

Master of Engineering (Geomatics)

Year and Campus:	2011												
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Contact:	Melbourne School of Engineering Current Students: courseinfo@eng.unimelb.edu.au (mailto:courseinfo@eng.unimelb.edu.au) Prospective Students: Visit http://www.eng.unimelb.edu.au/Postgrad/MEng/me_geomatics.html (http://www.eng.unimelb.edu.au/Postgrad/MEng/me_geomatics.html)												
Overview:	Geomatic engineers 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.												
Objectives:	To produce graduates who are both skilled in geomatic engineering principles and have the ability to apply them to complex, open-ended engineering tasks and problems.												
Structure & Available Subjects:	<p>The Master of Engineering (Geomatics) consists of 300 points of study - 275 points core and 25 points elective subjects as detailed below.</p> <p>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 150 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 fulfill 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 - 275 points core (compulsory) and 25 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 preferred study load. Students plan their study on-line, however Melbourne School of Engineering course advisors are available to assist students with individual study plans.</p> <p>Suggested first 100 points</p> <p>Suggested study plan for the first 100 points:</p> <ul style="list-style-type: none"> # 100 points Core <p>Core (Total 100 points)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENGR90021 Engineering Communication</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>MAST10011 Experimental Design and Data Analysis</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> <tr> <td>COMP20005 Engineering Computation</td> <td>Not offered 2011</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50	MAST10011 Experimental Design and Data Analysis	Semester 1, Semester 2	12.50	COMP20005 Engineering Computation	Not offered 2011	12.50
Subject	Study Period Commencement:	Credit Points:											
ENGR90021 Engineering Communication	Semester 1, Semester 2	12.50											
MAST10011 Experimental Design and Data Analysis	Semester 1, Semester 2	12.50											
COMP20005 Engineering Computation	Not offered 2011	12.50											

GEOM30009 Imaging the Environment	Not offered 2011	12.50
GEOM20013 Applications of GIS	Not offered 2011	12.50
GEOM20015 Surveying and Mapping	Not offered 2011	12.50
GEOM30011 Computational Methods in Geomatics	Semester 2	12.50
GEOM30012 Integrated Spatial Systems	Not offered 2011	12.50

Suggested second 100 points

Suggested study plan for the second 100 points:

87.5points Core

12.5 points Geomatic Elective from the list below

Core (Total 87.5 points)

Subject	Study Period Commencement:	Credit Points:
ABPL90041 Property Law (PG)	Semester 1	12.50
GEOM30010 Programming Geomatics Applications	Semester 1	12.50
ENGM90010 Management of Technological Enterprises	Not offered 2011	12.50
GEOM90041 Cadastral Surveying	Not offered 2011	12.50
CVEN90045 Engineering Project Implementation	Not offered 2011	12.50
GEOM90033 Satellite Positioning	Not offered 2011	12.50
GEOM90040 Adjustment Theory in Geomatics	Not offered 2011	12.50

Suggested third 100 points

Suggested study plan for the third 100 points:

87.5points Core

12.5 points from either the Geomatics or Approved Elective lists below.

Core (Total 87.5 points)

Subject	Study Period Commencement:	Credit Points:
GEOM90039 Advanced Surveying and Mapping	Not offered 2011	12.50
GEOM90034 Geomatics Research Project	Semester 1, Semester 2	25
GEOM90032 Land Administration	Semester 1	12.50
GEOM90038 Advanced Imaging	Not offered 2011	12.50
GEOM40004 Photogrammetry	Not offered 2011	12.50
GEOM40002 Residential Land Development	Semester 2	12.50

Geomatics Elective

Minimum 12.5 points

Students must take at least 12.5 points from this list but may take 25 points.

Subject	Study Period Commencement:	Credit Points:
GEOM90017 Geomatics Internship	Not offered 2011	12.50
GEOM90008 Foundations of Spatial Information	Not offered 2011	12.50

GEOM90018 Spatial Databases	Not offered 2011	12.50
CVEN90043 Sustainable Infrastructure Systems	Not offered 2011	12.50
GEOM90007 Spatial Visualisation	Not offered 2011	12.50
GEOM90006 Spatial Analysis	Not offered 2011	12.50
GEOM90005 Remote Sensing	Not offered 2011	12.50
GEOM90015 Spatial Data Infrastructure	Not offered 2011	12.50
GEOM90016 Advanced Topics in GIScience	Not offered 2011	12.50

Engineering Elective

Maximum 12.5 points

Students may take 12.5 points only from this list or no points.

Subject	Study Period Commencement:	Credit Points:
ENEN90027 Energy for Sustainable Development	Not offered 2011	12.50
ENEN90033 Solar Energy	Not offered 2011	12.50
ENEN90014 Sustainable Buildings	Not offered 2011	12.50
CVEN90019 Sustainable Water Resources Systems	Not offered 2011	12.50
ENEN90005 Environmental Management ISO 14000	Not offered 2011	12.50
CVEN40011 Transport Systems	Semester 2	12.50
ENEN90028 Monitoring Environmental Impacts	Not offered 2011	12.50
ENEN90011 Energy Efficiency Technology	Not offered 2011	12.50
ENGR90026 Engineering Entrepreneurship	Semester 2	12.50

Links to further information:

http://www.eng.unimelb.edu.au/Postgrad/MEng/me_geomatics.html

Related Course(s):

Master of Engineering