

Master of Engineering (Spatial)

Year and Campus:	2015
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Contact:	<p>Melbourne School of Engineering Ground Floor, Old Engineering (Building 173) Current students: Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Phone: 13MELB (13 6352) +61 3 9035 5511 Prospective Students: Visit: Master of Engineering (Spatial) (http://www.eng.unimelb.edu.au/study/graduate/master-eng-spatial.html)</p>
Overview:	<p>The spatial information profession provides fundamental assets to a nation's information infrastructure: knowledge about where and when. Engineers in this field study the science and technologies of measurement, mapping and visualisation. For example, they work on satellite and photographic image processing, three dimensional computer visualisations and global positioning systems. Through the course, students gain practical skills and highly sought after technical knowledge to prepare them for careers in land and/or asset management for government, banks or property firms, or as surveyors in mining, construction and land agencies, among others.</p>
Learning Outcomes:	<p>To produce graduates who are skilled in the engineering principles of spatial information and have the ability to apply them to complex, open-ended tasks and problems.</p>
Structure & Available Subjects:	<p>The Master of Engineering (Spatial) consists of 300 points of study - 262.5 points core and 37.5 points elective subjects as detailed below. Advanced standing will be awarded for equivalent subjects taken in prior study to applicants on the following basis:</p> <ul style="list-style-type: none"> # A maximum of 100 points for applicants with a 4 year Bachelor of Engineering or equivalent. # A maximum of 100 points for applicants with a 3 year undergraduate degree. Students entering with a three year bachelor degree must complete at least 200 points of study within the Masters of Engineering. In cases where applicants have completed the equivalent of more than 100 points of core masters subjects, discipline specific electives must be taken to fulfil the 200 minimum masters study requirement. <p>Note: applicants from the University of Melbourne with:</p> <ul style="list-style-type: none"> # An appropriate "Engineering System" major will receive 100 points of advanced standing. Applicants who have completed more than 100 points of core subjects in their undergraduate degree will obtain exemption for the cores taken but will need to replace the points in excess of 100 points with elective subjects. # Engineering breadth sequences (including those in the Bachelor of Commerce) will receive advanced standing to a maximum of 100 points.
Subject Options:	<p>Total 300 points - 262.5 points core (compulsory) and 37.5 points elective subjects from the list below. Students must complete all 300 points of subjects, including all core subjects, or have advanced standing or exemption.</p> <p>The core and elective subjects are those listed below. The order of subjects below is one way of progressing through the course - students who meet subject requisites may tailor their individual study plan to take into account advanced standing and their study load. Students plan their study online, however Melbourne School of Engineering course advisors are available to assist students with individual study plans.</p> <p>Suggested first 100 points</p> <ul style="list-style-type: none"> # 100 points Core <p>Core (Total 100 points)</p>

Subject	Study Period Commencement:	Credit Points:
ENGR90021 Engineering Practice and Communication	Semester 1, Semester 2	12.50
COMP20005 Engineering Computation	Semester 1, Semester 2	12.50
CVEN30008 Engineering Risk Analysis	Semester 1	12.50
GEOM20013 Applications of GIS	Semester 1	12.50
GEOM30009 Imaging the Environment	Semester 1	12.50
GEOM20015 Surveying and Mapping	Semester 2	12.50
GEOM30012 Integrated Spatial Systems	Semester 2	12.50
GEOM30013 Land Administration Systems	Semester 2	12.50

Suggested second 100 points

- # 75 points Core
- # 25 points Elective

Core (Total 75 points)

Subject	Study Period Commencement:	Credit Points:
GEOM90008 Foundations of Spatial Information	Semester 1	12.50
GEOM90040 Mathematics of Spatial Information	Semester 1	12.50
ENGM90010 Management of Technological Enterprises	Semester 1	12.50
GEOM90007 Spatial Visualisation	July	12.50
GEOM90006 Spatial Analysis	Semester 2	12.50
GEOM90033 Satellite Positioning Systems	Semester 2	12.50

Suggested third 100 points

- # 62.5 points Core
- # 25 points from the Research Component (core) listed below
- # 12.5 points Elective

Core (62.5 points Core as listed + 25 points Research Component: Total 87.5 points)

Subject	Study Period Commencement:	Credit Points:
GEOM90039 Advanced Surveying and Mapping	February	12.50
GEOM90015 Spatial Data Infrastructure	Semester 1	12.50
GEOM90018 Spatial Databases	Semester 1	12.50
CVEN90045 Engineering Project Implementation	Semester 2	12.50
GEOM90005 Remote Sensing	Semester 2	12.50

Research Component

25 Points

Students must choose only ONE of the subjects listed below:

Note: CVEN90022 IE Research Project 1 is of year-long duration; students may commence in either semester 1 or semester 2 and continue in the consecutive semester. CVEN90047 IE Research Project 2 is completed over one semester only.

Subject	Study Period Commencement:	Credit Points:
CVEN90022 IE Research Project 1	Semester 1, Semester 2	12.50
CVEN90047 IE Research Project 2	Semester 1, Semester 2	25

Electives

37.5 points

Subject	Study Period Commencement:	Credit Points:
GEOM90017 Spatial Industry Internship	Summer Term, Semester 1, Semester 2, Winter Term	12.50
ENGR90033 Industry Based Learning	January, Semester 1, Semester 2	25
GEOM90038 Advanced Imaging	Semester 1	12.50
ABPL90041 Property Law (PG)	Semester 1	12.50
ABPL90366 Urban Informatics	September	12.5

Approved Electives: Students may choose an elective subject that has a spatial flavour from any Masters level program at the university

Links to further information:	http://www.eng.unimelb.edu.au/study/graduate/master-eng-spatial.html
Related Course(s):	Master of Engineering