

Cartographer



Alternate title	Land Information Officer; Mapping Scientist; Spatial Information Technician
Description	<p>Cartographers design, prepare and revise maps, charts, plans, three-dimensional models and spatial information databases, often using computer-based techniques, and applying principles from science, mathematics and graphic design. Cartographers apply these elements to represent, analyse and manage essential spatial information that service the mining, mineral exploration, mapping, marketing, web publishing, regional planning and environmental management industries.</p> <p>Spatial information refers to information about the geographical relationship between places, people and other items within a particular area.</p> <p>Cartographers may have to travel to collect information and are often required to liaise with clients, government officials and industry.</p>
Typical duties	<ul style="list-style-type: none">➤ produce paper maps and web-delivered electronic maps using desktop publishing, computer graphics and multimedia software;➤ take part in the design and management of geographical information systems (GIS);➤ design and produce interactive mapping products for use on computer systems and the web;➤ supervise and coordinate the work of cartographic technicians and other production team members;➤ produce digital topographic and thematic data for use in geographical databases;➤ analyse and interpret information from a range of sources (including surveyors' notes, aerial photographs, remote sensing satellite imagery and existing maps and records) and prepare reports;➤ advise other professionals on the data requirements for map production and on the artistic, technical and economic aspects of map making.
Personal requirements	<ul style="list-style-type: none">➤ interest in design and computer graphics➤ Interest in geography;➤ ability to work neatly and accurately, paying attention to detail;➤ good at mathematics and science;➤ able to work as part of a team.
Entry pathway	Entry to these occupations requires completion of year 12 and is generally through a bachelor degree or higher qualification. In some instances relevant experience is also required.



- Qualification** The names of qualifications vary from institution to institution. Some examples are:
- Diploma and Advanced Diploma in Spatial Information Services
 - Bachelor of Science, majoring in spatial science
 - Bachelor of Applied Science
 - Bachelor of Science or Bachelor of Arts, majoring in geographical information science or geography
 - Bachelor of Geographic Information Technology
- Job prospects** Cartographers are employed across several industries in both Government and non government sectors such as utility and infrastructure providers, engineering, planning and land development.
- Specialisation** Cartographers may specialise in topographical maps (which show earth surface features and land use); or maps used for operational purposes in fields such as town planning, weather forecasting, tourism, hydrography, geological or mineral exploration and the military. Cartographers may also take part in the development of geographical information systems, including the processing, storage, presentation and analysis of data within those systems.
- Related Jobs**
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| ➤ Cadastral Surveyor | ➤ Cartographic Technician |
| ➤ Geodetic Surveyor | ➤ Geographer |
| ➤ Geomatic Engineer | ➤ Geomatician |
| ➤ Hydrographic Surveyor | ➤ Map Maker |
| ➤ Photogrammetric Surveyor | ➤ Surveyor |
- Further information**
- Surveying & Spatial Sciences Institute [\[www.spatialsciences.org.au/\]](http://www.spatialsciences.org.au/)
 - Mapping Sciences Institute, Australia [\[www.mappingsciences.org.au\]](http://www.mappingsciences.org.au)

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