

Admission Requirements

- Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.750 ; or
- 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
- 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
- Bachelor in any related field of Science or Technology with CGPA of 3.000 ; or
- 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
- 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.

Note: Candidates with Bachelor of Science or Technology degrees or their equivalents are admitted, prerequisite modules in Engineering must be offered to adequately prepare them for their advanced study.

Language Requirements

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

- 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).

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	Malaysian Student	International Student
Basic Fees (1st Semester)	RM 1,350	RM 2,400
Basic Fees (2nd and subsequent semester)	RM 1,100	RM 2,100
Credit Fees *subject to change	RM 370 / credit	RM 450 / credit



APPLICATION

Please apply online via:

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

For further information, please contact :

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PROGRAMME COORDINATOR

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MASTER IN FOOD PROCESS & PACKAGING ENGINEERING

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INTRODUCTION

The Master Programme in Food Process and Packaging Engineering (MFPP) is a postgraduate programme designed to add value to professionals relevant to the food process and packaging engineering industry. MFPP at Universiti Putra Malaysia is the first of its kind established in Malaysia, consisting of tailor-made courses addressing the needs of professionals from general topics such as research methodology and management practices to specific topics covering areas such as current advanced practices in food packaging, food waste management and food processing. Enrolled students will benefit from advanced knowledge and skills obtained through structured course modules delivered in the forms of lectures, seminars and practicals. A highly focused in-depth mini research project integrated with this programme will enhance the student application of the advanced knowledge obtained from courses offered in MFPP. This programme will be beneficial for fresh graduates who wish to pursue their studies before going into their professional careers or professionals who desire value-added postgraduate degree for potential career progression in the food and packaging industries.



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;

EPF5100	Research Methodology	3 credits
EPF5101	Food Manufacturing Operation Management	3 credits
EPF5707	Applied Food Engineering Analysis	3 credits
EPF5710	Utilization of Waste from Food Industry	3 credits
EPF5711	Packaging Machinery and Automation	3 credits
EPF5703	Package Permeability and Shelf Life of Food	3 credits
EPF5712	Packaging Evaluation and Testing	3 credits
EPF5713	Food Plant Sanitation Design and Maintenance	3 credits
EPF5990	Dissertation	10 credits

Note : EPF5990 - Dissertation is carried out over two semesters (4+6 credits)

Elective Courses

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

EPF5102	Manufacturing of Packaging Materials	3 credits
EPF5103	Food Packaging Innovations	3 credits
EPF5208	Drying Technology for Food and Bioproducts	3 credits
EPF5601	Applied Statistics and Probability for Engineers	3 credits
EPF5702	Food Rheology	3 credits
EPF5714	Advanced Food Process Engineering	3 credits

Course Synopsis

EPF5100 | Research Methodology | 3 Credits

This course covers the knowledge and skills required to prepare a research proposal. It also discusses the fundamental process in conducting an academic research, the theoretical and practical aspects of preparing a research proposal presented.

EPF5101 | Food Manufacturing Operation Management | 3 Credits

This course covers the management of food manufacturing operations, strategies and tools to analyse and improve operational performance. Emphasis is given on problem solving techniques including the usage of computer simulation and strategic decision-making to ensure efficient food manufacturing operation.

EPF5707 | Applied Food Engineering Analysis | 3 Credits

This course covers the treatment and interpretation of food engineering unit operations into mathematical models for analysis. It also emphasises on the use of computer simulation in the analysis of food engineering design.

EPF5710 | Utilization of Waste from Food Industry | 3 Credits

This course covers several types of waste from the food processing industry as well as methods to reduce the food waste. It also includes designing a process to convert food processing waste into useful materials.

EPF5711 | Packaging Machinery and Automation | 3 Credits

This course covers the application of machineries and control technology for automated packaging system. It includes major automation elements such as human-machine interfaces (HMIs), actuators, sensors, programmable logic controllers (PLCs) and machinery maintenance. Quality control system of various automated food packaging systems is also explained.

EPF5703 | Package Permeability and Shelf Life of Food | 3 Credits

This course covers the theory and concept of package permeability and the effects on the extension and deterioration of food shelf life. It also emphasis the relationship between barrier properties of packaging materials and permeability properties.

EPF5712 | Packaging Evaluation and Testing | 3 Credits

This course covers the scientific and engineering knowledge used in testing and evaluating performance, and interaction of package-product systems during handling and transportation. This knowledge is also applied for quality control testing of the packaging to meet standards and other requirements, and for improving the packaging quality and integrity.

EPF5713 | Food Plant Sanitation Design and Maintenance | 3 Credits

This course covers the principles to design food plants and to update an existing facility or equipment for optimum food safety and sanitation control. It also integrates food safety techniques with reliability and maintenance engineering techniques.



EPF5990 | Dissertation | 10 Credits

This course involve a research or study by a student on a specific topic. Every student is required to carry out a supervised project. Students are required to prepare a dissertation report and present the findings of the study to a panel assessors. The topic is chosen from one of the following areas: Food engineering, waste utilisation from industry, food package design system including packaging materials, packaging design, production system or any engineering fields deemed appropriate by the program.

EPF5102 | Manufacturing of Packaging Materials | 3 Credits

This course covers the relationship between structure-property of materials, types of manufacturing process and design consideration of selected packaging materials. Overall packaging manufacturing system and packaging standards are also discussed.

EPF5103 | Food Packaging Innovations | 3 Credits

This course covers advanced packaging materials, design and implementation of smart packaging techniques and packaging development for a sustainable package. It also includes considerations and requirements and current issues in developing innovative food packaging.

EPF5208 | Drying Technology for Food and Bioproducts | 3 Credits

This course covers the importance, concepts and types of drying operation. The drying applications in foods and bioproducts are also explained in detail in this course.

EPF5601 | Applied Statistics and Probability for Engineers | 3 Credits

This course covers the concept of applied statistics and probability for engineers. It develops understanding on random sampling, design of experiments and data description for statistical quality control.

EPF5702 | Food Rheology | 3 Credits

This course covers the roles, importance and measurement methods of rheological properties of food. Its applications in food processing are also explained in this course.

EPF5714 | Advanced Food Process Engineering | 3 Credits

This course introduces advanced theory essential to an understanding of food process modelling and advanced food engineering technologies. These technologies will include innovative thermal, non-thermal and emerging food applications in food processing industries, in which, critical parameters that entail these technologies and its usage in producing safe food will be discussed.