Admission Requirements

i. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.750 ; or
ii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.500-2.749 with at least 3 years of working experience in relevant field ; or
iii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.250-2.499 with at least 5 years of working experience in relevant field ; or
iv. Bachelor in any related field of Science or Technology with CGPA of 3.000 ; or
v. Bachelor in any related field of Science or Technology with CGPA of 2.750-2.999 with at least 3 years of working experience in relevant field ; or
vi. Bachelor in any related field of Science or Technology with CGPA of 2.500-2.749 with at least 5 years of working experience in relevant field.

Language Requirements

International candidates are required to fulfill English language requirement as follows:

a) 550 for TOEFL Paper-based Test (Academic Version); or
b) Band 6.0 for IELTS (Academic Training); or
c) 79-80 for TOEFL Internet-based Test (Academic Version).

Candidate without the requisite minimum score for TOEFL or IELTS may be granted a provisional admission. Such candidate will be required to pass an English Placement Test conducted by the University.

Fees

Fees	Master without thesis	
	Malaysian Student	International Student
Basic Fees (1st semester)	RM 1,425	RM 2,475
Basic Fees (2nd and subsequent semester)	RM 1,175	RM 2,225
Credit Fees * subject to change	RM 250 / credit	RM 400 / credit

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APPLICATION

Please apply online via:

http://sgsportal.upm.edu.my:8080/sgsportal
www.sgs.upm.edu.my/prospective_students-2964

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MASTER OF REMOTE SENSING AND GIS

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Faculty of Engineering, Universiti Putra Malaysia

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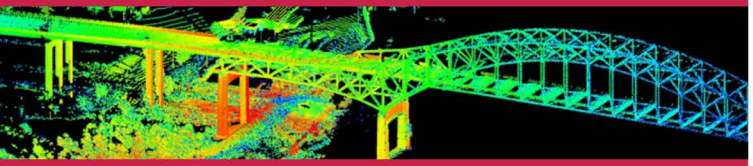
INTRODUCTION

This programme is designed to deepen the understanding and applications of spatial science and technology. The application of Remote Sensing and GIS have crossed various fields, especially activities involving spatial data base. This programme also involves the identification of land-based geographical data such as forest types and landuse, water-based ones such as identifying the location of fishing grounds and oil spills. Also of importance are land management and legal issues relating to land ownership and use.



PROGRAMME REQUIREMENTS

Credit Requirements for Graduation
Students enrolling under this programme must fulfill 40 credits of courses to graduate. The credit distributions for compulsory courses, elective courses and project are as follows:

- Compulsory Courses 24 credits
- Elective Courses 6 credits
- Dissertation 10 credits

Compulsory Courses
Students must take all the listed compulsory courses;

ECV5100	Research Methodology	3 credits
ECV5501	GIS Principles and Techniques	3 credits
ECV5502	GIS Management and Implementation	3 credits
ECV5503	Quantitative Remote Sensing	3 credits
ECV5504	Image Processing and Analysis	3 credits
ECV5508	Remote Sensing and GIS Applications	3 credits
ECV5510	Microwave Remote Sensing	3 credits
ECV5511	Hyperspectral Remote Sensing	3 credits
ECV5990	Dissertation	10 credits

Note : ECV5990 – Dissertation is carried out over two semester

Elective Courses
Students must take only two elective courses (6 credits) out of the listed

ECV5505	Geostatistical Analysis	3 credits
ECV5506	Programming for Spatial Data Analysis	3 credits
ECV5507	Spatial Information Management	3 credits
ECV5509	Global Navigation Satellite System	3 credits
ECV5512	Advanced Geospatial Modelling	3 credits
ECV5513	Object-based Image Analysis (OBIA)	3 credits

Course Synopsis

ECV5100 | Research Methodology | 3 Credits
This course covers best practices in research such as research methodology, design and ethics as well as academic writing and oral presentations.

ECV5501 | GIS Principles and Techniques | 3 Credits
This course covers the concepts and technical issues on GIS usage which covers techniques for effective GIS development and analysis.

ECV5502 | GIS Management and Implementation | 3 Credits
This course covers both the conceptual and practical aspects of developing GIS applications in which issues from planning to project implementation are covered.

ECV5503 | Quantitative Remote Sensing | 3 Credits
This course focuses on the geometric and quantitative aspects of remote sensing, covering physical aspects of remote sensing and various remote sensing sytems.

ECV5504 | Image Processing and Analysis | 3 Credits
This course covers digital image processing of remotely sensed data that encompasses remote sensing data acquisition, image pre-processing as well as advanced processing techniques.

ECV5505 | Geostatistical Analysis | 3 Credits
This course focuses on the analysis and spatial data modelling as well as case studies that are related to geostatistical analysis in Malaysia.

ECV5506 | Programming for Spatial Data Analysis | 3 Credits
This course covers the aspects of writing and developing routines for input and processing of spatially related data and application in the context of geospatial.

ECV5507 | Spatial Information Management| 3 Credits
This course covers the principles of spatial information management and identifies the concept and legal aspects related to the usage of spatial data.

ECV5508 | Remote Sensing and GIS Applications | 3 Credits
This course covers the applications of GIS and remote sensing in various fields and the use of GIS and remote sensing for national management.

ECV5509 | Global Navigation Satellite System | 3 Credits
This course covers the background of GNSS system, data collection and processing techniques as well as the various applications of GNSS.

ECV5510 | Microwave Remote Sensing | 3 Credits
This course covers the technical aspect of microwave remote sensing system, data collection and processing techniques as well as the wide applications of microwave remote sensing.

ECV5511 | Hyperspectral Remote Sensing | 3 Credits
This course covers hyperspectral remote sensing technology in terms of data collection and information processing techniques as well as operations and applications of hyperspectral data for various disciplines.

ECV5512 | Advanced Geospatial Modelling | 3 Credits
This course covers advanced geospatial modelling used in GIS and it covers practical applications in various fields.

ECV5513 | Object-based Image Analysis (OBIA) | 3 Credits
This course covers advanced image processing based on object-based image analysis (OBIA) including different image processing techniques as well as operations and applications of OBIA for various disciplines.

ECV5990 | Dissertation | 10 Credits
This course involves a research or study by a student on a specific topic. It covers literature review, methodology, data collection and analysis under a supervision of a lecturer. A proposal report needs to be prepared at the beginning of the study. At the end of the project, the student will submit a complete dissertation and research output for evaluation. The student is also required to present the findings of the study to a panel of assessors.