

GEOGRAPHY – MINOR (SCIENCE)

GPHY-Z

Subject: Administered by the Department of Geography and Planning.

Plan: Consists of 48.00 units as described below.

Program: The Plan, in combination with a Major plan in another subject, and with sufficient electives, will lead to an Honours Bachelors Degree.

Requirements for this program have been modified. Please consult the [2021-2022 Calendar](#) for the previous requirements.

Code	Title	Units
1. Core		
A. Complete 6.00 units from the following:		6.00
GPHY 101	Human Geography or BADR 100 Thinking Locally	
and		
GPHY 102	Physical Geography and Natural Resources	
B. Complete the following:		
GPHY 207	Principles Of Biogeography	3.00
GPHY 208	Surface Processes, Landforms, and Soils	3.00
GPHY 209	Weather and Climate	3.00
C. Complete the following:		
GPHY 247	Introduction to Statistics	3.00
D. Complete 3.00 units from the following:		3.00
GPHY 242	Remote Sensing I: Remote Sensing of the Environment	
GPHY 243	Geographic Information Science	
2. Option		
A. Complete 9.00 units from the following course lists:		9.00
GPHY_Physical at the 300-level or above		
GPHY_Tech/Methods at the 300-level or above		
B. Complete 6.00 units from the following course list:		6.00
GPHY_Human at the 200-level or above		
3. Supporting		
A. Complete 6.00 units from the following:		6.00
CHEM at the 100-level or above		
MATH at the 100-level or above		
STAT at the 100-level or above		
PHYS at the 100-level or above		
4. Additional Requirements		

A. Minimum of an additional 6.00 units in the physical and/or natural sciences or mathematics, from ASC_Science.

Total Units **48.00**

5. Notes

A. A maximum of 6.00 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan requirements. This includes courses in BMED, COMM, GLPH, LAW, NURS and courses in the Faculty of Engineering and Applied Science.

Geography Course Lists

The following lists contain courses offered through other Departments. In accordance with Academic Regulation 2.5 (Access to Classes), students do not have enrolment priority in all of these courses. Access to these courses may only be made available during the Open Enrolment period, and then only if space permits.

ASC_Science

Code	Title	Units
Natural and Physical Science Courses		
ANAT		
ASTR		
BCHM		
BIOL		
BIOM		
BMED 384	Integrative Laboratory Course	3.00
BMED 470	Principles of 'Omics'	3.00
BMED 480	Clinical Applications of Human Anatomy	3.00
BMED 483	Advanced Topics In Infectious Diseases	3.00
CANC		
CHEE 209	Analysis Of Process Data	3.50
CHEM		
CISC		
COGS		
COMM 162	Managerial Statistics	3.00
COMP		
CRSS		
DDHT		
ECON 250	Introduction to Statistics	3.00
ENSC 201	Environmental Toxicology and Chemical Risks	3.00
ENSC 301	Environmental Assessment	3.00
ENSC 307	Marine Environmental Issues	3.00



ENSC 320	Wildlife Issues in a Changing World	3.00
ENSC 407	Global Water Issues	3.00
ENSC 425	Ecotoxicology	3.00
ENSC 471	Environmental Analysis Methods	3.00
ENSC 480	Special Topics in Environmental Science	3.00
EPID		
GEOL		
GLPH 472	Special Populations: Neonatal to End-of-Life-Care	3.00
GPHY_Physical Course List		
GPHY_Tech/Methods Course List		
HLTH 230	Basic Human Nutrition	3.00
HLTH 331	Advanced Human Nutrition	3.00
HSCI 270	Fundamentals of Health Research Methodology	3.00
KNPE 125	Introduction to Human Physiology	3.00
KNPE 153	Introductory Biomechanics	3.00
KNPE 225	Advanced Human Physiology	3.00
KNPE 227	Exercise Physiology	3.00
KNPE 251	Introduction to Statistics	3.00
KNPE 254	Biomechanical Analysis of Human Movement	3.00
KNPE 255	Physical Activity, Fitness and Health	3.00
KNPE 261	Theory of Motor Behaviour and Motor Learning	3.00
KNPE 327	Exercise Physiology Laboratory	3.00
KNPE 339	Advanced Exercise Metabolism	3.00
KNPE 354	Occupational Biomechanics and Physical Ergonomics	3.00
KNPE 355	Lifestyle and Cardiometabolic Assessment Laboratory	3.00
KNPE 425	Physiology of Stress	3.00
KNPE 427		3.00
KNPE 429	Skeletal Muscle Oxygen Delivery: Demand Matching in Exercise	3.00
KNPE 439	Critical Appraisal and Translation of Muscle Physiology Research	3.00
KNPE 450	Ergonomics	3.00
KNPE 454	Clinical Biomechanics	3.00
KNPE 455	Advanced Physical Activity and Health	3.00
KNPE 459	Clinical Exercise Physiology	3.00
KNPE 493	Special Topics in Kinesiology and Physical Education	3.00
LISC		
MATH		
MICR		

NSCI		
NURS 323	Introduction to Statistics	3.00
NURS 324	Nursing Research	3.00
PATH		
PHAR		
PHGY		
PHYS		
POLS 285	Introduction to Statistics	3.00
PSYC 100	Principles of Psychology	6.00
PSYC 101	Principles of Psychology I	3.00
PSYC 102	Principles of Psychology II	3.00
PSYC 103	Principles of Psychology III	3.00
PSYC 202	Statistics in Psychology	3.00
PSYC 203	Research Methods in Psychology	3.00
PSYC 221	Cognitive Psychology	3.00
PSYC 271	Brain and Behaviour I	3.00
PSYC 299	Introduction to Directed Research in Psychology	3.00
PSYC 301	Advanced Statistical Inference	3.00
PSYC 302	Advanced Research Methods	3.00
PSYC 450	Advanced Topics in Developmental Psychology	3.00
PSYC_Cognitive Course List		
PSYC_BehaviouralNeuroscience Course List		
REPD		
SOCY 210	Social Research Methods	3.00
SOCY 211	Introduction to Statistics	3.00
SOFT		
STAM		
STAT		

ASC_Science_Excluding_GPHY

Code	Title	Units
Natural and Physical Science Courses, no GPHY Courses		
ANAT		
ASTR		
BCHM		
BIOL		
BIOM		
BMED 384	Integrative Laboratory Course	3.00
BMED 470	Principles of 'Omics'	3.00
BMED 480	Clinical Applications of Human Anatomy	3.00
BMED 483	Advanced Topics In Infectious Diseases	3.00
CANC		
CHEE 209	Analysis Of Process Data	3.50

CHEM		
CISC		
COGS		
COMM 162	Managerial Statistics	3.00
COMP		
CRSS		
DDHT		
ECON 250	Introduction to Statistics	3.00
ENSC 201	Environmental Toxicology and Chemical Risks	3.00
ENSC 301	Environmental Assessment	3.00
ENSC 307	Marine Environmental Issues	3.00
ENSC 320	Wildlife Issues in a Changing World	3.00
ENSC 407	Global Water Issues	3.00
ENSC 425	Ecotoxicology	3.00
ENSC 471	Environmental Analysis Methods	3.00
ENSC 480	Special Topics in Environmental Science	3.00
EPID		
GEOL		
GLPH 472	Special Populations: Neonatal to End-of-Life-Care	3.00
HLTH 230	Basic Human Nutrition	3.00
HLTH 331	Advanced Human Nutrition	3.00
KNPE 125	Introduction to Human Physiology	3.00
KNPE 153	Introductory Biomechanics	3.00
KNPE 225	Advanced Human Physiology	3.00
KNPE 227	Exercise Physiology	3.00
KNPE 251	Introduction to Statistics	3.00
KNPE 254	Biomechanical Analysis of Human Movement	3.00
KNPE 255	Physical Activity, Fitness and Health	3.00
KNPE 261	Theory of Motor Behaviour and Motor Learning	3.00
KNPE 327	Exercise Physiology Laboratory	3.00
KNPE 339	Advanced Exercise Metabolism	3.00
KNPE 354	Occupational Biomechanics and Physical Ergonomics	3.00
KNPE 355	Lifestyle and Cardiometabolic Assessment Laboratory	3.00
KNPE 339	Advanced Exercise Metabolism	3.00
KNPE 425	Physiology of Stress	3.00
KNPE 427		3.00
KNPE 429	Skeletal Muscle Oxygen Delivery: Demand Matching in Exercise	3.00
KNPE 439	Critical Appraisal and Translation of Muscle Physiology Research	3.00

KNPE 450	Ergonomics	3.00
KNPE 454	Clinical Biomechanics	3.00
KNPE 455	Advanced Physical Activity and Health	3.00
KNPE 459	Clinical Exercise Physiology	3.00
KNPE 493	Special Topics in Kinesiology and Physical Education	3.00

LISC		
MATH		
MICR		
NSCI		
NURS 323	Introduction to Statistics	3.00
NURS 324	Nursing Research	3.00
PATH		
PHAR		
PHGY		
PHYS		
POLS 285	Introduction to Statistics	3.00
PSYC 100	Principles of Psychology	6.00
PSYC 101	Principles of Psychology I	3.00
PSYC 102	Principles of Psychology II	3.00
PSYC 103	Principles of Psychology III	3.00
PSYC 202	Statistics in Psychology	3.00
PSYC 203	Research Methods in Psychology	3.00
PSYC 221	Cognitive Psychology	3.00
PSYC 271	Brain and Behaviour I	3.00
PSYC 299	Introduction to Directed Research in Psychology	3.00
PSYC 301	Advanced Statistical Inference	3.00
PSYC 302	Advanced Research Methods	3.00
PSYC 450	Advanced Topics in Developmental Psychology	3.00

PSYC_Cognitive Course List

PSYC_BehaviouralNeuroscience Course List

REPD		
SOCY 210	Social Research Methods	3.00
SOCY 211	Introduction to Statistics	3.00
SOFT		
STAM		
STAT		

GPHY_Human

Code	Title	Units
Human Geography		
GPHY 101	Human Geography	3.00
GPHY 227	Cities: Geography, Planning and Urban Life	3.00



GPHY 228	Geographies of the Global Political Economy	3.00
GPHY 229	Place, Space, Culture and Social Life	3.00
GPHY 230	Introduction to Urban and Regional Planning	3.00
GPHY 250	The Geography of Canada	3.00
GPHY 254	The Caribbean in Globalizing World	3.00
GPHY 257	The Geography of Middle America	3.00
GPHY 258	The Geography of South America	3.00
GPHY 309	Field School in Geography	3.00
GPHY 319	Contemporary Energy Resources	3.00
GPHY 320	Energy and Society	3.00
GPHY 325	Maps and Society	3.00
GPHY 327	The Geographical Imagination	3.00
GPHY 330	Transportation Geography	3.00
GPHY 332	Cities and Planning for Sustainable Development	3.00
GPHY 333	Markets, Environments and Societies	3.00
GPHY 334	Geographies of Growth and Decline	3.00
GPHY 336	Geography, the Environment and Human Health	3.00
GPHY 337	Regional Development and Planning	3.00
GPHY 338	Urban Political Geography	3.00
GPHY 339	Medical Geography	3.00
GPHY 351	Geographies of Indigenous and Settler Relations	3.00
GPHY 352	Gender and the City	3.00
GPHY 362	Human Migration	3.00
GPHY 365	Geography, Development, and Environment in the 'Third World'	3.00
GPHY 368	Environments and Society	3.00
GPHY 369	Urban Natures	3.00
GPHY 370	Special Topics in Human Geography	3.00
GPHY 401	Honours Seminar in Human Geography I	3.00
GPHY 402	Honours Seminar in Human Geography II	3.00
GPHY 403	Honours Seminar in Human Geography IIB	3.00
GPHY 501	Special Studies in Geography	3.00
GPHY 502	Research and Thesis in Geography I	3.00
GPHY 503	Research and Thesis Geography II	6.00
IDIS 302	Race and Racism	3.00

GPHY_Physical

Code	Title	Units
Physical Geography		
GPHY 102	Physical Geography and Natural Resources	3.00
GPHY 203	Water Resources and Management	3.00

GPHY 204	Forests as a Global Resource	3.00
GPHY 207	Principles Of Biogeography	3.00
GPHY 208	Surface Processes, Landforms, and Soils	3.00
GPHY 209	Weather and Climate	3.00
GPHY 215	Field Studies in Physical Geography	3.00
GPHY 304	Northern and Arctic Environments	3.00
GPHY 305	Applied Cold Regions Science	3.00
GPHY 306	Natural Environmental Change	3.00
GPHY 309	Field School in Geography	3.00
GPHY 310	Landscape Ecology	3.00
GPHY 311	Biogeochemical Processes	3.00
GPHY 312	Watershed Hydrology	3.00
GPHY 313	Glacier Processes and Dynamics	3.00
GPHY 314	Climate Change	3.00
GPHY 315	Advanced Field Measurements and Their Analysis	3.00
GPHY 317	Soil, Environment, and Society	3.00
GPHY 318	Advanced Biogeography	3.00
GPHY 319	Contemporary Energy Resources	3.00
GPHY 320	Energy and Society	3.00
GPHY 371	Special Topics in Earth System Science	3.00
GPHY 413	Water, Energy and Carbon Cycling in the Biosphere	3.00
GPHY 415	Advanced Analysis of Earth Surface Processes	6.00
GPHY 417	Land-Use Change in the Earth System	3.00
GPHY 501	Special Studies in Geography	3.00
GPHY 502	Research and Thesis in Geography I	3.00
GPHY 503	Research and Thesis Geography II	6.00

GPHY_Tech/Methods

Code	Title	Units
Techniques, Research Methods and Geographic Information Science		
GPHY 105	The Digital Earth: Geospatial Data and Earth Observation	3.00
GPHY 240	Introduction to Qualitative Methods in Geography	3.00
GPHY 242	Remote Sensing I: Remote Sensing of the Environment	3.00
GPHY 243	Geographic Information Science	3.00
GPHY 247	Introduction to Statistics	3.00
GPHY 315	Advanced Field Measurements and Their Analysis	3.00
GPHY 341	Photogrammetry	3.00
GPHY 342	Remote Sensing II: Digital Image Processing	3.00

GPHY 343	Applications for Geospatial Technology fo	3.00
	Business	
GPHY 344	Cartography and Computer Aided Design	3.00
GPHY 345	Spatial Analysis	3.00
GPHY 346	GIS and Modelling for Environmental Applications	3.00
GPHY 347	Multivariate and Spatial Statistics	3.00
GPHY 348	Application Design and Customization in GIS	3.00
GPHY 349	GIScience and Public Health	3.00
GPHY 372	Special Topics Geographic Information Science	3.00
GPHY 501	Special Studies in Geography	3.00
GPHY 502	Research and Thesis in Geography I	3.00
GPHY 503	Research and Thesis Geography II	6.00