

GIS PROGRAMS AVAILABLE AT SFU

**GIS
MAJOR**

**PGEO
MAJOR**

**GIS
CERTIFICATE
+ MINOR**

**GIS
CO-OP**

**GIS
COURSES**

SFU

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ENVIRONMENT**

**DEPARTMENT OF
GEOGRAPHY**

GIS MAJOR

The GIS major gives you a full spectrum GIS foundation while allowing you to explore GIS uses in areas of your personal interest.

This mix of core concepts, critical thinking and advanced technical skills this will equip you to work in a variety of GIS-related positions, addressing both social and environmental challenges.

Our focus on hands-on learning enables you to fully explore how to use GIS.

A key component of the GIS Major is **"choosing your own adventure."**

This program provides in-depth GIS knowledge and skills while giving you the flexibility to branch out into related fields to prepare you for a wide variety of career options in a data-driven world.

Program is available **SPRING 2025**

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PHYSICAL GEOGRAPHY MAJOR IN GEOSYSTEMS AND GISCIENCE

The Geosystems and GIScience stream in the Physical Geography major focuses on the linkages between earth systems science and spatial information science.

It targets the requirements necessary to apply the theory and techniques of GIScience in the environmental and natural resources sectors.

It also covers the requirements for the Certificate in Geographic Information Science and you can benefit from overlapping requirements between your major and the GIS certificate program.

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GIS CERTIFICATE

With a GIS Certificate , you will learn to create and interpret data in the form of maps, figures and models. GIScience combines computer cartography, remote sensing, spatial data analysis, spatial theory and geovisualization.

Courses in the certificate can be used towards major requirements.

Students complete the following courses including all of

[GEOG 251 - Quantitative Geography \(3\)](#)

[GEOG 253 - Introduction to Remote Sensing \(3\)](#)

[GEOG 255 - Geographical Information Science I \(3\)](#)

and three of the following

[GEOG 351 - Multimedia Cartography \(4\)](#)

[GEOG 352 - Spatial Analysis \(4\)](#)

[GEOG 353 - Advanced Remote Sensing \(4\)](#)

[GEOG 355 - Geographical Information Science II \(4\)](#)

[GEOG 356 - 3D GIScience \(4\)](#)

[GEOG 451 - Spatial Modeling \(4\)](#)

[GEOG 453 - Theoretical and Applied Remote Sensing \(4\)](#)

[GEOG 455 - Theoretical and Applied GIS \(4\)](#) or [GEOG 455W - Theoretical and Applied GIS \(4\)](#)

[GEOG 457 - Geovisualization Interfaces \(4\)](#)

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GIS MINOR

With a GIS Minor , you will learn to create and interpret data in the form of maps, figures and models. GIScience combines computer cartography, remote sensing, spatial data analysis, spatial theory and geovisualization.

Courses in the minor are separate from major requirements and cannot overlap.

Students must complete one of

[GEOG 100 - Our World: Introducing Human Geography \(3\)](#)

[GEOG 111 - Earth Systems \(3\)](#)

Students complete a total of six units from the following

[GEOG 251 - Quantitative Geography \(3\)](#)

[GEOG 253 - Introduction to Remote Sensing \(3\)](#)

[GEOG 255 - Geographical Information Science I \(3\)](#)

Students complete a minimum of 16 units from the list below.

[GEOG 351 - Multimedia Cartography \(4\)](#)

[GEOG 352 - Spatial Analysis \(4\)](#)

[GEOG 353 - Advanced Remote Sensing \(4\)](#)

[GEOG 355 - Geographical Information Science II \(4\)](#)

[GEOG 356 - 3D GIScience \(4\)](#)

[GEOG 451 - Spatial Modeling \(4\)](#)

[GEOG 453 - Theoretical and Applied Remote Sensing \(4\)](#)

[GEOG 455W - Theoretical and Applied GIS \(4\)](#)

[GEOG 457 - Geovisualization Interfaces \(4\)](#)

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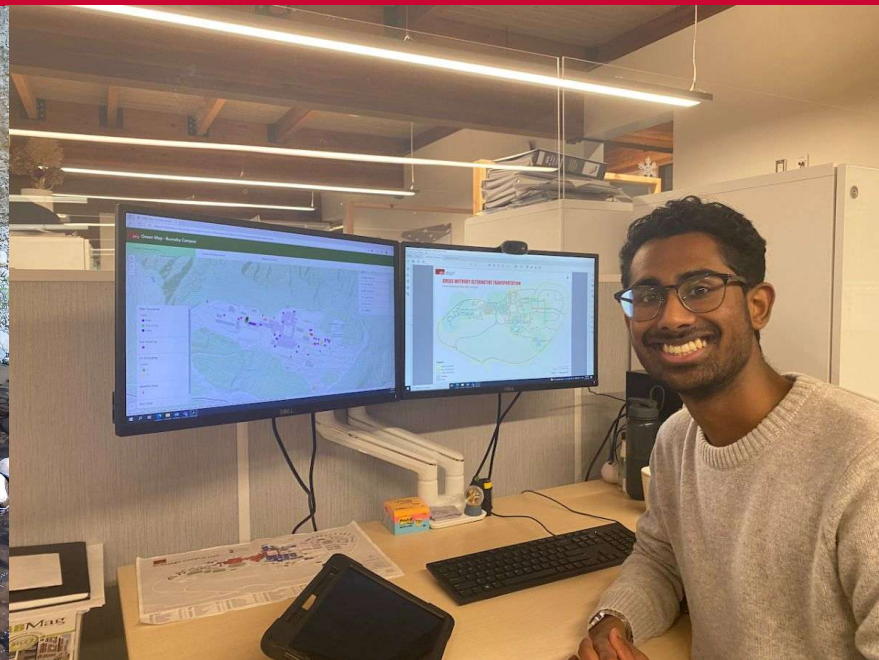
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GIS CO-OP OPPORTUNITIES

careers

Cadastral management
Cartographer
Emergency Management
Specialist
Environmental Consultant
Geospatial Data Scientist
Geospatial Software Developer
GIS Analyst
GIS Project Manager

GIS Technician
Hydrologist
Market Research Analyst
Natural Resource Manager
Public Health Analyst
Remote Sensing Specialist
Surveyor
Transportation Planner
Urban Planner

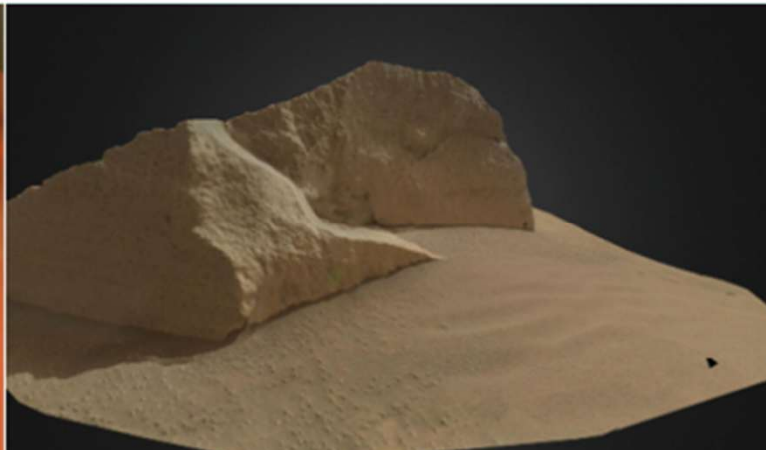


GIS COURSES

GEOG 356 3D GIScience
GEOG 353 Advanced Remote Sensing
GEOG 451 Spatial Modeling
GEOG 453 Theoretical and Applied Remote Sensing
GEOG 455W Theoretical and Applied GIS
GEOG 457 Geovisualization Interfaces

Spatial interface research
Remote Sensing
3D Surveying and Data Collection
Spatial computing
Spatial modelling
Experiential information systems
Computer Cartography

Scientific data visualization interface infrastructure



CONTACT

GEOGRAPHY ADVISORS

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