

and locating exact positioning of buildings, highways and water systems, both in the design and construction phases.

The technology goes even further as data collected in the field can be transmitted via modem or by direct connection from electronic data collectors into AutoCad or other 3D drafting programs.

Other technological advancements couple the use of global positioning and surveying data with access to Geographic Information System (GIS) spatial data files.

Surveyors are called upon to gather and process on-site locations of real property improvements. This electronic information provides the foundation for the GIS data files linking any variety of data in a graphical environment.

Salt Lake Community College has worked with the surveying and engineering communities to develop a Surveying training program for you. Surveyors are in high demand, and most students of the SLCC Surveying program are quickly assimilated into paying jobs while attending the surveying evening program classes.



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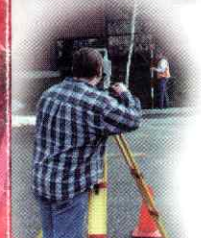
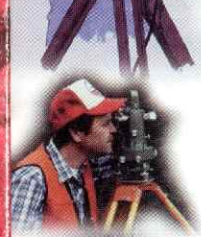
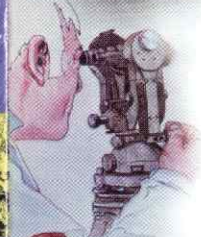
SURVEYING

Division of Technical Specialties
4600 South Redwood Road
Salt Lake City UT 84130
801.957.4550
<http://www.slcc.edu/tech/divts/survey.htm>



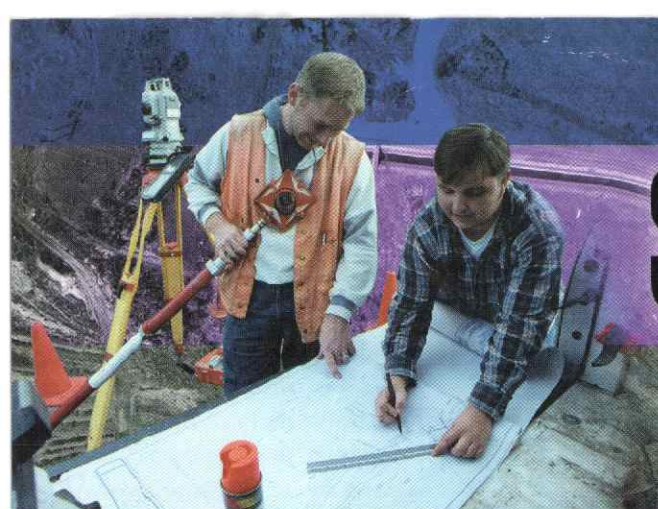
SURVEYING

AAS Degree Program



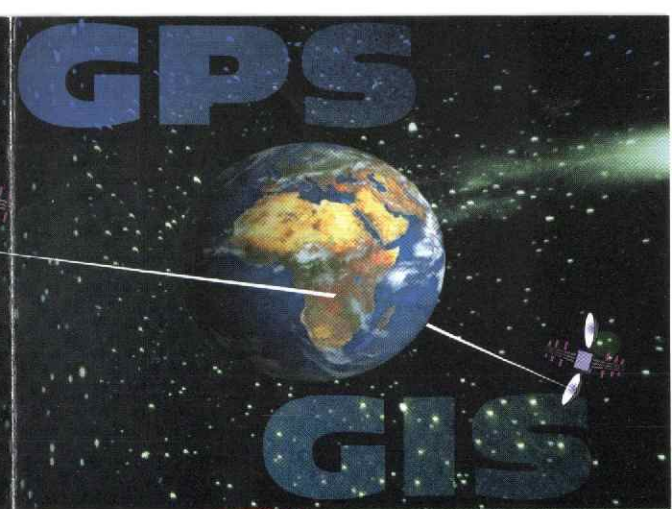
Surveying is a timeless career. Evidence of its beginnings date back to early cartographers, scientists and explorers who used crude tools and methods to chart and map their surroundings. Driven by man's desire to own real property and the need for description of its bounds and locations, surveying is a career that is a critical component of modern society.

Though the tools of the ancient surveyor were crude, today's tools and methods have put surveying into the world of "high-tech careers." Transits, levels and location devices of yesteryear have been replaced by distance-measuring electronic "total stations" and data collectors capable of storing data and performing necessary calculations. Coupled with satellites and sophisticated global positioning systems (GPS) with sub-centimeter accuracy, "static" or "real-time kinematic" (RTK) methods can be used to locate precise positions anywhere on the globe. This technology can be used by surveyors, scientists, cartographers and engineers for purposes of mapping, defining property boundaries



SURVEYING

AAS Degree Program



What is Surveying?

Surveying is the art of measuring distances and angles to determine the boundaries, area or elevations of land or structures on, near or below the surface of the earth. Surveying is scientific to the degree that rigorous mathematical approaches are used to analyze the field survey data, and technical in the methods and equipment used to gather and process the data.

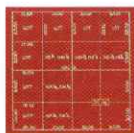
Land surveying is the application of current laws applied to field measurements resulting in boundary determinations.

Surveyors must understand and work within several systems of measurement and recognition. Public Land Survey Systems (PLSS), North American Datum (NAD), Universal Transverse Mercator (UTM), Global Positioning System (GPS), National Geodetic



Survey (NGS) and other methods of *cadastral* (land boundary) surveying provide a framework within which any point on the earth can be identified.

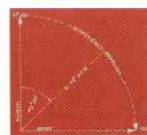
A surveyor's expertise has many uses—in real estate and all facets of construction, in engineering, design and computer-aided drafting, in government and mapping services, in legal services, and in earth science and astronomic exploration.



The SLCC Surveying Program

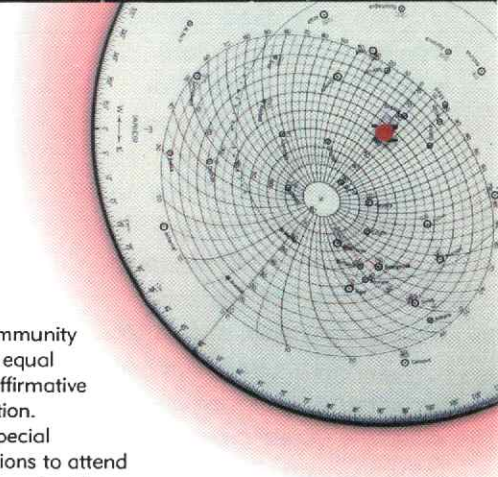
The Surveying program at SLCC is an AAS degree program, offered evenings only. Degree-seeking students enter the program in the Fall and will typically take four years to complete the program.

The demands for people in this industry are such that new students can be readily employed in a full-time job early in their program. Entry-level wages for working students ranges \$7-\$10 per hour. Those with several years experience, or a combination of CAD and surveying experience can make \$12-\$18 per hour. AAS degree graduates with four years experience who pass the 16-hour national and state licensing examination may earn \$50,000-\$60,000 per year in a variety of excellent job choices.



The Technology of Surveying

High technology rules in the world of the surveyor. Today's "total stations" are capable of measuring distances, angles and other survey data, performing necessary calculations, storing and retrieving data from memory, and interfacing with computer-aided drafting software. Satellites overhead (global positioning system) interact with mobile field equipment to reveal precise positioning anywhere on the globe in 3D space! Technology has added to the complexity and to the capability of the science and art of surveying.



Salt Lake Community College is an equal opportunity/affirmative action institution. If you need special accommodations to attend SLCC, please contact the Disability Resource Center at 801.957.4659.

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For Additional Program Information

Call our applied technology program advisor at **801.957.4550** or see us on the web at <http://www.slcc.edu/tech/divts/survey.htm>

