These introductory notes have been produced for students entering the Bachelor of Applied Science programs in Geospatial Science at RMIT University.

These programs are:

Bachelor of Applied Science Geomatics

Bachelor of Applied Science Surveying

Bachelor of Applied Science Cartography & Geographical Visualisation (Honours)

The notes are intended to give new students an insight into some of the workings of RMIT University, Geospatial Science and in particular its Programs.

At all times, students should feel free to ask questions of both lecturers and technical staff about any aspects of the programs or the discipline with which they may be unfamiliar.

We wish you the best in your studies in 2010

The Team at Geospatial Science
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Welcome and Message to New Students from 
Associate Professor Chris Bellman

Welcome to Geospatial Science and congratulations on your admission to tertiary study in the Bachelor of Applied Science degree at RMIT University. Geospatial Science forms a Discipline within the School of Mathematical & Geospatial Sciences. Our degrees in Geomatics and Surveying are recognised nationally for their quality and relevance.

No doubt, you have worked hard to achieve entry into your program of choice. You should be very proud of this achievement and we are delighted to welcome you. As part of the selection process, our academic staff carefully considered your educational qualifications, background and/or work experience and believe that you have the attributes required to succeed in your chosen degree program in the geospatial sciences.

Now, our task, and indeed our commitment, is to provide you with a dynamic, high quality and enjoyable learning environment that helps you to graduate successfully.

University study can be as much a lifestyle as a “job” or task. Many people find this experience to be an exciting and highly rewarding period of their life. A period when life-long friends and acquaintances are made; one’s philosophy and views are challenged and expanded; and one’s thinking, experiences and knowledge flourish and begin to mature. Importantly, it’s the time when you develop and begin to hone and consolidate your chosen areas of expertise. This will provide a vital foundation for your future vocational and employment opportunities.

The program that you have chosen to undertake has been carefully designed by staff to provide you with a balance of theoretical scientific education and practical application. This approach introduces the scientific paradigms and conceptual and theoretical frameworks that underpin the disciplines, and provides a wide range of learning opportunities for you to apply and test these using the latest methods, techniques and equipment. An important aspect of this learning is the practical exercises and activities you will undertake with other students and, at times, with collaborating companies, government agencies and the wider community.

The field of geospatial science is evolving rapidly and many changes have occurred over the last few years. Further changes and innovations can be expected over the next 5 - 10 years, especially as information and communication systems converge even further.
These changes provide many opportunities for you to contribute to, and influence, the future directions of your chosen field of geospatial science.

Over the past 30 years or so, we have welcomed many thousands of new students. In our experience, we find that one of the key challenges for students is the need to take responsibility for their own learning and education. As you begin to undertake your program, you will realise that, at a tertiary level, students are expected to be responsible for their own individual learning. Ultimately, each student must become responsible for their own education and the educational outcomes that they achieve.

Hence I would strongly encourage you to:

- **Develop a professional approach** to your studies (i.e. be organised, dedicated, disciplined) so you can maximise your potential and success within the program.

- **Anticipate demands on your time** during semester due to the program load, and plan to avoid situations where the demands are severe – this will require careful planning and our staff can assist and give advice.

- **Feel free to discuss with our staff any concerns and issues** that you may have about the programs and how best to undertake them. All our staff are aware that one of their major functions is to assist and guide students through the range of educational activities offered, and to provide support and advice when problems arise. Your year coordinator plays an important role in advising students but you will find that all our staff are very approachable and experienced in dealing with student concerns.

- **Enjoy your studies, and take responsibility for your future.** You are beginning what should be one of the most exciting and enjoyable periods of your life. Sure, there will be many stresses and strains along the way but take the time to enjoy what you do, engage with other students and the wider university and get the most out of your time at RMIT by actively participating in the full range of academic and social activities on offer.

We are proud of our graduates and the recognition and regard that they enjoy in the geospatial science industry in Australia and overseas. We look forward to helping you on your journey towards a professional career and trust that your personal success will also strengthen the reputation of RMIT graduates in the Geospatial Science professions.

I wish you every success in your academic and professional endeavours.

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Associate Professor Chris Bellman
Geospatial Science at RMIT University offers four year full-time undergraduate degree programs in Surveying & Geomatics, and a one year Honours Program in Cartography & Geographical Visualisation. The programs cater for those students wishing to undertake a career in Surveying, Geomatics, Cartography, Geographical Visualisation and other areas of Geospatial Science. They lead to the qualification entitled Bachelor of Applied Science.

There has been an increasing awareness by professional surveyors and cartographers that together they form a very significant element of a growing Geospatial Science industry. Modern technology has had an immense impact on the ways in which the modern surveyor and cartographer practise their professions. Developments in computing, information technology, satellite systems, automation and communications have changed the ways in which these professionals operate, and thus changed the skills needed to function effectively.

Perhaps the most significant change, however, is in the emergence of information and communication technology as the driving influence across all the fields of Geospatial Science, whether it be measuring a block of land or using GPS to navigate around a city.

The merging of surveying, geomatics and cartography in the land and geospatial information areas provides similar, but, at times, distinctly different services to meet the needs of a wide variety of user groups.

The bases for these services are land measurement, geographical information and data visualisation.

The degree programs are designed to cater for this broadening scope of geospatial professions as society becomes more concerned with incorporating land-related and geospatial data into its decision-making processes, and as environmental investigation, management and monitoring programmes receive greater recognition.
**Program Description:**

The Bachelor of Applied Science (Geomatics) is a program aimed at producing professionals with expertise in the collection, utilisation and management of geographic information, and the development and implementation of systems that support it.

The program emphasizes information technology related to geospatial data, with significant flexibility for the student to choose aspects of cartography, surveying and other aspects of geospatial science which best suit their interests and intended vocation. Importantly, all graduates will have the knowledge, skills and attitudes to be innovative in embracing, developing and implementing new technology.

The aim of the Geomatics program is to educate students who wish to enter the geospatial science industry. The program shares a common first two years with Surveying.

**Career Prospects**

Graduates of Geomatics develop and manage geographic information systems in a diverse range of exciting areas, including conservation agencies, planning bodies, scientific research organisations, geological mapping agencies, demographic marketing companies, local councils, exploration and mining groups, emergency services, statutory authorities, State and Federal government agencies and software development companies.

Most of the work carried out by professionals educated in this area involves the handling and analysis of large volumes of geospatially-related data.
Program Structure: BP087 – Bachelor of Applied Science (Geomatics)

YEAR One  Total Credit Points = 96

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After Year 2, students in Geomatics who wish to be eligible to enter a Training Agreement with the Surveyors Board (Vic) can elect to do a specialist surveying stream within the Geomatics program. Details of this can be found on Page 9 of this booklet.
Program Structure: BP087 – Bachelor of Applied Science (Geomatics)

**YEAR THREE**  Total Credit Points = 96

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Program Structure: BP087 – Bachelor of Applied Science (Geomatics)

Specialist Surveying Stream

The following Program Schedule MUST be followed if students are to satisfy the requirements of the Surveyors Board (Vic) and graduate as qualified surveyors.

YEAR Three  Total Credit Points = 96

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Every year, final year students in Cartography & Geographical Visualisation and Geomatics produce a calendar as part of their work in the courses Cartography 3 and Design and Electronic Publishing. The topic and format of the calendar are selected by the students, and all decisions relating to the design are made by the class. In 2010, the Calendar topic is “A snapshot of the bay”. You can download the entire calendar at http://www.rmit.edu.au/geospatial/calendar

Bachelor of Applied Science (Cartography & Geographical Visualisation) (Honours)

Geospatial Science offers an exciting one-year honours program in Cartography & Geographical Visualisation. This degree program is for outstanding students who have completed the three year degree program in Cartography & Geographical Visualisation or a similar degree program from other Australian universities or recognised overseas universities. The honours program is designed for students of exceptional ability who wish to develop higher-level expertise and experience in the disciplinary area. The program involves a combination of course material and independent research under the supervision of leading academic staff. Completion of the honours degree program is considered essential for students wishing to rapidly build their career and take senior positions in the industry and/or those who wish to undertake a Masters degree or Doctorate. Students undertaking this degree program will graduate with the degree of Bachelor of Applied Science (Cartography & Geographical Visualisation) (Honours) which is distinct from the base degree of Bachelor of Applied Science (Cartography & Geographical Visualisation).
Program Description:

The Bachelor of Applied Science (Surveying) program aims to produce graduates who have expertise in measurement processing, interpretation, analysis and presentation of land-based spatial information. This program provides a strong link between theory and practice.

Surveying is a very diverse profession. Broadly speaking, it involves the acquisition, processing, interpretation, analysis and presentation of land-based geographical spatial information – that is, information about the size, shape, nature and location of various aspects of our physical environment.

Surveying has benefited greatly from the recent developments in electronics and space technology. Today’s surveyor utilises radio signals from satellites to fix position, measures distances with light beams, determines angles electronically, records observations digitally, processes such observations on computer and produces computer-generated digital and graphical output.

Opportunities exist for students to undertake commercial work with surveying and other geospatial science companies.

The program shares a common first two years with Geomatics.

Career Prospects:

Surveyors have the opportunity to practise in a very wide range of interesting areas. These include engineering surveying, topographical surveying, cadastral surveying (concerning the definition of property boundaries), mining surveying and hydrographic surveying. Other areas in which surveyors have an interest are related to land development and land and geographic information systems.

Surveying graduates may choose to work in private surveying or multi-disciplinary companies, or for a range of government or semi-government authorities.
**Program Structure: BP089 - Bachelor of Applied Science - Surveying**

**YEAR One**  
Total Credit Points = 96

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<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>1033</td>
<td>Spatial Information Science 1</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>PHYS</td>
<td>1080</td>
<td>Introduction to Physical Modelling</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2083</td>
<td>Applied Geospatial Techniques</td>
<td>2</td>
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</tr>
</tbody>
</table>

**Year Two**  
Total Credit Points = 96

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Catalogue Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH</td>
<td>2164</td>
<td>Mathematics for Surveying &amp; Geomatics B</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>1044</td>
<td>Spatial Information Science 2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2089</td>
<td>Surveying 2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2079</td>
<td>Cartography 2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2117</td>
<td>Map Projections</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2084</td>
<td>Remote Sensing &amp; Photogrammetry 1</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2091</td>
<td>Surveying 3</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>PHYS</td>
<td>2088</td>
<td>Geospatial Physics and Mathematics</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>
# Program Structure: BP089 - Bachelor of Applied Science - Surveying

## YEAR Three  Total Credit Points = 96

Complete Seven (7) from:

<table>
<thead>
<tr>
<th>Subject Code</th>
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<th>Course Name</th>
<th>Semester</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOM</td>
<td>2101</td>
<td>Cadastral Surveying 1</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2119</td>
<td>Geodesy</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2086</td>
<td>Remote Sensing &amp; Photogrammetry 2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>MATH</td>
<td>2165</td>
<td>Vector Calculus Methods and Geometry of Surfaces</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2104</td>
<td>Engineering Surveying 1</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2102</td>
<td>Cadastral Surveying 2</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

AND Complete One (1) from:

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Catalogue Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOM</td>
<td>2093</td>
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</tr>
<tr>
<td>GEOM</td>
<td>2093</td>
<td>Surveying 4</td>
<td>2</td>
<td>12</td>
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</tbody>
</table>

## YEAR Four  Total Credit Points = 96

Complete Six (6) from:

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Catalogue Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOM</td>
<td>1060</td>
<td>Engineering Surveying 2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2075</td>
<td>Land Development</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2114</td>
<td>Geospatial Science Major Project A</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2116</td>
<td>Professional Practice</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2121</td>
<td>Survey Network Design &amp; Analysis</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td>2115</td>
<td>Geospatial Science Major Project B</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

AND Complete Two (2) from:

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Catalogue Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOM</td>
<td></td>
<td>Student Elective</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>GEOM</td>
<td></td>
<td>Student Elective</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>
RMIT is a multi-campus University. It includes a Higher Education Sector and a TAFE Sector. Geospatial Science is located in the City Campus within the School of Mathematical & Geospatial Sciences, one of the schools in the Higher Education Sector. Geospatial Science conducts the Bachelor of Applied Science undergraduate programs and also offers post-graduate diploma programs in Geospatial Science as well as higher degrees at Masters and PhD levels.

The undergraduate programs (Bachelor of Applied Science) are of three or four years duration. They aim to provide graduates with a broad theoretical and practical education in land and geospatial science, with some specialisation in the latter stages of the program as preparation for a professional career. One of the prime objectives is to produce graduates who are "vocationally orientated", that is, graduates who can readily apply the relevant theory to practical situations and are, therefore, able to readily assume useful roles in industry. A considerable quantity of practical work is therefore included in the program, including field camps and mapping trips. Such an intense period of field activity makes an invaluable contribution to the development of practical skills.

Students are also encouraged to gain professional experience during the summer vacations and are assisted to obtain suitable work with organisations throughout Australia.

Geospatial Science students also study service courses such as mathematics, physics and computer science, which make an important contribution towards producing a well-educated professional graduate. Whilst much emphasis is placed upon the practical, a thorough and comprehensive knowledge of the underlying theory being applied is essential.

For most of you, Geospatial Science programs will be your first experience of tertiary education. No doubt many of you will notice changes in teaching methods from those at secondary level. Basically, three modes of teaching are used; lectures, tutorials and practical sessions. Probably the most significant difference will be that students are totally responsible for organising their own affairs. In contrast to secondary school, you will have almost complete freedom to choose what you will or will not do with regard to your learning activities. In order to succeed, therefore, it is essential that new students quickly adopt a mature, serious and responsible approach to tertiary studies; neglecting to do so will inevitably lead to failure. In the main, students are expected to be self motivated and independent, and thus when difficulties arise you must initiate the necessary action to overcome them and not passively expect others, unsolicited, to come to your rescue.
Probably the most essential ingredient necessary for success in a University degree is self-motivation. Tertiary students must be self-motivated and capable of working without supervision. Our programs involve heavy workloads and great demands will be made upon your time. There is little doubt that any student who has been accepted into the program has the necessary ability to succeed if they are sufficiently motivated. Self-motivated students will be prepared to make the necessary sacrifices demanded by their program. As well as being industrious, you must be well organised and disciplined. You need to identify and remain focused on the important tasks and ignore the many distractions around you.

Students can benefit from the support of a whole range of people - lecturers, student counsellors, chaplains, librarians, etc, - who are available to assist them with problems, both academic and personal, that they may encounter during the term of their stay at RMIT. You should actively seek out these people for help when it is needed and make full use of facilities which have been provided with the aim of ensuring that their experiences at RMIT are pleasant and enriching both academically and personally.
Our philosophy is to provide professional programs that will cater for the educational needs of the land and geospatial science, surveying and mapping industry.

There are around 25 academic, technical and administrative staff and over 25 Masters and Doctoral students in the Geospatial Science discipline area. This provides a great breadth of expertise across all areas of land and geospatial science, surveying and cartography.

Each year there is a first year intake of 60 - 80 students.

**Facilities** include a well-equipped surveying field station, two general-purpose computing laboratories and two specialist computing laboratories. Students are able to use a whole range of up-to-date software that is commonly used in industry.
Geospatial Science – Principal Staff, Advisors & Expertise

Head of Discipline
Assoc. Prof. Chris Bellman
Photogrammetry, GIS and spatial analysis

Professors
Professor William Cartwright
Multimedia Cartography, Geographical Visualization

Professor John Handmer
Risk, Community Safety, Sustainability

Professor Simon Jones
Remote Sensing, Environmental Modelling

Professor Kefei Zhang
Physical Geodesy, GPS, Geodynamics

Professor Mark Shortis
Close range photogrammetry, least squares, surveying

Associate Professors
Assoc. Prof. Colin Arrowsmith
GIS - environmental issues, geography, tourism, surveying

Assoc. Prof David Fraser
Mapping Sciences, Applications of remote sensing and GIS to agriculture

Senior Lecturers
Dr Gang-Jun Liu
Geomatics, Environmental Modelling

Dr David Silcock
GPS applications, plane, Engineering and Cadastral Surveying, Geodesy

Dr David Mitchell
Cadastral & Engineering Surveying, Land Development and Urban Design

Lecturers
Rodney Deakin
Geodesy, Map Projections, Least Squares

Gita Pupedis
Desktop Mapping, Cartographic Design and Usability, Student Transition

Lucas Holden
Geodesy, Surveying, GPS

Dr Suelynn Choy
GPS, Surveying, Geodesy

Research Fellows
Dr Elizabeth Farmer
Remote Sensing

Dr Rakhesh Devadas
Remote Sensing/Agriculture

Dr Karin Reinke
Remote Sensing/GIS

Dr Hai Xu
GPS

Dr Robert Norman
GPS/Physics

Dr Carl Wang
GPS

Dr Suqin Wu
GPS

Dr Katharine Haynes
Risk, Community Safety

Dr Josh Whittaker
Risk, Community Safety
Research Officers

Andreana Reale  
Risk, Community Safety
Catherine Stephenson  
Risk, Community Safety
Adriana Keating  
Risk, Community Safety

Adjuncts

Dr George Gerdan  
Geodesy, GPS
Dr John LeMarshall  
Remote Sensing
Dr Nicholas Talbot  
GPS systems applied to surveying and engineering,
Dr Chris Pettit  
Geographic Information Systems/Visualisation
Michael Tarrant  
Emergency Management, Risk and Community Safety

Administrative Staff

Petra Siskos  
School Manager
Rania Zain  
Academic Administration Officer
Bhavika Agnihotri  
Functional Assistant to Deputy Heads
Nicolette Mackenzie  
Administrative Assistant Marketing
Michelle Merrett  
PA to Head of School
Jon Ching  
Administration Assistant
Margaret Pagonis  
Administration Assistant (Part-time)

Technical Staff

Laurie Buxton  
Technical Officer, Photogrammetry, digital mapping

Key Contacts:

School Office  
Email: SMGS@rmit.edu.au  
Phone: 03 9925 2213
Dr Gang-jun Liu  
Geospatial Undergrad Program Leader  
Email: Gang-Jun.Liu@rmit.edu.au  
Phone: 03 9925 3574
Gita Pupedis  
First Year Coordinator  
Email: gita.pupedis@rmit.edu.au  
Phone: 03 9925 3267
Rod Deakin  
Second Year Coordinator  
Email: rod.deakin@rmit.edu.au  
Phone: 03 9925 3268
Lucas Holden  
Third Year Coordinator  
Email: lucas.holden@rmit.edu.au  
Phone: 03 9925 2420
Dr. David Mitchell  
Fourth Year Coordinator  
Email: david.mitchell@rmit.edu.au  
Phone: 03 9925 2420
Assoc. Prof. Colin Arrowsmith  
Postgrad Coursework Coordinator  
Email: colin.arrowsmith@rmit.edu.au  
Phone: 03 9925 2042
Prof. Kefei Zhang  
International Coordinator  
Email: kefei.zhang@rmit.edu.au  
Phone: 03 9925 3272
Geospatial Science Facilities

The Bachelor of Applied Science programs at RMIT place particular emphasis upon producing graduates who are able to readily assume productive roles in the surveying, mapping and geospatial information industry. A considerable quantity of practical work is included in all programs. A basic teaching strategy of our programs is that of the application of theory presented in lectures should be reinforced by practical "real life" exercises. This vocational orientation emphasis means that Geospatial Science is well equipped with a wide range of up-to-date facilities, including total stations, GPS equipment and GIS, remote sensing, mapping and visualisation software.
Class Requirements for Courses

1. Textbooks

The course guide for each course specifies prescribed text books (ones that you should purchase) and recommended texts that you could either purchase or find in the library.

Most of the prescribed texts are available from the RMIT University Bookshop.

Books in the library that are in high demand will be held in the Library’s Reserve Section and can only be borrowed on short term (3 day) loans.

2. Calculator

All Surveying and Geomatics first year students must possess a Reverse Polish Notation scientific calculator. The Hewlett Packard HP 35s is recommended, which is available at the RMIT book store.

Note: All Surveying 1 class exercises are based on the use of this calculator

3. Other Requirements

It is highly recommended that you have access to a personal computer outside RMIT.

A USB storage device is essential.
Study skills

The RMIT University Library is an excellent resource for students. Most assignments will require specialized sources that are often only available in the library collection or on the library databases. For more information, go to the Library website at http://www.rmit.edu.au/library

The Study and Learning Centre in Building 12, Level 4, Room 20 (ph 9925 3600) is another resource available to all RMIT students. Not only do staff provide specialist academic and educational learning support services, their website provides on-line resources and links to a wealth of useful information. These include study skills websites that cover topics such as:

- General study skills
- Mathematics, Physics, Chemistry
- Reading
- Time management and looking after yourself
- Note taking
- Researching in the library and on the web
- Listening and questioning
- Group and teamwork

To find out more, check out their website http://www.rmit.edu.au/studyandlearningcentre

International Students

For information, advice, support and assistance on the following issues

- Academic progress
- Language & learning guidance
- Fee statements
- Visa guidelines/renewals

please contact the Geospatial Science International Coordinator

Prof. Kefei Zhang - Building 12, Level 11, Room 16.
Phone 03 9925 3272 or
Email kefei.zhang@@rmit.edu.au

You can also receive information and support with these issues:

- International Student Information and Support (ISIS) (http://www.rmit.edu.au/isis)
- Study Abroad & Student Exchange (http://www.rmit.edu.au/international/educationabroad)
- Study and Learning Centre (http://www.rmit.edu.au/studyandlearningcentre)
- Counselling Service (http://www.rmit.edu.au/counselling)

Or by contacting: RMIT International Student Service Centre
Building 14, level 4, Student Services
(Corner Swanston and Franklin Streets)
Melbourne Vic 3000
Tel: +61 3 9925 2963 (Student Services Reception)
Email: issc.advisor@rmit.edu.au
University ‘Speak’ (A Glossary of Terms)

Recognition of Prior Learning (RPL): This is given to students who have relevant prior qualifications, or have partially completed a relevant TAFE Diploma or University Degree. Advanced Standing allows such students to receive credit for one or more courses in their degree. Each student is assessed individually, and must provide documentary evidence of their previous studies. RPL can also be awarded for relevant workplace experience.

Commonwealth Supported Places (CSP): Commonwealth supported students (that is, all students who are not Full Fee-paying or International Students) are required to contribute to the cost of their program through this scheme. The CSP scheme has replaced HECS (Higher Education Contributions Scheme). For more information, and to calculate your tuition costs under the CSP scheme, visit http://www.rmit.edu.au/programs/fees/highered

Hurdle Requirements: These are specific requirements, set by your lecturer, that you must meet in order to pass a course; for example, submitting all practical reports or achieving at least 40% in a component of assessment.

Journals: Journals are specialized publications which are full of academic articles. These articles are peer reviewed prior to publication, so they are of a very high standard. This means that they are a great way to find up to date and relevant information. Most courses actually require you to use journal articles in your assignments. RMIT students have access to a broad database of journal articles available through the RMIT Library (http://www.rmit.edu.au/library/searchit)

Leave of Absence: Taking a leave of Absence is also widely referred to as ‘Deferring’ your studies. A Leave of Absence may be granted by your program leader for up to one year. Applications for a Leave of Absence must be submitted to the Hub. The deadline for submitting this form in each semester is the ‘census date’ (you will find these dates in your student diary). Forms are available online or from the Hub.

Lectures: Lectures run for between one and two hours, and are usually held in large lecture theatres and attended by the whole year level. During lectures it is recommended that you take notes or (with permission from your lecturer) use an audio recorder such as an iPod. The best time to discuss or ask questions about your lectures is in your tutorial group.

Student Electives: A student elective is a course of choice; this can be from any School or discipline across the University. Geomatics and Surveying students can complete 3 student elective courses. More information and lists of courses can be found at http://www.rmit.edu.au/students/studentelectives

Tutorials: Tutorials are very important. Tutorials for each course are designed to complement the lectures. Your tutor may not be the same person who gave the lecture. During tutorials you can discuss and question the information gained from the lecture.

Practical Classes: Many courses have significant practical components. These are conducted at Yarra Bend Field Station or in specialized computer laboratories. They are usually done in small groups and contribute to your course assessment.
Student Responsibilities

During the years of your university education you will be subject to specific policies and procedures. Information on these regulations can be accessed from several different sources; your student diary, the University website, and the Student Union.

**COURSES**
Course details such as assessment, attendance requirements, objectives, hours of class/non-class study, texts, references and so on will be available in your first class. If for some reason this does not happen, discuss the course outline with your tutor or lecturer. Remember that it is your responsibility as a student to be aware of, and comply with, course requirements. All of the information you need is available in the Course Guides.

**ASSESSMENT**
Details of the assessment procedure will be provided in your first classes. Please read the information given to you carefully – it is a good idea to make a note of assignment due dates in your student diary. The information you receive on assessment should include due dates, aims, expected content and grading criteria for each assignment. Any confusion or misunderstanding in relations to assessment should be directed to your tutor or lecturer. Don’t rely on rumours – ASK!

**SUBMITTING ASSIGNMENTS:** All assignments for Geospatial Sciences Courses must be submitted into the assignment box at the Geospatial Science Office (Building 12, Level 11, Room 4) by the due date. All assignments must include a coversheet (available outside the office or on the Geospatial Science homepage). Please note that assignments for Student Electives (i.e. courses not run by Geospatial Science must be submitted to the owning School).

Written assignments should be word processed and proof read prior to submission. You should always keep a copy of any assignments you submit.

Assignments will be graded and assessed by your lecturers and tutors, and returned to you. If you are not satisfied with your grade, or have other questions please direct this to your lecturer in the first instance. At the conclusion of each semester your results will be available on the internet, at [http://www.rmit.edu.au/students/results](http://www.rmit.edu.au/students/results)

Grades are awarded as follows:

- High Distinction (HD) 80-100%
- Distinction (DI) 70-79%
- Credit (CR) 60-69%
- Pass (PA) 50-59%
- Fail (NN) 0-49%

**Special Consideration:** Students who experience health or other personal problems that affect their studies can apply for special consideration in regards to assessment. Further details can be found at [http://www.rmit.edu.au/students/specialconsideration](http://www.rmit.edu.au/students/specialconsideration)
Plagiarism is a form of cheating. In work submitted for assessment with Geospatial Science, plagiarism will be regarded as grounds for a failure. Plagiarism means copying or imitating the language and/or ideas of another author and presenting them as one’s own work. The most common form of plagiarism is copying-out passages from texts and websites without proper acknowledgment of the source.

If one copies word-for-word from someone else’s work, the copied passage must be put in quotation marks and the source must be referred to. If a passage from someone else’s work is paraphrased, quotation marks are not used, but the source (or reference) must still be cited.

The aim of an essay should be to present one’s own argument in one’s own words. Normally it refers to (and may quote) the work of others as well, but for the most part the analysis, argument and language must be those of the author of the essay.

Peer review, discussion and assistance in understanding concepts are encouraged on educational grounds. However, unless specifically advised in the requirements of assessable work, all student submissions are expected to be clearly identifiable as the individual work of the student making the submission, even when data may have been gathered in a group environment. Where a group or team submission is permissible, this will be explicitly stated in the requirements for submission.

The copying or imitating of a computer program is an obvious example of plagiarism, and will be dealt with in the manner explained above.

Canberra Bushfires, Fires and smoke in Southeast Australia
(false colour image from Aqua Satellite, Pixel size: 2km)
http://rapidfire.sci.gsfc.nasa.gov/gallery/?2003018-0118/Australia.A2003018.0330.721.2km.jpg
Accessed 23/02/2009
Etiquette

There will be times when you need to get in touch with your Program Leader, tutor or lecturer.

Making Appointments

The best way to contact the staff member you need to speak with is via email. All RMIT staff members have a university email address (see the contacts pages in this booklet, or the People and Contacts website (http://www.rmit.edu.au/geospatial/people). Staff members are also available by phone, and most staff members also use voicemail. If the person you are trying to contact is unavailable by phone, leave a clear message with your full name and student number.

DO NOT walk into a staff member’s office uninvited. Staff members are often in their offices and do not mind students knocking on their doors, so long as this is done politely and with respect.

During Lectures and Tutorials

DO

Enter and settle quickly
Arrive on time and sit in the middle of a row, rather than at the end
Take notes and revise after class
Ask questions
Respect other students and the lecturer/tutor

DON'T

Arrive late
Talk
Leave your mobile phone on
Send or receive text messages
Start to pack up before the lecture is finished
Guidelines for the use of the Geospatial Science Computers

Geospatial Science supports a diverse range of computers and software. This equipment is expensive and fragile and must be used carefully. All of the computer software has copyright and this may be the property of private companies and vendors. The use of this software is often restricted to educational purposes and it is essential that these requirements are met.

Students must recognise their responsibility, and the restrictions associated with use of the Internet while at RMIT. Use of these facilities is expensive and must be done prudently and only for bonafide study and educational purposes. Misuse of the Internet (e.g. copying, communication, reproduction and transmission of restricted material) is strictly prohibited.

Information on using the Geospatial Science Computers and Network

1. Logging on to the Network.

Your user name –
You will need a user name and password to access a university computer. Follow the screen instruction to log into the network.
Press on the keyboard the Control, the Alt and the Delete keys together to access the next menu.
Your user name is based on your student number. If your student number is 1234567D, put an “s” in front of the number and omit the final letter.

Your initial password.

Your initial password the letter ‘p” followed by your BIRTHDAY in the form of 4 digits for the year (eg. 1979)
2 digits for the month number (eg. 12 or 02)
2 digits for the day (eg. 24 or 04).
You will be prompted to change your password the first time you log in.

Student with a birthdate of 24th December 1979 has an initial password of p19791224
The second part of the Login screen should look the same as the one shown above, including the TREE = RMITNET and the CONTEXT = ug.SMGS.set.rmit

Undergraduates using CONTEXT of ug.SMGS.set.rmit

Coursework postgraduates CONTEXT of pg.SMGS.appsci.rmit

2. **The Student Electronic Mail System.**

Your email address.

You can easily work out your email address from your student number. For example, if your student number is 1234567, then put an “s” in front of the number. Suffix with @student.rmit.edu.au. This is your email address:

<table>
<thead>
<tr>
<th>Student number</th>
<th>1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translates to email address</td>
<td><a href="mailto:s1234567@student.rmit.edu.au">s1234567@student.rmit.edu.au</a></td>
</tr>
</tbody>
</table>

Accessing your mail.

You can access your mail from all the latest web browsers, Netscape 4.5 and above and Internet Explorer 4 and above. Go to this web site to access your mail.

http://studentems.rmit.edu.au

User name.

You will need a user name and password to access your mail. Your user name is based on your student number. If your student number is 1234567, put an “s” in front of the number and omit the final letter.

<table>
<thead>
<tr>
<th>Student number</th>
<th>1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translates to user name</td>
<td>s1234567</td>
</tr>
</tbody>
</table>

Password

Your password for the email system is the same as your login password. You will be asked to change your password the first time you log in and every 90 days thereafter for security.

Assistance

Online assistance for information about Email is provided at http://studentems.rmit.edu.au

For general information or assistance please contact the ITS Helpdesk
Ph.: 9925 8888 - Email: helpdesk@student.rmit.edu.au or visit the webpage www.rmit.edu.au/its
Work Experience Requirement

A requirement of undergraduate programs in Geospatial Science is that students must undertake approved professional experience. For Geomatics and Surveying, the total experience obtained must be at least twelve weeks (60 working days) and for Cartography & Geographical Visualisation, at least ten weeks (50 working days).

The purpose of this requirement is to provide added context to program work, consolidate practical skills obtained in the programs, and improve practical skills for application in the programs. It is therefore important that students acquire this experience by way of vacation employment, as the program progresses. The requirement is reduced to 40 days (Surveying/Geomatics) and 30 days (Cartography & Geographical Visualisation) if obtained in total during vacation periods, to recognise its higher value for learning. Students unable to gain sufficient experience during their program will be permitted to use experience gained after completing the academic requirements of the program (ie. after final examination period).

Any employment which is demonstrably related to the geospatial information industry would be deemed "approved professional experience". If any doubt exists as to the suitability of a particular job, approval should be sought from the program final year coordinator(s) before proceeding. To qualify for the reduced requirement, all professional experience must be completed prior to the commencement of the final examination period in the student's final year.

The Geospatial Science Students’ Association

The Geospatial Science Students Association is very active in representing your interests as a student, and also in arranging many social functions such as the Annual Student Dinner (which is the premier student function of the year), car rallies, sporting competitions and barbecues. Participation in the activities of the Association can greatly assist new students to "settle-in" and become part of the RMIT community.

Year representatives are elected early each year for the purpose of allowing each year group to have a say in student and Geospatial Science affairs, and you should consider becoming active in this way. The student association executive committee members and year representatives also represent the students’ interests on the Geospatial Science Staff Student Consultative Committee, which meets several times a year.
Holders of the Bachelor of Applied Science degree from the Geospatial Science discipline in the School of Mathematical and Geospatial Sciences are eligible on graduation for Associate Membership of the Mapping Sciences Institute, Australia. After a period of about two years experience they may be eligible for the grade of member.

As undergraduates, students are encouraged to join as student members and participate in the affairs of the Institute.

Contact details:

GPO Box 1817
Brisbane Qld 4000
Phone: 08 9266 7605
Email: msiau@gil.com.au
www.mappingsciences.org.au

Surveying & Spatial Sciences Institute

Graduates from any of the degrees offered by the Geospatial Science discipline in the School of Mathematical and Geospatial Sciences are eligible to join the Surveying & Spatial Sciences Institute (SSSI). This is a national professional body, they will slowly evolve into commissions of the Spatial Sciences Institute.

Undergraduate students are encouraged to join the SSSI as student members. While student membership is not free, it is heavily subsidised by an industry sponsor. Details can be found on the SSI website at http://www.spatialsciences.org.au

Contact details:

PO Box 307
Deakin West, ACT 2600
Phone: 02 62822282
Email: info@spatialsciences.org.au
**The Surveyor's Board of Victoria**

Holders of the Bachelor of Applied Science in Surveying degree or the Bachelor of Applied Science in Geomatics, provided appropriate elective courses have been undertaken, are academically acceptable to the Surveyor's Board of Victoria for admission into a period of training if they wish to become Registered or Licensed Surveyors.

**The Institution of Surveyors, Victoria**

Holders of a Bachelor of Applied Science in Geospatial Science degree from RMIT are eligible upon graduation for Graduate Membership of The Institution of Surveyors, Victoria. After a period of about two years of professional experience they may be eligible for associate or corporate membership.

As undergraduates, students are encouraged to participate in the affairs of the Institution as student members. Student membership fees are nil for the first year, and a nominal fee for subsequent years.

The Young Surveyors Group of the Institution provides information and functions of specific interest to younger members of the profession. Recent graduates form a high percentage of the membership of this special interest group within the Institution. Membership is free to all graduates and students.

Contact details:

The Institution of Surveyors, Victoria  
Suite 207, Level 2  
13-21 Bedford Street  
NORTH MELBOURNE VIC 3051  
Telephone: 03 9326 9227  
Email: isv@isvic.org.au  

Brief History of RMIT University

The Royal Melbourne Institute of Technology Limited opened as the Working Men's College Melbourne in June 1887, enrolling some 600 students. Its origins date back to 1881, when Francis Ormond, a prominent grazier and philanthropist contributed 5000 pounds for its establishment. Ormond also left further sums totalling about 20,000 pounds in his will for later development.

Until about 1900 the College was essentially an evening Institute which taught a wide range of subjects according to demand. Included in the program was surveying as well as many other scientific and technical subjects.

From 1899 the College offered full-time day courses in Engineering and Applied Science leading to the award of diplomas. With the substantial fees that these courses attracted, the College began to employ full-time teaching staff. In 1904 the College was incorporated under the Companies Act, an arrangement that has continued to this day. Under this arrangement the College is controlled by a Council of elected and nominated representatives.

The full-time engineering courses developed, following the formation of the Institution of Engineers, Australia, in 1919. In 1936 these courses were extended to four years with the addition of the "fellowship" year.

In 1934 the College was renamed "The Melbourne Technical College" and during this period (1934-37) many of the present buildings were erected. During World War II the College played a major part in training for the war effort. Some 20,000 servicemen, mainly RAAF, passed through the College. A further 2000 were trained in munitions production, and after the war many thousands of ex-service personnel were retrained under the Commonwealth Reconstruction Training Scheme. Increased public support for technical education as a result of the war effort lead to greater demands on government for the establishment of a university level Institute of Technology for Victoria, based on the facilities and courses of the College.

During the 1950's the College developed many new courses, including a revised Surveying course and a Cartography course. An expanding number of students, local and overseas, was a feature of development at this time. In 1954 the College was granted permission to use the prefix "Royal" in its title.

In 1960 the College was renamed "Royal Melbourne Institute of Technology" and was affiliated with the Victoria Institute of Colleges in 1965. This led to the accrediting of its courses and the award of degrees. Parallel with the development of the tertiary sector of the Institute, the non-tertiary sector was reconstituted as the Technical College. It was initially assumed that the two sectors would eventually become separate, each under its own Council. In 1977 however, Council determined that the Institute would remain under the control of a single body, but that each College would pursue its own development. In 1981, RMIT awarded its own degrees for the first time. RMIT has been a pioneer in many fields of education and is pre-eminent in a number of disciplines. It has always put great emphasis on the practical as well as theoretical concepts in its courses. Applied research and investigation, always a feature of its work, has been expanded.

On July 1, 1992 RMIT was amalgamated with the Phillip Institute of Technology to become the largest multi-level university in Australia. It has retained the name "RMIT". Since 1992, RMIT has established campuses off-shore including a new facility in Vietnam. RMIT has an international reputation for academic and research excellence, and enduring links with business, industry and government. It is committed to quality vocational education and applied research.

During 2003-2004, the University undertook a restructure of its Faculties and Services area. These changes include the partnering of the Department of Geospatial Science with the Department of Mathematics & Statistics to form a new, strong school entitled the School of Mathematical & Geospatial Sciences. The new School supports a range of disciplines, expertise and degree programs unique in Australia and the international region.
School and Geospatial Weblinks

More information is available at our homepage, http://www.rmit.edu.au/geospatial

Geospatial Science program timetables are available on the web at http://www.rmit.edu.au/geospatial/timetables