

## Environmental Geomatics

### Program Learning Outcomes

Learning outcomes represent culminating demonstrations of learning and achievement. In addition, learning outcomes are interrelated and cannot be viewed in isolation of one another. As such, they should be viewed as a comprehensive whole. They describe performances that demonstrate that significant integrated learning by graduates of the program has been achieved.

The graduate has reliably demonstrated the ability to

1. Input, store, manipulate and retrieve geomatics data using the general concepts of spatial information and current methodologies.
2. Explain the data structures, algorithms, and computational problems that are encountered when analyzing the output of various environmental geomatics technologies.
3. Contrast a variety of sources of environmental spatial data, such as surveying and remote sensing, that feed into a geomatics system, and the methods by which these data are realized in a geomatics system.
4. Evaluate the application of geomatics technologies to determine the advantages, changes in method, efficiencies, and enhancements that may result from the adoption of these technologies.
5. Design and execute, in a progressive manner, algorithms and programs to handle spatial data and associated hardware devices in geomatics.
6. Effectively communicate data extracted from geomatics systems to a variety of stakeholders to facilitate their understanding of the environmental issues.
7. Formulate and propose a plan for the design, implementation, and operation of proposed geomatics systems for a typical industrial client group, and executing this plan as a demonstration project.