

BUILT ENVIRONMENT (SPATIAL)

University courses - Victoria

APRIL 2021
CAREERS DEPARTMENT



INTRODUCTION

This document has been developed to assist domestic Year 12 students and their families in researching built environment (spatial and surveying) courses in Victoria. Please use entry requirements and indicative ATARs listed in this document as a guide only and check university websites for updates.

Disclaimer: information taken from university websites and VTAC. Universities featured in this guide reserve the right to change course information, admissions, and entry requirements at any time and without notice.



Indicative ATAR

The lowest selection rank (ATAR plus adjustment factors such as academic and equity adjustments) for the 2022 January intake. Please use indicative ATARs as a guide as they may change for future intakes.



English prerequisite

EAL = English as an Additional Language. 'Any other English' includes English, English Language and Literature.

Occupations featured

Cadastral (Land) Surveying
Geospatial Science
Building Surveying

Developed by Sandie McKoy
April 2022



Undergraduate

This is usually your first course at university. For example - bachelor's degree.



Graduate

This is study you do once you have graduated from a bachelor's degree. For example – Graduate Diploma.



COURSE SUMMARY

CADASTRAL (LAND) SURVEYING

University	Course	Campus	Indicative ATAR
RMIT University	Bachelor of Applied Science (Surveying) (Honours)	Melbourne City	69.6
	Bachelor of Applied Science (Geospatial Science) (Honours)		67.25
The University of Melbourne	Design pathway	Parkville	
	Bachelor of Design		85.00
	Bachelor of Design (Chancellor's Scholar)		99.90
	Bachelor of Design / Master of Engineering (Spatial) (Graduate Degree Package)		96.00
	Science pathway		
	Bachelor of Science		85.00
	Bachelor of Science (Chancellor's Scholar)		99.90
	Bachelor of Science / Master of Engineering (Spatial) (Graduate Degree Package)		96.00
	Master of Engineering (Spatial)		Graduate entry

GEOSPATIAL SCIENCE (UNDERGRADUATE)

University	Course	Campus	Indicative ATAR
RMIT University	Bachelor of Applied Science (Geospatial Science) (Honours)	Melbourne City	67.25
The University of Melbourne	Bachelor of Science (major in Spatial Systems)	Parkville	85.00
	Bachelor of Design (major in Spatial Systems)		85.00

BUILDING SURVEYING

University	Course	Campus	Indicative ATAR
Victoria University	Bachelor of Building Surveying	Footscray Park	ATAR wasn't used for the 2022 intake

CADASTRAL (LAND) SURVEYING

STEPS TO BECOME A LICENCED SURVEYOR IN VICTORIA

Step 1

Complete an accredited surveying or geospatial course at either RMIT University or The University of Melbourne

Step 2

Complete practical training in cadastral surveying following graduation under the supervision of a licensed surveyor

Step 3

Pass examinations in cadastral surveying set by the Board.

Key website

A Life Without Limits,
<https://bit.ly/2V23pIL>



Professional Training Agreement (PTA) 3-5 Years (part time)

LICENSED SURVEYOR

Undergraduate Degree/ Undergraduate Degree + Postgraduate Degree 4-5 Years (full time)

GRADUATE SURVEYOR

Advanced Diploma 1 Year (full time)

SURVEY ASSISTANT (PARTY LEADER)

Diploma 1 Year (full time)

SURVEY TECHNICIAN

Certificate IV 6 months (part time)

SURVEY ASSISTANT

Study Pathways

RMIT UNIVERSITY

<https://bit.ly/3c8wPnZ>

Bachelor of Applied Science (Surveying) (Honours)

RMIT offers the only undergraduate surveying degree in Victoria. It is accredited with local and international surveying organisations and thoroughly prepares you to enter the profession.

Surveyors play a major role in land development, from the planning and design of land subdivision, through to the final construction of the roads, utilities, and landscape planning.

They also play an important part in the construction industry providing detailed design plans for the subsequent construction of roads, freeways, tunnels,

bridges, pipelines, and high-rise buildings.

Some surveyors work with mining companies on exploration, mining development, and mining operations.

Other surveyors specialise in hydrographical surveys, working with automated position and sounding equipment on survey ships to map the ocean floor.

Professional accreditation

- Surveyors Registration Board of Victoria.
- The Institution of Surveyors Victoria
- Surveying and Spatial Sciences Institute.
- Land Surveyors Board of Malaysia.
- Royal Institution of Chartered Surveyors.

Industry experience

You are expected to complete 40 days of work experience during your program.

Pathway options

If you don't receive an offer there are pathway options available,

<https://bit.ly/2KJV7Ja>

Other

The Bachelor of Applied Science (Geospatial Science) (Honours) at RMIT is also accredited with the Surveying and Spatial Sciences Institute and the Royal Institution of Chartered Surveyors

Information on this course is located in the Geospatial Sciences section of this document.

Course	Prerequisites	Campus	Indicative ATAR
Bachelor of Applied Science (Surveying) (Honours)	Minimum study scores of: 30 in English (EAL) or 25 in any other English; and 20 in Mathematical Methods or Specialist Mathematics.	Melbourne City	69.6

THE UNIVERSITY OF MELBOURNE

<https://bit.ly/2V5p6RS>

The University offers an accredited surveying qualification at the graduate level. Applicants will need to complete an undergraduate degree first.

The following is a suggested study pathway at The University.

Undergraduate

Complete the Bachelor of Design or Bachelor of Science with a major in Spatial Systems (3-years).



Graduate

Complete the Master of Engineering (Spatial) (2-years).

Spatial Engineering @ UniMelb

Develop the Industrial Internet of Things, autonomous vehicles and smart cities with the Master of Engineering (Spatial).

Develop skills in mapping and visualisation, geographic information systems (GIS), 3D computer visualisations, surveying and satellites, and image processing.

As a spatial engineering student, you will have access to a vast range of opportunities to network with industry, develop your professional skills and connect with a dynamic cohort of students from around the world.

You will apply your skills in internships, industry projects, and innovation challenges with industry mentors.

Professional accreditation

Recognised with the Royal Institution of Chartered Surveyors and conditionally accredited with the Surveyors Registration Board, Victoria.

Professionally recognised by EUR-ACE® (accrediting agency: ASIIN) and provisionally accredited by Engineers Australia.

Guaranteed entry

Applicants can secure guaranteed entry into the Master of Engineering (Spatial) via acceptance into one of the following programs:

Graduate Degree Package – Bachelor of Design or Bachelor of Science / Master of Engineering.

Melbourne Chancellor's Scholars.

Info - <https://bit.ly/2RHZrBf>

Course	Prerequisites	Campus	Guaranteed ATAR
Bachelor of Design	Minimum study scores of: 30 in English (EAL) or 25 in any other English and 25 in Mathematics Methods, or equivalent - https://bit.ly/3efg5x0	Parkville	88
Bachelor of Science	Minimum study scores of: 30 in English (EAL) or 25 in any other English; 25 in Mathematical Methods or Specialist Mathematics; and 25 in one of Biology, Chemistry or Physics. OR: Minimum study scores of: 30 in English (EAL) or 25 in any other English; 25 in Mathematical Methods AND Specialist Mathematics.	Parkville	88



GEOSPATIAL SCIENCE

Military intelligence, urban sprawl, environmental sustainability... the applications go on and on. Geospatial scientists' work underpins decisions that have a direct effect on societal development.

It can be applied to track coastal erosion, or help design towns and communities. Basically, geospatial science solves problems. It offers the intelligence to shape our world.

Geospatial Science Careers,
<https://bit.ly/2y3RGtP>



RMIT UNIVERSITY

<https://bit.ly/3c8wPnZ>

Bachelor of Applied Science (Geospatial Science) (Honours)

This unique course prepares you for the specialised field of geospatial science through the management and development of geographic information systems.

This program paves the way for a career in interpreting how location has an impact on the way we interact with the world around us.

If we understand where things are and how they are connected, we better understand our world. This is what geospatial science is and this program develops professionals to work in the field.

Geospatial scientists use location as the key to collecting, managing, analysing and interpreting information.

It's a specialised discipline, so you'll enjoy the advantage of relatively small class sizes, focused content and staff who are easily accessible.

While you'll find elements of geospatial science in other programs, RMIT offers the only four-year undergraduate program in Victoria.

Professional accreditation

- Royal Institution of Chartered Surveyors
- Surveying and Spatial Sciences Institute
- Mapping Sciences Institute of Australia.

Industry experience

All students carry out a final-year research project that is industry-approved and reflects current best practice.

You are expected to complete 60 days of work experience during your course. This usually takes the form of paid employment during vacation periods or as a part-time employee

Course	Prerequisites	Campus	Indicative ATAR
Bachelor of Applied Science (Geospatial Science) (Honours)	Minimum study scores of: 30 in English (EAL) or 25 in any other English; and 20 in any Mathematics.	Melbourne City	67.25

THE UNIVERSITY OF MELBOURNE

<https://bit.ly/2V5p6RS>

Students can study a major in Spatial Systems in either of the following undergraduate degrees:

Bachelor of Science
Bachelor of Design

Spatial Systems Major

Be part of one of the fastest-growing IT industries in the world.

Spatial information has entered the 'big data' age with huge, complex data sets that include geographic and location-tagged information from thousands of sources, like global positioning satellites, surveying, laser mapping (LiDAR) and telecommunications.

Spatial systems is the study of the science and technology of 3D measurement, mapping and visualisation, focusing on the fundamental questions of where, what and when.

You could build the next generation of 3D visualisations for Google Earth or create software that will help us predict and respond to bushfires or other natural disasters.

You will develop knowledge in spatial measurement and analysis for both the human and natural environment and hands-on skills with sophisticated technologies.

Combined major

Students studying the Bachelor of Design can apply to combine the Spatial Systems major with one of the following majors: Construction or Property.

Career outcomes

After completing this major you might pursue careers in 3D spatial consultancy, asset information coordination, geographic boundary surveying, forensic surveying, or hydrographic surveying or as a geodesist, GIS consultant or spatial analyst.

Graduate study

Following graduation from the Bachelor of Science (major in Spatial Systems) or the Bachelor of Design (major in Spatial Systems), students can apply for either of the following graduate degrees at the University of Melbourne:

Master of Engineering (Spatial)
Master of Information Technology (Spatial)

Course	Prerequisites	Campus	Guaranteed ATAR
Bachelor of Design	Minimum study scores of: 30 in English (EAL) or 25 in any other English. For information about the Mathematical Methods requirement and bridging options, visit - https://bit.ly/3efg5x0	Parkville	88
Bachelor of Science	Minimum study scores of: 30 in English (EAL) or 25 in any other English; 25 in Mathematical Methods or Specialist Mathematics; and 25 in one of Biology, Chemistry or Physics. OR: Minimum study scores of: 30 in English (EAL) or 25 in any other English; 25 in Mathematical Methods AND Specialist Mathematics.	Parkville	88

BUILDING SURVEYING



Building Surveyors have an impact on the design, planning and functionality of buildings as part of their responsibility to ensure that buildings are safe, accessible and energy efficient.

A Building Surveyor is involved for the length of a building project, from the start until the end, and conduct inspections in order to sign off on every stage of the construction.

Australian Institute of Building Surveyors, www.aibs.com.au

Victorian Builders Association, www.vba.vic.gov.au

VICTORIA UNIVERSITY

<https://bit.ly/29Wv8JX>

Bachelor of Building Surveying

Develop the skills to become a construction-industry professional with a Bachelor of Building Surveying at Victoria University.

This course will give you solid foundation for a wide range of professional roles in the building and construction industry. You'll also develop skills and technical knowledge to become a specialist in:

- building and construction legislation and auditing
- inspection procedures
- building codes and regulations
- industry standards in professional practice
- building safety and design including fire safety
- sustainable construction techniques and materials.

The degree will equip you with the qualification needed to work as a registered building surveyor.

Building surveyors are responsible for interpreting and enforcing the laws and regulations that control building and construction.

With a current shortage of registered building surveyors, you'll be well placed for a career in Australia's growing construction industry.

Industry partners

We have a number of industry partnerships which inform our courses, provide shared resources, and give you opportunities for workplace learning.

Our partners include:

- Engineers Australia
- The Department of Environment, Land, Water and Planning
- VicRoads
- National Measurement Institute.

Professional accreditation

The course is recognised by the Victorian Building Authority (VBA).

Graduates of the Bachelor of Building Surveying are eligible to register as a Building Practitioner with VBA when the minimum experience has been acquired.

Career opportunities

Career opportunities for building surveyors have grown dramatically in recent years and are forecast to keep growing. The industry currently faces a huge challenge in addressing a shortage of registered building surveyors.

Pathway options

If you don't receive an offer for the Bachelor of Building Surveying, there are pathway options available. View information under 'pathways and credits' <https://bit.ly/3cVP5Bm>

Course	Prerequisites	Campus	Indicative ATAR
Bachelor of Building Surveying	Minimum study score of 25 in English (EAL) or 20 in any other English.	Footscray Park	ATAR wasn't used for entry in the 2022 intake.