Faculty of Engineering
Department of Biological and Agricultural Engineering
www.eng.upm.edu.my
Master of Emergency Response and Planning
INTRODUCTION
This programme is designed for emergency response and planning in various fields. The core courses of the programme stress the principles and concepts, taking into account the development in technological field in facing emergency situations. Graduates from this programme will be able to form a network of Master of Science in the field of Emergency Response and Planning (ERP), equipped with engineering knowledge and concepts and an effective management system to be further viable in the evaluation and preparation of strategies at every level of emergency response and planning.

PROGRAMME REQUIREMENT

CREDIT REQUIREMENTS FOR GRADUATION
Students enrolling under this program must fulfill 40 credits of courses to graduate. The credit distributions for compulsory courses, elective courses and dissertation are as follows:

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Compulsory Courses</td>
<td>25</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>9</td>
</tr>
<tr>
<td>Dissertation</td>
<td>6</td>
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Compulsory Courses must take all the compulsory courses listed below:

- EAB5100 Research Methodology 3 credits
- EAB5310 Natural Resources Conservation 3 credits
- EAB5403 Disaster Recovery and Contingency Plan 3 credits
- EAB5404 Emergency Response and Planning Network 3 credits
- EAB5407 Incident and Crisis Management 3 credits
- EAB5411 Emergency Risk Management 3 credits
- EAB5412 Information Engineering 3 credits
- EAB5977 Independent Study 1 credit
- EAB5988 Dissertation 6 credits
- EMM5201 Fire Safety Engineering and Regulations 3 credits

Note: EAB5988 - Dissertation is carried out over two semesters

Students must also take at least 6 credit from the elective courses listed below:

- EAB5302 Building Services 3 credits
- EAB5401 Hazard, Risk and Ethics 3 credits
- EAB5405 Disaster Forecasting 3 credits
- EAB5408 Medical Response for Disaster 3 credits
- EAB5421 Forensic Science 3 credits
- EAB5422 Public Safety and Security 3 credits
- KOM5327 Crisis Communication 3 credits

Identification on the elective courses for the student will be made by the program coordinator.
Course Synopsis

•Research Methodology
This course covers best practices in research such as research methodology, design and ethics as well as academic writing and oral presentations
•EAB5100
•3 credits

•Building Services
This course covers topics related to various building services, ventilation systems, support systems for water supply and electricity, fire service and drainage. Emphasis is given on the relationship between environmental factors and building services, the evaluation on the effectiveness of building services and the identification of the need for repair of building services
•EAB5302
•3 credits

•Natural Resources Conservation
The subject will cover the cause and effect of natural phenomena that is at risk of becoming a hazard and disaster to human lives, including the effect of climate change. Emphasis is given on acts related to natural resource conservation, prevention methods by technical means such as forest conservation, sustainable conservation system and post-disaster debris management
•EAB5310
•3 credits

•Hazard, Risk and Ethics
This course covers the relationship between hazards, risks and ethics. Emphasis is given on the measurement, analyses and comparisons between various types of hazard, risks associated with hazards, and the aspect of ethics and efficiency in facing and responding to risks. This course also covers the topic of occupational hazards and risks
•EAB5401
•3 credits

•Disaster Recovery and Contingency Plan
This course covers various types of disaster and their impacts. Emphasis is given on the measurement of the effects of disasters, and the preparation of contingency plans during critical time, prevention plans through the database application as well as recovery plans suitable for human needs
•EAB5403
•3 credits

•Emergency Response and Planning Network
This course covers the concept of organizational network within the emergency command systems of multiple agencies. Emphasis is given on organizing emergency command systems and communication for evacuation plan
•EAB5404
•3 credits

•Disaster Forecasting
This course discusses the application of ICT tools and GIS science (Geographical Information System and Remote Sensing) for forecasting natural and man-made disasters. This will cover the comparisons and analysis between various types of susceptibility, hazard, vulnerability and risk associated with disasters. Emphasis will be given on the concept of application and techniques such as spatial model development for a particular hazard prediction, multi criteria evaluation, statistical and data-mining approaches
•EAB5405
•3 credits

•Incident and Crisis Management
This course covers the concept of incident and crisis management. Emphasis is given on solving problems involving factors that leading to a crisis, stages of crisis, and methods of crisis control, as well as forming a team to execute a crisis management plan
•EAB5407
•3 credits

•Medical Response for Disaster
This course covers medical operation for disasters and its components, the role of emergency medical team, as well as key issues related to medical assistance during disaster. Emphasis is given on the evaluation of emergency medical operation for natural and man-made disasters
•EAB5408
•3 credits

•Emergency Risk Management
This course discusses various types of emergency risks, risk management policy and its implementation including integrated catastrophe models. Emphasis is given on risk reduction strategy evaluation and effective emergency risk management plan framework
•EAB5411
•3 credits

•Information Engineering
This course covers methods of presenting information in the form of cognitive models, geospatial information engineering and virtual reality exercises. Emphasis is given on concepts related to information engineering management and information management techniques, as well as their importance in managing disasters
•EAB5412
•3 credits

•Forensic Science
This course covers the utilization of forensic techniques for investigating disasters, industrial accidents and fire risks by analyzing physical evidence. The witness interview technique is also included. Emphasis is given on evaluating the need for forensic investigation of an incident, identifying the cause of a disaster and organizing a forensic investigation procedure
•EAB5421
•3 credits

•Public Safety and Security
This course discusses public safety and security management system. Emphasis is given on key issues related to public and national security, the effectiveness of public response mechanism, disaster management, as well as the concept of total defense
•EAB5422
•3 credits

•Independent Study
This course involves activities related to critical selection and evaluation of literatures related to a selected topic that is relevant to the field of Emergency Response and Planning. Emphasis is given on recognizing research problems based on incident dan disaster reports. A report is due at the end of the semester
•EAB5977
•1 credits

•Dissertation
This course involves a research or study by a student on a specific topic. It covers a 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, a complete dissertation and research output will be submitted for evaluation. An oral presentation of the project will also be conducted
•EAB5998
•6 credits

•Fire Safety Engineering and Regulations
This course covers basic principles of fire safety, and active and passive fire protection systems. Emphasis is given on Uniform Building by Law 1984 and the Fire Services Act 341, 2006 and other Code of Practice (COP), the evaluation on fire safety systems and performance based fire safety system
•EMM5201
•3 credits

•Crisis Communication
This course covers concepts of crisis, crisis management, and crisis communication; crisis management approaches and crisis communication theory; steps in crisis prevention, preparation, recognition, containment and recovery; Planning crisis communications plan for managing organizational crisis
•KOM5327
•3 credits

For further information
Please contact :

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FEES

Fees

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<tr>
<th></th>
<th>Master without thesis</th>
<th>International Student</th>
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<tbody>
<tr>
<td>Basic Fees (1st semester)</td>
<td>RM1,250</td>
<td>RM2,300</td>
</tr>
<tr>
<td>Basic Fees (2nd and subsequent semester)</td>
<td>RM1,000</td>
<td>RM2,050</td>
</tr>
<tr>
<td>Credit Fees</td>
<td>RM 250.00 / Credit Hour</td>
<td>RM 350.00 / Credit Hour</td>
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Language Requirement

• A Malaysian candidate must have obtained at least a credit in English at Sijil Pelajaran Malaysia level or have passed English courses conducted at the Diploma or Bachelor’s Level.

• All international candidates from countries where English is not a medium of instruction must have obtained a minimum score of 550 for TOEFL Paper-based Test (Academic Version); or Band 6.0 for IELTS (Academic Training); or 79-80 for TOEFL Internet-based Test (Academic Version).

• A 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.

• A candidate who has failed the English Placement Test will be required in the first semester to pass a prescribed English course. Should the candidate fail to obtain the prescribed minimum grade, the University may allow him to repeat the prescribed English course in the second semester.

• A candidate who fails after the second attempt will have his candidature suspended until he passes the English course before being allowed to continue with his Masters programme.

Application For Admission

Please apply online via http://sgsportal.upm.edu.my:8080/sgsportal/

Tel. : (603) 9769 4218/4223/4228
Website : http://www.sgs.upm.edu.my/prospective_students-2964