

# Surveyor



**Alternate title** Geomatic Engineer

**Description** Surveying is the measurement and mapping of our surrounding environment using mathematics, specialised technology and equipment. Surveyors measure just about anything on the land, in the sky or on the ocean bed. They even measure polar ice-caps.

Surveyors can be found in the office or out in the field, in suits and boots. Out in the field, they use the latest technology to map and measure a field site, making computations and taking photos as evidence. In the office, Surveyors use GPS and mapping software to draft plans and map the onsite measurements; they may also be found liaising and meeting with clients, engineers and architects about their site or project.

**Typical duties**

- Collect information about land such as, identification of property boundaries, ownership/tenure details, land features (topography, watercourse, extent of erosion, vegetation details, location of buildings and infrastructure, roads etc).
- Prepare plans for the development/redevelopment eg subdivision proposal, road alignment and infrastructure.
- Set out the alignment for construction work eg. Building, roads.
- Prepare plans for land ownership eg unit title/strata title/community title.
- Accurately monitor changing conditions associated with erosion, water levels, mining, vegetation, earth movement.
- Thoroughly understand and apply relevant legislative provisions (acts, regulations, codes of practice etc).

**Personal requirements**

- good at mathematics;
- good organisational skills;
- able to work accurately and neatly;
- good health and good eyesight (corrected is acceptable);
- able to work as part of a team;
- able to work independently.

**Qualification** The names of qualifications may vary from institution to institution and include:

- Bachelor of Surveying;
- Bachelor of Engineering (Surveying and Spatial Information Systems);
- Bachelor of Applied Science (Geomatics);
- Bachelor of Applied Science (Surveying);



**Entry pathway** To become a surveyor you usually have to study surveying or spatial science at university. The various universities have different prerequisites and some have flexible entry requirements or offer external study. Contact the universities you are interested in for more information as requirements may change.

Students who do not meet the tertiary entrance requirements can first undertake a TAFE diploma or advanced diploma in spatial information services, then apply to university.

**Job prospects** Surveying is a global profession with excellent opportunities within the industries that underpin land markets, urban and rural development and engineering construction. Land Surveyors establish the dimensions, value, utility, nature and ownership of land. Engineering Surveyors work on pre-design surveys, construction and monitor and check structures. Mining Surveyors locate ore bodies and monitor the operation of underground and open cut mines. Hydrographic Surveyors map marine areas to support safe navigation and marine engineering activities and monitor river-beds and harbours. Surveying can be combined with Arts, Commerce, Law or Science.

Surveying students at TAFE and University are able to get a taste of what Surveying is really like by starting out as a Survey Assistant during their study. Tafe students can then move into a Surveying Technician/Draftsperson role once they are qualified, whilst those in University complete their degree as a graduate Surveyor, some choosing to specialise in other related fields like Geospatial Information Systems.

Graduate Surveyors can further their career opportunities and remuneration by undertaking a professional training agreement to become a Licensed Surveyor.

**Specialisation** Surveyors may work in related fields such as photogrammetry, geographic information systems or remote sensing and as project managers or financial advisers. After spending some years in the field, they often become managers, or they may specialise as one of the following:

- Cadastral/Land Surveyor
- Mine Surveyor
- Geodetic Surveyor
- Engineering Surveyor
- Topographic Surveyor
- Remote Sensing Surveyor
- Hydrographic Surveyor

**Further information**

- Consulting Surveyors National [[www.acsnational.com.au/](http://www.acsnational.com.au/)]
- Surveying & Spatial Sciences Institute [[www.spatialsciences.org.au/](http://www.spatialsciences.org.au/)]
- A life without limits [[www.alifewithoutlimits.com.au/](http://www.alifewithoutlimits.com.au/)]

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