

# What can I do with a Major in **Remote Sensing**?



### For more information on the Remote Sensing Major at the U of L:

<http://www.uleth.ca/artsci/remote-sensing>

### Faculty of Arts & Science

AWESB Alberta Water & Env. Science Building

Phone: 403-332-4040

Email: See [Contact Website](#)

Academic Advising:

<http://www.uleth.ca/ross/academic-advising>

### The Remote Sensing Program at the University of Lethbridge

Remote sensing involves gathering information about objects without being in direct contact with the object. The information gathered comes from a wide variety of sensor types such as Earth observation satellites, airborne imagers, hyperspectral ground-based spectroradiometers and distributed sensor networks. This rapidly growing, technologically-driven science allows scientists to make detailed observations, measurements, and models of the world we live in and impacts on the environment.

The Departments of Geography and Physics & Astronomy offer a major in Remote Sensing for the Bachelor of Science degree program. Remote Sensing students will study Geography, Environmental Science and Physics, as well as other topics focused on field studies. Students will learn to record and interpret images using highly specialized instruments, some of which are unique to the Remote Sensing program at the U of L.

### Skills Developed

- Communication
- Critical & Analytical Problem Solving
- Research & Information Management
- Fieldwork & Risk Assessment Techniques
- In-depth Knowledge of Environmental & Social Issues
- Ability to Summarize Research Findings
- Knowledge of Geography & Mapping
- Patient & Methodical Approach to Work
- Statistical Analysis
- Knowledge of Geographic Information Systems (GIS)
- Mathematics
- Technical Proficiency
- Innovative
- Work Independently
- Teamwork

### Work Environments

Employment in Remote Sensing has an exceptionally bright outlook. As a graduate in this emerging field, your skills will be in demand across a wide range of sectors - from corporate energy giants to specialized government departments. Graduates may find employment with geospatial technology companies, survey firms, mapping companies, aerospace engineering firms, positioning and navigation businesses, building or defense contractors, petroleum and energy producers, mining corporations, remote sensing companies, space agencies, geographical information companies, computer graphics businesses, public utilities or government departments.

### Key Areas of Specialization:

Radiometric/Atmospheric Correction, Phenomenology and Algorithms, Measurements & Experiments, Automated Production Chains, Calibration/Validation, Data Preprocessing, Spectral Target Characterization, Information Extraction

## Entry Level Job Titles

These jobs are normally intended for new graduates and require 0 to 2 years of experience. It is important to note that many entry level positions require *some* related experience or demonstrated ability to perform job-related tasks. Even those positions that do not *require* experience will still prefer an experienced candidate, if one is available.

- Cartographic Aide
- Controls Technician
- Data Analyst/Technician
- Document Control Specialist
- Entry Level Remote Sensing Scientist
- Environmental Technician
- Field Service Technician
- GIS Technician
- Junior Electronics Technician
- Land Surveyor/Articling Student
- Materials Property Specialist
- Research Technician
- Seasonal Remote Sensing Office Technician

**Note:** The U of L offers various resources and programs to facilitate students in gaining work and volunteer experience. Find an entry level position on the [CES job board](#) or join the [Management](#) or [Arts & Science](#) Cooperative Education Programs. Summer jobs, part-time work, internship positions and volunteer experience help students to enhance their skillset and accumulate work experience for their future career.

## Related Job Titles

These jobs generally require extensive, relevant work experience and/or further education.

- Application Developer
- Cartographic Technologist
- Coastal Erosion Analyst
- Coastal Scientist
- Construction Materials Technician
- Environmental Consultant
- Forest Systems Analyst
- Geo-Spatial Data Services Manager
- Geodetic Surveyor
- Geographer
- Geomatics Engineer
- Geomatics/Mapping Technologist
- GIS Officer (Remote Sensing Specialist)
- Information Security Officer
- Inventory Analyst
- Lab Engineering Technician
- Land Surveyor
- Marine Earth Observation Scientist
- Photogrammetric & Remote Sensing Specialist
- Photogrammetric Specialist
- Production Manager
- Project Assistant/Coordinator
- Remote Sensing Technologist
- Research Technician
- Sales Director – Geospatial Equipment
- Sales Representative – Surveying Services
- Survey CAD Technician
- Surveying Assistant/Consultant
- Technical Drafter
- Technical Writer
- University Professor

## Thinking Outside the Box: Other Possible Job Titles

On average, people change their careers three to five times in their lifetime. So, no matter what major you choose, you may still be interested in opportunities totally unrelated to your program of study. We encourage you to be open to all possibilities! Your undergraduate degree can be a springboard for other educational pursuits, and your transferable skills and experience can prepare you to work in a multitude of settings.

- Application Engineer
- Biologist
- Cartographer
- Civil Engineer
- Control System Specialist
- Drafter
- Environmental Engineer
- Freelance Specialist Editor
- Geologist
- GIS Developer
- GIS Technician/Specialist
- Human Resources Advisor
- Hydrographer
- Maintenance Technician
- Oil & Gas Sales Executive
- Project Manager
- Quality Assurance Engineer
- Records Administrator

## Useful Resources

Recommended websites to assist in exploring the field of Remote Sensing and its career opportunities.

University of Lethbridge Remote Sensing Group  
<http://people.uleth.ca/~remotesensing/>

Canadian Association of Geographers  
<http://www.cag-acg.ca/en/index.html>

Alberta Terrestrial Imaging Centre  
<http://www.imagingcenter.ca>

Canadian Cartographic Association  
<http://cca-acc.org>

Alberta Geomatics Group  
<http://www.albertageomaticsgroup.ca>

Alberta Land Surveyors' Association  
<http://www.alsa.ab.ca>

Canada Centre for Remote Sensing  
<http://www.nrcan.gc.ca/forests/remote-sensing/13429>

Ontario Association of Remote Sensing  
<http://www.oars.on.ca>

Canadian Remote Sensing Society  
<http://www.crss-sct.ca>

Eco Canada – Environmental Careers Organization, Job Profile  
<http://www.eco.ca/occupationalprofiles/profiles/remote-sensing-technologist/210/>

Canadian Journal of Remote Sensing  
<http://pubs.casi.ca/journal/cjrs>

European Association of Remote Sensing Companies  
<http://ears.org/members>

Alberta Learning Information Service Occupational Profiles  
[Mapping Technologist](#), [Geomatics Engineer](#)

Geological Remote Sensing Group  
<https://www.grsg.org.uk>

Canadian GIS & Geomatics – Geographic Information & Resources  
<http://canadiangis.com/professional-geomatics-associations-groups-in-canada.php>

International Society for Photogrammetry & Remote Sensing  
<http://www.isprs.org/>

Canadian Institute of Geomatics  
<http://www.cig-acsg.ca>

## Campus Resources

Career & Employment Services (CES)  
<http://www.uleth.ca/ross/ces/>

Career Counselling (Counselling Services)  
<http://www.uleth.ca/counselling/>

Academic Advising  
<http://www.uleth.ca/ross/academic-advising>

Native Student Advising  
<http://www.uleth.ca/ross/native-student-advising>

Student Success Centre – Study Skills, Learning  
Strategies & Tutoring  
<http://www.uleth.ca/student-success-centre/>

Accommodated Learning Centre  
<http://www.uleth.ca/ross/accommodated-learning-centre/>

International Centre for Students  
<http://www.uleth.ca/international/>

Registrar Office & Student Services  
<http://www.uleth.ca/ross/>

Scholarship & Students Finance  
<http://www.uleth.ca/ross/student-finance/>

U of L Students' Union & Student Clubs  
<http://www.ulsu.ca/>

## Campus Job Resources

Career & Employment Services Job Board  
[CES Job board](#)

Arts & Science Applied Studies  
<http://www.uleth.ca/artsci/applied-studies/students>

Arts & Science Co-op Education & Internship  
<http://www.uleth.ca/artsci/coop>

Management Co-op Education  
<http://www.uleth.ca/management/co-op>

Study Abroad & Exchanges  
<http://www.uleth.ca/international/content/study-abroad-exchanges>

Management Study Abroad & Exchanges  
<http://www.uleth.ca/management/study-abroad>

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### Career & Employment Services (CES)

CES assists U of L students and graduates with their career exploration and work search needs.

AH154 Anderson Hall, Phone: 403-329-2000

Mon- Fri: 9:00 a.m. to 12:00 p.m.

1:00 p.m. to 4:00 p.m.