

SVR 210 - SURVEYING POSITIONING

Course Description

Students will explore and apply the theories and tools used to determine three-dimensional positioning on the surface of the earth. Topics include ellipsoid properties, reference datums, global coordinate systems, developable surfaces and map projections. Extensive use of hardware and software employing Global Navigation Survey Systems (GNSS) in both field and office environments are made. Group 2 course

Credit Hours

5

Contact Hours

8

Lecture Hours

2

Lab Hours

6

Required Prerequisites

MTH 122, SVR 110, SVR 160

General Education Outcomes supported by this course

Quantitative Reasoning

Course Learning Outcomes

Knowledge:

- Identify observational techniques, ellipsoid properties, reference datums, global coordinate systems, developable surfaces and map projections.

Application:

- Employ GNSS hardware and software to determine precise timing and three-dimensional, positioning anywhere on earth with high reliability.

Integration:

- Integrate GNSS hardware, GNSS software, and CAD routines.
- Formulate sound decisions, judgments and predictions using planning principles, various observational techniques, mathematical algorithms, quality assurance and quality control.

Human Dimension:

- Develop interpersonal and group communication skills. .

Caring - Civic Learning:

- Identify connections between an individual's decision-making and local, national and global issues.

Learning How to Learn:

- Examine the links between accurate positioning information provided by Global Navigation Survey Systems and Surveying, Geographic Information System, Remote Sensing, Marine and Space applications.