Course Title:	**Geo-spatial analysis**
Course Code:	**ENVS721**
Descriptor Start Date:	**13/07/2020**
POINTS:	**15.00**
LEVEL:	**7**
PREREQUISITE/S:	**ENVS621**
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: 150

PRESCRIPTOR

The use of advanced geo-spatial analysis tools for environmental management, decision support and geo-spatial planning.

LEARNING OUTCOMES

1. Demonstrate an understanding of spatial analysis and statistics in GIS.
2. Apply advanced spatial analysis techniques to a range of data sets and projects.
3. Critically evaluate GIS applications in geospatial planning in New Zealand and internationally.
4. Present work at the appropriate academic standard.

CONTENT

- Working with categorical data and displaying large spatial datasets
- Spatial Density analysis and visualisation techniques
- Mapping change patterns and geographic distances
- Spatial clustering, hot spot analysis and autocorrelation
- Explorative data analysis, measures for spatial continuity, spatial interpolation
- Introduction to open source GIS for geospatial planning
- GIS in science and technology, and regional management

LEARNING & TEACHING STRATEGIES

This course will be offered as a combination of lectures, structured practical work, student independent study, student independent work in the computer lab, weekly worksheets for formative assessment and tutorials.

ASSESSMENT PLAN

Assessment Event	Learning Outcomes
Lab exercises	LO1, LO2, LO3, LO5
Project Proposal	LO1, LO2, LO4
Practical Final Report	LO1, LO2, LO3, LO4
Project presentations	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:

Students must achieve all learning outcomes in order to pass this course.

LEARNING RESOURCES

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

Principal Programme:	**HA1041, Bachelor of Science**
Related Programme/s:	**AK1041 Bachelor of Science**