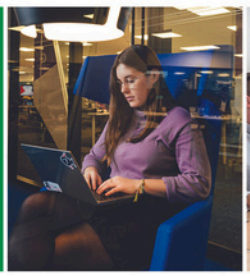
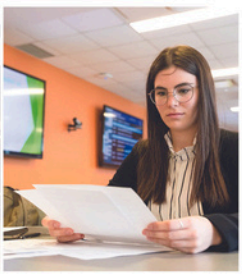
Co-op Program

GRADUATE DIPLOMA IN

APPLIED GEOMATICS





This graduate program gives students a solid foundation to be able to work in remote sensing and geographic information systems at a local, national and international level. Students will choose courses based on their own interests to develop the expertise to work in their desired field. They will choose their specialization and have the opportunity to gain a sense of leadership and intellectual independence that gives them better decision-making capabilities and a greater understanding of a manager's responsibilities.

Students will apply geomatic techniques to geospatial decision making and resource management. They will develop research and problem-solving skills, as well as the ability to develop intervention scenarios, all while considering all physical and social impacts.

To enroll in this program, students must have a bachelor's degree in geomatics or in a relevant field (science, engineering, social sciences, humanities, etc.), or equivalent training.

WHAT OUR STUDENTS CAN DO FOR YOU

Science and technology

- Digital mapping
- Design of geospatial database management systems
- Earth observation (environment, climate change, agriculture, urban environments)
- Geographic information systems (GIS) and spatial modelling
- Optical, thermal and radar remote sensing
- Remote sensing image processing
- Emerging technologies (artificial intelligence, virtual reality, augmented reality)

Management

- Business development and management
- GIS implementation in organizations
- International development
- Writing scientific proposals, reports and papers

Environment

- Environmental problem solving and analysis
- Health risk analysis (epidemiology)
- Establishing emergency interventions (emergency preparedness)
- Environmental impact assessments and prevention analyses
- Changing dynamics of natural environments
- Watershed management and monitoring
- Natural resource management
- Analysis of human impact on the environment
- Environmental assessment of case studies

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ACCREDITED PROGRAM
PROGRAMME AGRÉÉ

USherbrooke.ca/ssdp/en

UDS Université de Sherbrooke

KNOWLEDGE AND SKILLS

Term	Description
S-1	**Introduction to geomatics** Basic principles of satellite positioning; digital mapping theory; creation and dissemination of digital maps; the systems approach and GIS; modelling; spatio-temporal analysis concepts; image analysis, remote sensing and processing.
S-2	Design and implementation of geospatial databases; description and application of project management methods; development of a geomatics project proposal; national and international cooperation in geomatics; application and integration of geomatic principles and methods for management and decision making in urban environments and geohazard prevention; implementation of advanced remote sensing applications in relation to relevant topics, especially the environment, climate change, agriculture and urban environments; application and integration of geomatic principles; design and implementation of GIS and other online geomatic applications; integration of techniques and methods used in image interpretation for components, dynamics and changes in natural and human environments.
S-3	Application and integration of geomatics principles and methods for management and decision making (integrated water management, health and safety management, natural resource management); development of concepts for socio-economic and climate change, sustainable development and adaptation strategies; analysis and conceptualization of a geomatics problem; development of technology solutions to geomatics problems; integration of emerging technologies to solve problems (artificial intelligence, big data, augmented reality, virtual reality, smart objects).

ORGANIZATION OF STUDY (S) AND WORK TERM (W)

	1st year			2nd year	
	FALL	WIN	SUM	FALL	WIN
A	S-1	S-2	W-1	S-3	-
B		S-1	S-2	S-3	W-1