

SURVEYING (SUR)

SUR 161: Surveying I (4)

Course includes the fundamental concepts of plane surveying including the theory of measurements; systematic and random errors; distance and angle measurement using total stations and differential leveling. Course also includes calculation of bearings, azimuths, coordinates, area, and traverse adjustments with an introduction to horizontal and vertical curve computations.

Registration-Enforced Corequisite: MTH 112Z, with grade of C or better or instructor approval.

Terms Typically Offered: Spring

SUR 162: Plane Surveying II (4)

Digital theodolites and data collectors, instrument testing and observational error analysis. Theory of leveling. Solar observation and computation. E.D.M. use and calibration. Field labs including solar observations, traversing, leveling, and horizontal curve layout. Introduction to COGO software.

Registration-Enforced Prerequisite: SUR 161, and MTH 112Z with grade of C or better.

Terms Typically Offered: Fall

SUR 163: Route Surveying (4)

Laboratory intensive project overview including horizontal and vertical control for preliminary location and construction surveys for a secondary road. Instruction in basic elements of horizontal and vertical route alignment and layout. Determination of earth work quantities. CAD drafting of plan, profile and cross-sections.

Registration-Enforced Prerequisite: SUR 162 with a grade of C or better.

Terms Typically Offered: Winter

SUR 242: Land Descriptions-Cadastre (3)

Real property descriptions and land record systems. Emphasis on interpreting and writing land descriptions, research in land records and multi-purpose cadastre.

Registration-Enforced Prerequisite: SUR 161 with a grade of C or better.

Terms Typically Offered: Spring