

# SURVEYING, ASSOCIATE IN APPLIED SCIENCE DEGREE

NMC Code 577

The Surveying program focuses on the technical aspects of surveying, ensuring students in the program are trained to meet varying roles surveyors play in the workforce. In today's ever changing world of technology, autonomous vehicles, construction and development there has never been more demand for surveyors. All boundaries defining ownership, road construction, housing, schools, and commercial structures, cell phone towers, fiber optic line, gas pipe line, solar panel farms, oil – gas exploration, dams, rails, bridges, mining requires the assistance of a properly trained land surveyor.



The tools that a modern-day surveyor use are technically very advanced and vary depending on the accuracy and precision required for a specific task. Leica Geosystems has partnered with NMC to provide a comprehensive set of equipment, ensuring every student in the program has ready access to the most recent tools and technology.

## Requirements

### Major Requirements

| Course                                     | Title                                               | Credits |
|--------------------------------------------|-----------------------------------------------------|---------|
| <b>General Education Requirements</b>      |                                                     |         |
| ENG 111                                    | English Composition                                 | 4       |
| ENG 220                                    | Technical Writing                                   | 3       |
| MTH 122                                    | Trigonometry                                        | 3       |
| GEO 115                                    | Introduction to GIS                                 | 3       |
| PHL 105<br>or PHL 203                      | Critical Thinking<br>or Environmental Ethics        | 3       |
| PHY 105<br>or PHY 121                      | Physics of the World Around Us<br>General Physics I | 4       |
| <b>Occupational Specialty Requirements</b> |                                                     |         |
| MTH 131                                    | Intro to Prob & Stats                               | 3       |
| UAS 121                                    | UAS Applications in Surveying (Spring only)         | 3       |
| SVR 111                                    | Intro to Field Surveying                            | 2       |
| SVR 112                                    | Intro to Surveying Data Use                         | 3       |
| SVR 120                                    | CAD for Surveying                                   | 4       |

|                      |                            |              |
|----------------------|----------------------------|--------------|
| SVR 150              | Construction Survey App    | 5            |
| SVR 160              | Surveying Calculations     | 3            |
| SVR 210              | Surveying Positioning      | 5            |
| SVR 220              | Boundary Surveying         | 3            |
| WSI 200              | GL Research Technologies   | 3            |
| WSI 300              | Remote Sensing and Sensors | 3            |
| Approved Elective    |                            | 3-4          |
| <b>Total Credits</b> |                            | <b>60-61</b> |

**Note:** This program requires a minimum of 60 credits. Courses tested out or waived must be replaced with approved program electives.

### Program Requirements 60

## Course Sequence Guide

| Course                | Title                                                  | Credits      |
|-----------------------|--------------------------------------------------------|--------------|
| <b>Year 1</b>         |                                                        |              |
| <b>Fall</b>           |                                                        |              |
| SVR 111               | Intro to Field Surveying (Fall only)                   | 2            |
| SVR 112               | Intro to Surveying Data Use (Fall only)                | 3            |
| SVR 120               | CAD for Surveying (Fall only)                          | 4            |
| Approved Elective     |                                                        | 3-4          |
| <b>Credits</b>        |                                                        | <b>12-13</b> |
| <b>Spring</b>         |                                                        |              |
| ENG 111               | English Composition                                    | 4            |
| MTH 122               | Trigonometry                                           | 3            |
| SVR 150               | Construction Survey App (Spring only)                  | 5            |
| SVR 160               | Surveying Calculations (Spring only)                   | 3            |
| <b>Credits</b>        |                                                        | <b>15</b>    |
| <b>Summer</b>         |                                                        |              |
| WSI 200               | GL Research Technologies (Summer only)                 | 3            |
| GEO 115               | Introduction to GIS                                    | 3            |
| <b>Credits</b>        |                                                        | <b>6</b>     |
| <b>Year 2</b>         |                                                        |              |
| <b>Fall</b>           |                                                        |              |
| ENG 220               | Technical Writing                                      | 3            |
| MTH 131               | Intro to Prob & Stats                                  | 3            |
| SVR 220               | Boundary Surveying (Fall only)                         | 3            |
| WSI 300               | Remote Sensing and Sensors (Fall only)                 | 3            |
| PHL 105<br>or PHL 203 | Critical Thinking<br>or Environmental Ethics           | 3            |
| <b>Credits</b>        |                                                        | <b>15</b>    |
| <b>Spring</b>         |                                                        |              |
| SVR 210               | Surveying Positioning (Spring only)                    | 5            |
| UAS 121               | UAS Applications in Surveying (Spring only)            | 3            |
| PHY 105<br>or PHY 121 | Physics of the World Around Us<br>or General Physics I | 4            |
| <b>Credits</b>        |                                                        | <b>12</b>    |
| <b>Total Credits</b>  |                                                        | <b>60-61</b> |

The responsibility for determining the transferability of this degree and courses to another institution is the sole responsibility of the student.