate.  
2. All students who major in Geography should consult with the , who will help them in planning their academic programme.  
3. The Major requirements consists of 15 Geography Courses (45 credit hours)  
- 1050   
- 2001, 2102, 2195, 2302, 2425   
- 3222 and 3228   
- three courses from 3000-level  
- two courses from 4000-level  
- 490A and 490B (Note that 490A is offered in the fall semester, and 490B is offered in the winter semester)  
4. B.Sc. candidates must complete 15 credit hours in science courses outside Geography at the 2000-level or above.  
5. B.A. candidates must complete the B.A. core requirements. ([CRW](http://www.mun.ca/regoff/calendar/sectionNo=ARTS-0109#ARTS-8194), [LS](http://www.mun.ca/regoff/calendar/sectionNo=ARTS-0109#ARTS-8196), [QR](http://www.mun.ca/regoff/calendar/sectionNo=ARTS-0109#ARTS-8198))

# Minor

Students may complete a Minor in Geography as part of either a BA or BSc. BSc students do not have to complete a minor.

The Minor in Geography can be combined with a Major in all kinds of disciplines. Students registered in the Minor in Geography have chosen to complete their Major in disciplines such as earth sciences, English, mathematics, biology, anthropology, history, French, or computer sciences.

Program requirements  
For students commencing a Minor in Geography, 24 credit hours in Geography courses are required, including:  
  
1050: Geographies of Global Change  
2001: Cultural Geography  
2102: Physical Geography  
2195: Introduction to Geographic Information Sciences  
2302: Issues in Economic Geography  
2425: Natural Resources  
Six additional credit hours taken from 2 Geography courses at the 3000- or 4000-level.

# Honours

Students graduating with the Honours degree in Geography will have met the challenge of undertaking a supervised research project and presenting the results in a dissertation. For many students, this experience is a critical one in determining their career. It is a good way, within a reasonable time frame, to strengthen a chosen specialization.  
  
The Honours degree is highly valued at Memorial and in other universities; it is often an important asset for students who apply for external research funding and graduate programs, or for employment.  
  
Program requirements

1. Students intending to take an Honours degree in Geography must apply for entry to the Honours program though the Office of the Registrar.  
  
2. Students accepted in the Honours program must:

* Comply with the General Regulations for the Honours degree of BA and BSc as appropriate.
* Arrange their program in consultation with the [Undergaduate Program Co-Ordinator.](https://www.mun.ca/geography/people/faculty/arn-keeling/#d.en.167975)

3. A candidate for the Honours degree is required to complete at least 60 credit hours in courses in Geography, including:

* Forty-five credit hours in courses as listed under Major in Geography;
* Geography 3230, 490A/B, and 4999;
* Six additional credit hours at the 4000-level.

Academic standing: BA Honours

In order to graduate with a BA Honours, a candidate shall obtain: A grade of 70% or better, OR and average of 75% or higher in the minimum number of courses (including the required courses) in the Hounours subject(s) prescribed by the Department [or, in the case of Joint Honours, Departments] concerned, excluding 1000-level courses. A grade of 70% or better must be obtained in the Honours dissertation.  
  
AND  
  
An average of at least 2.75 points on the total number of credit hours in the courses required for the degree.  
  
Academic standing: BSc Honours  
  
In order to graduate with a BSc Honours, a candidate shall obtain a grade of "B" or better, OR an average of 75% or higher (whichever is to the candidate's advantage) in the minimum number of courses in the Honours subject (or subjects) prescribed by the Department (or, in the case of Joint Honours, Departments) concerned, excluding 1000-level courses.  
  
AND  
  
An average of at least 2.75 points on the total number of credit hours in the courses required for the degree.  
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# 16.11 Geography

In accordance with Senate's Policy Regarding Inactive Courses, the course descriptions for courses which have not been offered in the previous three academic years and which are not scheduled to be offered in the current academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Head of the Department.

It is strongly recommended that all 2000-level core courses be successfully completed before registration in 3000-level courses. All 2000-level core courses must normally be successfully completed prior to registration in a 4000-level course.

Specific prerequisites for courses may be waived only with permission of the instructor and the Head of Department.

A tentative list of upcoming Geography course offerings can be found at [www.mun.ca/hss/courses.php](http://www.mun.ca/hss/courses.php).

Geography courses are designated by GEOG.

##### [GEOG 1050 Geographies of Global Change](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306756)

provides perspectives on the major geographical challenges and changes facing the contemporary globe, including: climate and environmental change, sustainability, human development, economic globalization, cultural change, and population and migration. Using the integrative skills of geographical analysis, the course prepares students for advanced study in geography and citizenship in the modern world. All sections of this course follow Quantitative Reasoning Course Guidelines available at [www.mun.ca/hss/qr](http://www.mun.ca/hss/qr).

CR: credit may not be obtained for GEOG 1050 and any one of the former GEOG 1000, the former GEOG 1001, the former GEOG 1010, the former GEOG 1011

##### [GEOG 2001 Cultural Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306755)

is an introduction to the study of culture in geography, emphasizing both the history of the field from classic studies of landscapes to contemporary scholarship and themes of recent importance. It explores the politics of cultural production and consumption; critical spaces of cultural production and consumption from around the world, including cities, landscapes, texts, media, performance, and identity; and concepts of everyday life, materiality, and space/place. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or the former GEOG 1001, or the former GEOG 1011

##### [GEOG 2102 Physical Geography: The Global Perspective](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306720)

is a study of form, process, and change in natural systems at and near the surface of Earth, viewed as human environment. Emphasis is on global and regional scales in the systematic study of climate, water, landforms and vegetation. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS) and Quantitative Reasoning Course Guidelines available at [www.mun.ca/hss/qr](http://www.mun.ca/hss/qr).

LH: 3

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or the former GEOG 1001, or the former GEOG 1011, or students following a major in Environmental Physics

##### [GEOG 2105 Canada's Natural Environments and Landscapes](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306729)

examines the characteristics and development of the natural environments and landscapes of each of the major regions of Canada. The diversity of natural environments is illustrated through discussion of the climatic, hydrological, biogeographical, and geomorphic processes responsible for shaping the land. The impact of both gradual and rapid (catastrophic) changes on local, national, and global scales will be emphasized. This course is complementary to GEOG [3405](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); students are encouraged to take both.

CR: the former GEOG 3100

##### [GEOG 2195 Introduction to Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306726)

is an introduction to the fields of cartography, remote sensing, and geographic information systems (GIS). Geographic information collection, representation and analysis methods are the topics for the course. An emphasis is given to applications of maps and satellite images. All sections of this course follow Quantitative Reasoning Course Guidelines available at [www.mun.ca/hss/qr](http://www.mun.ca/hss/qr).

##### [GEOG 2302 Issues in Economic Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306722)

covers issues and ideas in economic geography. The development of local, regional and global economies will be related to economic, cultural and resource factors at international scales. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS) and Quantitative Reasoning Course Guidelines available at [www.mun.ca/hss/qr](http://www.mun.ca/hss/qr).

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or the former GEOG 1001, or the former GEOG 1011, or permission of the instructor

##### [GEOG 2425 Natural Resources](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306759)

is an introduction to the concepts of natural resources, environment and conservation: the nature and distribution of natural resources; methods of use, allocation and development of natural resources and the role of various physical, social, economic, political and technological factors influencing decision-making about resources.

CR: the former GEOG 3325

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or the former GEOG 1001, or the former GEOG 1011

##### [GEOG 2495 Regional Geography of Labrador](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306747)

is a holistic study of the Geography of Labrador, including the terrain, geology, Quaternary history, climate, vegetation, and fauna; the cultural geography of Labrador, including Innu, Inuit, NunatuKavut, and Settler people and communities; economic activities in Labrador, and the interaction of the Labrador economy within Newfoundland, Canada, and globally; the management of physical and human resources; and the geographic techniques used to investigate and understand Labrador's unique Geography.

CR: the former GEOG 3495

##### [GEOG 3015 Science, Technology, and Society](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306738)

explores the relationships among science, technology, and society (STS). It is premised on the idea that science and technology affect our social, cultural, economic, and political lives. Equally, scientific research and technology development are shaped by their social, cultural, economic, and political contexts. This course draws upon the fields of anthropology, sociology, geography, history, and cultural studies, as STS is an interdisciplinary field.

EQ: Sociology [3015](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3110 Physical Geography of the Watershed](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306763)

- inactive course.

##### [GEOG 3120 Climatology](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306768)

is an analysis of the energy and moisture budgets and circulation of the atmosphere at the macro-scale, together with an examination of resulting climate characteristics for selected world regions.

LH: 3

PR: GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3140 Biogeography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306733)

is the application of ecological concepts to the study of the spatial variations in the distribution of species. Laboratory work emphasizes terrestrial species distributions of the island of Newfoundland.

LH: 3

PR: GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3150 Geomorphology](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306717)

is a study of the relationships between geomorphic processes and landforms. Practical work will involve collection of data and samples in the field and analytical laboratory techniques.

EQ: Earth Sciences [3700](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

LH: 3

PR: GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or Earth Sciences [2905](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/). Sections of this course delivered by the Department of Geography do not require the Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) prerequisite.

##### [GEOG 3202 Introduction to Cartography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306740)

is an introduction to the field of cartography and its different components, including: projections, generalization, cartographic design, data classification, topographic and thematic mapping.

CR: the former GEOG 2200

LH: 3. Laboratory exercises will utilize Geographic Information Systems software.

PR: 6 credit hours at the 2000-level

##### [GEOG 3222 Research Design and Quantitative Methods in Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306714)

is an introduction to principles of research design, and to the use of quantitative techniques. This course provides students with a basic understanding of data collection, entry, and analysis and presentation skills most commonly used by geographers. Practical, computer-based exercises are an essential part of the course. It is strongly recommended that this course be successfully completed before registration in a 4000-level geography course.

CR: the former GEOG 2220

LH: 3

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or the former GEOG 1011, or the former GEOG 1001 and at least 9 credit hours from GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [2195](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3228 Field Methods in Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306767)

is designed to introduce students to the practice of geography in the field. Throughout this course, the students will experience the field research process from the initial observation of a site, formation of research questions and methods, collection of primary data, research and analysis, and finally presentation of their findings to both academic and public audiences via reports, outreach activities, or presentations.

CR: the former GEOG 3226

LH: 3

PR: GEOG [1050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and one course at the 2000- level in Geography

##### [GEOG 3230 Field Course](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306739)

will normally be taken by Geography Honours students just prior to the Fall semester of their third year. The course will be held off campus and is designed to provide experience in instrument and field techniques in physical, economic and cultural Geography.

PR: permission of the instructor

##### [GEOG 3250 Introduction to Remote Sensing](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306754)

is an introduction to digital image analysis, including many aspects of pre-processing and processing of airborne and satellite imagery.

LH: 3

PR: GEOG [2195](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3260 Introduction to Geographic Information Systems (GIS)](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306745)

introduces the principles of GIS as they relate to spatial data input, structures, management, integration, analysis and output. Laboratory exercises permit students to use GIS software and explore how it can be applied to a wide variety of disciplines and real world issues.

CR: the former GEOG 4251

LH: 3

PR: GEOG [2195](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Mathematics [1000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3303 Location Theory](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306765)

- inactive course.

##### [GEOG 3320 Fisheries Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306774)

- inactive course.

##### [GEOG 3340 Techniques of Regional Analysis](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306721)

is an introduction to some of the more common types of analysis of urban and regional systems.

PR: GEOG [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or GEOG [3303](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3350 Community and Regional Planning and Development](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306712)

introduces students to regional planning and development theories, techniques and approaches. Understanding of networks of development actors at community and regional scales, methods of delineating regions, links between theory and practice in planning and development. Focus on Canadian experiences and a sustainable development perspective.

PR: GEOG [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or permission of the instructor

##### [GEOG 3405 Canada](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306713)

is a study of the regional geography of Canada, with emphasis on social, economic and political characteristics. This course is complementary to GEOG [2105](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); students are encouraged to take both.

CR: the former GEOG 2400

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); or permission of the instructor and the Head of the Department

##### [GEOG 3420 Globalization of Food](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306710)

examines the increasingly globalized nature of food consumption, production and trade. The course examines the positive and negative effects of globalization on the food system before exploring the proliferation of alternative food networks. These alternative food networks aim to re-localize and re-embed the food system and include organic food, fair trade, self-provisioning, and animal welfare amongst many others. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

CR: the former GEOG 3907

##### [GEOG 3425 Geographical Analysis of Resources](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306757)

is the geographic study of contemporary North American issues in resources and their management. Emphasis will be placed on air and water quality issues, lands and forest resources, energy resources, and coastal zone resources. A number of substantive areas in resource analysis will be considered, including resource appraisal, landscape evaluation, and environmental impact assessment.

CR: the former GEOG 4400

PR: GEOG [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or equivalent

##### [GEOG 3510 Geography of the Seas](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306764)

is an introductory course in marine science and management treating the world’s oceans as a global geographic unit. The course covers basic physical, geological and biological marine science and applications of basic science to management issues facing the oceans today. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

PR: GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or GEOG [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or permission of instructor

##### [GEOG 3610 Cultural Landscape](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306758)

is an investigation of a principal subject of study in cultural geography; the human imprint on the land. The course will include a detailed consideration of the origin of landscape studies in geography; newer approaches emphasizing visual and representational aspects of landscapes; and several diverse case studies, historical and contemporary, concerned with struggles over their definition.

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3620 International Migration](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306748)

examines global population movements from a critical geographic perspective. This course applies a spatial lens to key topics surrounding migration, including labour and development; borders and immigration control, refugees and the politics of asylum; and citizenship, belonging, and place making. Students will develop skills in information seeking, critical judgment, and effective communication for a broad audience, in addition to gaining the knowledge base to navigate contemporary migration debates. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or permission of the instructor

##### [GEOG 3650 Conservation Biology I: Introduction to Conservation](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.314429)

is an introductory course surveying the broad and evolving discipline of Conservation Science. Students examine how basic biological and geographic principles are applied to the conservation of biological diversity in the natural world under conditions of exploitation, habitat loss, and climate change. Topics covered may include biodiversity assessment, endangered species assessment, threats to biodiversity, Indigenous-led conservation, protected areas, systematic conservation planning, and conservation economics, legislation, and policy. Special emphasis is given to relevant provincial examples.

CR: the former GEOG 4650, the former Biology 4650, and Environmental Science [4133](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

EQ: Biology [3650](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

OR: 3 hours of seminar/discussion group each week

PR: Biology [2600](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and [2900](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or permission of instructor

##### [GEOG 3701 Urban Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306752)

is an examination of the evolution, structure and dynamics of cities and urban systems.

PR: GEOG [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3710-3729 Special Topics in Geography: Harlow](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306723)

will have topics to be studied announced by the Department.

PR: available only as part of the [Harlow Campus semester](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/10/)

##### [GEOG 3800 International Political Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306737)

is a geographic study of political ideas and processes. The course will consist of a historical discussion of the origins and trajectory of geopolitics, from the beginning of the 20th century to contemporary uses. Key themes in political geography, including strategy and statecraft, decolonization and nationalism, global technologies, and environmental security will be discussed. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 3900-3909 (Excluding 3907) Special Topics in Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.311850)

will have topics to be studied announced by the Department.

PR: permission of the instructor and the Head of the Department

##### [GEOG 3990-3999 Special Topics in Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306741)

will have topics to be studied announced by the Department.

PR: permission of the instructor and the Head of the Department.

##### [GEOG 4010 Cultural Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306735)

is concepts and methods in the study of cultural geography.

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and at least one of GEOG [3610](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3620](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3800](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/). It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4015 Cultural Resource Management](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306750)

is a study of cultural resource management: the definition and recognition of cultural resources, the application of policy in managing cultural resources, and the identification and consideration of contemporary issues in cultural resource management.

EQ: Archaeology [4015](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Folklore [4015](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

OR: three hours of seminar per week

PR: it is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses

##### [GEOG 4030 Discard Studies](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306744)

covers the cultural, economic, and resource aspects of waste, pollution, and externalities. Topics include, but are not limited to: social justice, colonialism, toxicity, scale, spatialities and temporalities, economic development, and infrastructures as they relate to systems of waste. Both quantitative and qualitative methods are emphasized.

##### [GEOG 4040 Assessing Environmental Change](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306725)

provides a survey of common environmental monitoring and analysis techniques, and applies them to the study of a particular location. Students will gain practical experience with environmental sampling techniques and analytical methods targeted at identifying adverse impacts of human activity on the natural environment and nature on the built environment.

LH: 3

PR: GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and one of GEOG [3120](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3140](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or [3260](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4050 Engaging Arctic and Northern Geographies](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306728)

explores the geography of global Arctic and Northern Regions from an integrative geographical perspective. Students integrate and apply concepts, themes, and methodologies developed over the Geography program in a hands-on, northern-focused research project. By focusing on a specific "hot topic" theme, students will also have the opportunity to examine the interactions and interdependencies between the human and the physical dimensions of northern geography across a variety of scales.

CR: the former GEOG 3905

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), GEOG [2102](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), and at least 6 credit hours of Geography courses at the 3000 level or above

##### [GEOG 4060 Natural Hazards: People and Environments](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306760)

considers case studies involving select biological and medical; climatological; geophysical; hydrological; and meteorological hazards. There are no hazards without people. The emphasis is not only in how and where particular natural hazards develop, from a physical / exposure viewpoint, but also in the implications for risk management, emergency response, planning, and community sustainability. Aspects of social and community sensitivity and vulnerability will be emphasized.

CR: the former GEOG 4908

##### [GEOG 4107 Feminist GeoTechnologies](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306762)

investigates the effects of technology in feminist social movements and technologies that exemplify feminist values and ideologies, particularly as they pertain to the Earth. Topics could include: ecofeminism and technology; assessing, designing, and building technologies from a feminist perspective; the gender politics of social-technological systems; information technologies in science; feminist geography; biotechnology and ecology; development in architecture and design. The course combines seminar discussions of reading with hands-on activities.

EQ: Sociology [4107](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

PR: 9 credit hours in any combination of Sociology, Gender Studies, Geography, Communication Studies [2000](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Communication Studies [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4120 Applied Climatology](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306742)

is analysis of the impact of climatic environments and meteorological conditions upon agriculture, forestry, the hydro industry and the marine sector. Climatological considerations in the planning and design of urban areas and buildings.

LH: 3

PR: GEOG [3120](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4141 Glacial Environments](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306736)

- inactive course.

##### [GEOG 4150 Environmental Change and Quaternary Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306751)

covers methods of reconstructing Quaternary environments; effects of Quaternary environmental change on landforms, with special reference to North America; development and characteristics of glacial and non-glacial climates.

EQ: Archaeology [4150](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), Earth Sciences [4703](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

LH: 3

PR: 6 credit hours in physical geography courses at the 3000- level; or permission of Head of Department. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4170 Advanced Biogeography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306772)

examines the global patterns of species distributions and the processes that drive them. Laboratory work emphasizes the link between pattern and process at multiple spatial scales.

LH: 3

PR: GEOG [3140](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4190 Coastal Geomorphology](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306770)

is an advanced course in geomorphology of coastal regions in all climate zones. Covers reflective and dissipative beaches, barrier systems, coastal sand dunes, deltas, tidal flats, estuaries, reefs, bedrock and karst shorelines, ice-dominated shorelines, and influence of climate change and sea level change on coastal environments.

CR: the former GEOG 4180

LH: 3

PR: GEOG [3150](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or permission of instructor. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4202 Advanced Cartography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306727)

will provide students with advanced knowledge in computer-based cartography required to produce final geographic datasets and maps.

LH: 3. Laboratory exercises will utilize Geographic Information Systems software.

PR: GEOG [3202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or permission of instructor. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4220 Advanced Quantitative Methods](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306731)

- inactive course.

##### [GEOG 4250 Environmental Image Analysis](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306718)

is remote sensing techniques applied to various environmental problems. Techniques include selection of the system for data acquisition (airborne or satellite imagery), planning of a ground truth survey, and of data processing. Applications to high and low density urban areas, agricultural, forestry, coastal zone, oceanic, and environmental monitoring.

LH: 3

PR: GEOG 3250. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4261 Advanced Methods in Geographic Information Systems (GIS)](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306743)

explores the nature and use of advanced GIS algorithms, discrete and continuous data structures, computational methods and analysis of error for the purpose of analysing and modelling spatial patterns and processes. Laboratory exercises permit students to use GIS software to explore as well as develop problem solving and modelling skills for a wide variety of real world applications.

LH: 3

PR: GEOG [3260](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); Mathematics [2050](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); Computer Science [1001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); (or equivalent, with permission of instructor and the Head of Department). It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4290 Geographic Information Sciences Practicum](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306730)

is practical experience with the geographic information sciences fields of cartography, remote sensing or geographical information systems. Students will serve as interns in governmental, institutional or private agencies, or in non-profit organizations.

CO: GEOG [4202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4261](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), and be enrolled in the [Diploma in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/7/)

LH: six hours per week or a total of 72 hours of research or laboratory work

OR: six hours per week or a total of 72 hours of research or laboratory work

PR: GEOG [4202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4261](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), and be enrolled in the [Diploma in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/7/). It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4300 World Fisheries: Current Discourse and Future Directions](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306749)

is a seminar course on the key concepts, principles and challenges in fisheries resources worldwide. Topics of discussion include the state of world fisheries, analysis of various management approaches and tools, and future scenarios for world fisheries. All sections of this course follow International Studies guidelines available at [www.mun.ca/hss/IS](http://www.mun.ca/hss/IS).

PR: 6 credit hours in Geography at the 3000-level or permission of Head of Department. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4320 Regional Development Seminar](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306724)

is focused on understanding the region and regional development in theoretical terms and in a policy context. The central question of the course is: how do we understand the region and regional development in a globalizing world? What are the policy options for people interested in making regional development work in a global economy? The case studies will cover both the developing and the developed world.

PR: GEOG [2302](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or permission of Head of Department. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4405 Outdoor Recreational Resources and Planning](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306719)

is an introduction to the major themes and techniques in the study of outdoor recreation. A theoretical framework will provide a base for the evaluation of the complex issues involved in managing a physical resource for recreational purposes. North American examples will be emphasized.

CR: GEOG [4909](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

LH: 3

PR: GEOG [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or the former GEOG 3325. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4410 Research Seminar in Resources](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306732)

offers the opportunity to undertake advanced work in a number of resource sectors such as energy, fisheries, forests, lands, air and water. The emphasis will be on learning through experience. Students will be expected to initiate and complete suitable research projects in close consultation with faculty involved.

PR: GEOG [2425](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or the former GEOG 3325. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4500 Engaging the Environmental Humanities](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306766)

explores the role of the environmental humanities in a setting beyond the traditionally defined class-room. While the initial weeks focus on providing students with the tool-kit and theoretical framework for engaging the environmental humanities, the course is mainly driven by projects designed and executed by students in collaboration with community partners.

EQ: History [4500](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

PR: enrolment in the [Diploma in Environmental Humanities](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/6/) or permission of instructor

##### [GEOG 4600 Historical Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306746)

is a study of concepts and methods in historical geography. The field concerned with geographies of the past and their relation to the present. Themes will include the history of geography as a discipline, particularly its relevance to imperialism and state power; changing relationships between humans and the natural environment; and histories of the spaces of social life and human identity.

PR: GEOG [2001](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and at least one of GEOG [3610](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3620](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3800](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/). It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4640 Historical Geography of Canada](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306734)

- inactive course.

##### [GEOG 4651 Conservation Biology II: Conservation in Practice](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.320337)

teaches non-academic skills beneficial to anyone considering a career in conservation. Topics will be covered through a series of modules, including science communication, Geographic Information Systems, quantitative skills, interactions with government, ENGOs and museum, working with Indigenous partnerships, and the interface between science and society.

EQ: Biology [4651](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

PR: Biology [2900](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [3295](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and one of Biology [3650](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or GEOG [3650](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4700 Adaptive Cities and Communities](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306769)

will provide students with the opportunity to immerse themselves in the analysis of a small number of problems related to contemporary urban studies and community planning. Topics include but are not limited to: adaptable economies, socio-cultural change, northern cities, governance, climate change, and the built environment.

PR: GEOG [3701](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), or [3350](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4900-4918 Special Topics in Geography](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306753)

will have topics to be offered announced by the Department of Geography.

PR: permission of the instructor and the Head of the Department of Geography. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 490A Geography in Action I](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306761)

is the first half of a two semester linked course, built around geography-related issues that integrate natural and social science perspectives. Each year, students will address specific challenges faced by a client, NGO, or research group in the province. Through this process, students will reflect on the conceptual and practical challenges faced by practicing geographers.

CR: the former GEOG 4990

PR: GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/); GEOG [3228](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) or the former 3226

##### [GEOG 490B Geography in Action II](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306771)

is the second half of a two semester linked course, built around geography-related issues that integrate natural and social science perspectives. Each year, students will address specific challenges faced by a client, NGO, or research group in the province. Through this process, students will reflect on the conceptual and practical challenges faced by practicing geographers.

CR: the former GEOG 4990

PR: GEOG [490A](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/)

##### [GEOG 4919 Integrative Practicum in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306711)

is an applied or research project integrating aspects of cartography, geographical information systems and remote sensing. Students will have access to the GISciences Research Laboratory to complete their project. This is the capstone course for the students registered in the [Diploma in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/7/) program. It will involve the knowledge and experiences acquired over the years in the program.

CO: GEOG [4202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4261](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), and be enrolled in the [Diploma in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/7/)

LH: six hours per week or a total of 72 hours of individual research or laboratory work

OR: six hours per week or a total of 72 hours of individual research or laboratory work

PR: GEOG [4202](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4250](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), [4261](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/), and be enrolled in the [Diploma in Geographic Information Sciences](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/7/7/). It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.

##### [GEOG 4999 Dissertation Honours Degree](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/#d.en.306773)

is required of the Honours degree.

PR: Admission to the Honours program. It is strongly recommended that GEOG [3222](https://www.mun.ca/university-calendar/st-johns-campus/faculty-of-humanities-and-social-sciences/16/11/) and the former 3226 be successfully completed before registration in 4000-level courses.