

STUDY SCHEME 2016-2020
BACHELOR OF PROCESS AND FOOD ENGINEERING
Department of Process and Engineering
Faculty of Engineering, Universiti Putra Malaysia

| First Semester | | | Second Semester | | |
|----------------|--|-----------|-----------------|---|-----------|
| CODES | COURSES | CREDIT | CODES | COURSES | KREDIT |
| YEAR 1 | | | | | |
| ECC3001 | Engineering Mathematics I | 3(3+0) | ECC3002 | Engineering Mathematics II | 3(3+0) |
| EPF3108 | Material and Energy Balance | 3(3+0) | EMM3305 | Fluid Mechanics I | 3(3+0) |
| PRT2008 | Agriculture and Man | 2(2+0) | EMM3518 | Computer Aided Engineering Drawing | 3(1+2) |
| SKP2101 | Malaysian Nationhood | 3(3+0) | EPF3001 | Statics and Strength of Materials | 3(3+0) |
| SKP2203 | Asian and Islamic Civilisation | 2(2+0) | BBI2423 | Academic Interaction and Presentation | 3(2+1) |
| QKXXXX | Credited Co-curriculum | 1(0+1) | SKP2204 | Ethnic Relation | 2(2+0) |
| | | | QKXXXX | Credited Co-curriculum | 1(0+1) |
| JUMLAH | | 14 | JUMLAH | | 18 |
| YEAR 2 | | | | | |
| EEE3100 | Electrical and Electronic Technology | 3(2+1) | ECC3004 | Engineering Statistics | 3(3+0) |
| EMM3213 | Thermodynamics I | 3(3+0) | ECH3108 | Chemical Engineering Thermodynamics | 3(3+0) |
| EPF3109 | Numerical and Computer Methods | 3(2+1) | ECH3116 | Heat and Mass Transfer Processes | 4(4+0) |
| EPF3603 | Engineering Properties of Biological Materials | 3(3+0) | EPF3104 | Process and Food Engineering Laboratory I | 1(0+1) |
| BBI2424 | Academic Writing | 3(2+1) | EPF3107 | Microbiology and Safe Food Processing | 3(3+0) |
| | | | FST3107 | Introduction to Food Chemistry | 3(2+1) |
| JUMLAH | | 15 | JUMLAH | | 17 |
| YEAR 3 | | | | | |
| EPF3105 | Process and Food Engineering Laboratory II | 1(0+1) | ECV3001 | Engineer and Society | 3(2+1) |
| EPF3202 | Food Engineering Unit Operations | 3(3+0) | EPF3106 | Process and Food Engineering Laboratory III | 1(0+1) |
| EPF3203 | Separation Process | 3(3+0) | EPF3502 | Occupational Safety and Health in Processing Industries | 3(3+0) |
| EPF3304 | Process Control | 3(3+0) | EPF4801 | Process Equipment Design | 3(3+0) |
| EPF3501 | Waste Treatment and Utilisation | 3(3+0) | EPF4802 | Process and Food Plant Design | 3(3+0) |
| EPF3801 | Reaction Kinetics and Reactor Design | 3(3+0) | EPF4804 | Process Simulation and Optimization | 3(2+1) |
| JUMLAH | | 16 | JUMLAH | | 16 |
| YEAR 4 | | | | | |
| EPF4001 | Production and Operation Management | 3(3+0) | EPF3701 | Packaging Engineering | 3(3+0) |
| EPF4805 | Process and Food Plant Design Project | 4(0+4) | EPF4949B | Bachelor's Project | 4(0+4) |
| EPF4901 | Industrial Training ¹ | 5(0+5) | EPFXXXX | Elective III ² | 3(3+0) |
| EPF4949A | Bachelor's Project | 2(0+2) | EPFXXXX | Free Elective | 3(3+0) |
| EPFXXXX | Elective I ² | 3(3+0) | | | |
| EPFXXXX | Elective II ² | 3(3+0) | | | |
| TOTAL | | 20 | TOTAL | | 13 |

NOTA

¹ EPF4901 Industrial Training is carried out for 10 weeks during semester breaks in Semester 2, Year 3.

² EPFXXXX elective course is taken according to option that was chosen.

TOTAL OVERALL CREDIT

129

ELECTIVE COURSE CHOICE

Student is compulsory to choose one of three options offered in final year of studies and a free elective course from five courses offered in fourth year second semester. Course choice proposal are as follows:

| First Semester | | | Second Semester | | |
|---|--------------------------------------|--------|-----------------|--|--------|
| CODES | COURSES | CREDIT | CODES | COURSES | KREDIT |
| BIO-MATERIAL PROCESS ENGINEERING OPTION | | | | | |
| EPF4601 | Plantation Crops Processing | 3(3+0) | EPF4602 | Bio-Material Polymer Technology | 3(3+0) |
| EPF4607 | Biological Process Engineering | 3(3+0) | | | |
| FOOD ENGINEERING OPTION | | | | | |
| EPF4703 | Food Engineering Systems | 3(3+0) | EPF4702 | Fabricated Food Technology | 3(3+0) |
| EPF4709 | Food Plant Cleaning and Sanitation | 3(3+0) | | | |
| PROCESSING MACHINE DESIGN ENGINEERING OPTION | | | | | |
| EPF4806 | Processing Machinery Dynamics | 3(3+0) | EPF4808 | Processing Machinery System and Automation | 3(3+0) |
| EPF4807 | Processing Machinery Elements Design | 3(3+0) | | | |
| FREE ELECTIVE COURSES | | | | | |
| | | | EPF4605 | Pharmaceutical Technology | 3(3+0) |
| | | | EPF4608 | Palm Oil Processing | 3(3+0) |
| | | | EPF4704 | Food Extrusion Technology | 3(3+0) |
| | | | EPF4705 | Powder Technology | 3(3+0) |
| | | | EPF4706 | Rice Processing | 3(3+0) |