Course Title:	**From Remote Sensing Data to Geospatial Solutions**
Course Code:	**GESC801**
Descriptor Start Date:	**01/01/2025**
Descriptor End Date:	**31/12/2025**
POINTS:	**30.00**
LEVEL:	**8**
PREREQUISITE/S:	
COREQUISITE/S:	
RESTRICTION/S:	

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 300

PRESCRIPTOR

Advances knowledge and skills required to process and analyse remotely sensed imagery from data collection to end-user solutions. Explores extracting geospatial information from UAV (drone), aerial, and satellite imagery to solve real-world environmental problems.

LEARNING OUTCOMES

1. Integrate fundamental remote sensing concepts relevant to solving environmental problems.
2. Critically assess approaches to processing and analysing remotely sensed data of different types.
3. Critically discuss the utility of end-to-end UAV (drone) survey and processing pipeline .
4. Contrast the application of diverse applications methods of remotely-sensed data analysis in to addressing environmental problems.

CONTENT

- Remote sensing concepts and applications
- Aerial and satellite sensors and platforms
- LiDAR and point-cloud data visualization and analysis
- Image processing, analysis, and information extraction concepts and methods
- Desktop and cloud-based solutions for image analysis
- Applications of image analysis methodologies for environmental problem solving

LEARNING & TEACHING STRATEGIES

The course delivery will include lectures, student-led seminars, discussions, and online tools, supplemented by self-directed study. Refer to your timetable and Canvas for detailed information.

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Written Assessment	30.00	LO1, LO2, LO3, LO4
Portfolio	50.00	LO1, LO2, LO3, LO4
Verbal Presentation	20.00	LO1, LO2, LO4

Grade Map **MAP1**

A+ A A- Pass with Distinction
B+ B B- Pass with Merit
C+ C C- Pass
D Fail

Overall requirement/s to pass the course:

Achievement of a minimum overall grade of C- is required to pass this course.

LEARNING RESOURCES

Additional readings and resources are provided in class and on Canvas.

For further information, contact: Te Ara Hauora A Putaiao - Faculty of Health & Environmental Science

Principal Programme: **AK2037, Master of Science**

Related Programme/s: **AK1037**
AK1038
AK1039

Disclaimer: Course descriptors may be amended between teaching periods/semesters