OBJECTIVE

The handbook is a compendium that aims to facilitate academic staff with the process of achieving excellence in their career at the university. It presents general and specific information about the university as well as the roles and responsibilities of an effective academic staff. Where possible, constituent documents in a standard format, including: purpose, principles, regulation, procedure, guidance, glossaries and flowcharts are presented as general guidelines and reference.
DEFINITION

The terms used in this Academic Staff Handbook, unless the context requires another meaning:

University means Universiti Malaysia Pahang;

Senate means the Senate of Universiti Malaysia Pahang;

Dean means the head of the Faculty appointed by the Vice-Chancellor;

Faculty means any faculty, school or education centre at the University;

Academic Staff refers to staff of the university appointed on a permanent, contract or part-time basis to the position of Professor, Associate Professor, Senior Lecturer, Lecturer, or English Teacher;

Academic Programme means the study according to the curriculum approved by Senate for the award;

Student means any person who follows the registration of academic programmes at the University;

Course means the components of the course curriculum and has its own code;

Learning and Teaching Methods refers to the approaches, practices, and activities inside and outside the classroom related to a course. This term covers the approach of Teaching & Learning in the class such as learning-centered teacher, student centered learning, active learning; tutorials, practical etc., and also Teaching & Learning activities which involve discussions, presentations and others. Teaching & Learning methods also include providing guidance to student activities outside the classroom and other activities related to the requirements of the course curriculum.

Teaching Plan refers to the document prepared by academic staff for each course taught in a semester as operational planning of the course. A teaching plan must contain information regarding the code and name of the course, the teaching faculty information, synopsis, course, objectives and outcomes, generic skills instilled in students, weekly plan of topics, teaching and learning methods, assessment and references.

UMP community refers to everyone playing an active role in the operation of the university which includes: the university Board of Directors, Academic Management and administrative staff as well as students.
A GUIDE TO LEARNING & TEACHING AT UMP

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Chapter 1

GENERAL INFORMATION

1.1 BACKGROUND

This chapter provides you with the basic information about UMP that you should know as an academic staff here.

Universiti Malaysia Pahang (UMP) is a Malaysian government university. It was formerly known as Kolej Universiti Kejuruteraan dan Teknologi Malaysia (University College of Engineering & Technology Malaysia - KUKTEM).

UMP was established as a public technical university by the Malaysian government on 16 February 2002. Incorporated under the Universities and University Colleges Act 1971 by the Royal Decree of His Majesty the Yang Di Pertuan Agong, Kolej Universiti Kejuruteran & Teknologi Malaysia (KUKTEM) was set up as a technical university, specializing in engineering and technology programmes. Then, KUKTEM operated on a temporary campus in Gambang, Pahang. On 8 October 2006, the Malaysian government agreed to rename KUKTEM to Universiti Malaysia Pahang (UMP).

UMP offers a wide range of skill-based higher education programmes in engineering and technology with the aim of producing competent engineers. The hands-on curriculum, which integrates theory and practice in the concept of a teaching factory, emphasises experiential and action learning that is task-oriented and concentrates on problem-solving. UMP also focuses on applied research and industrial projects to enrich the learning and teaching processes. Consequently, the university promotes commercialisation of research products and believes in exposing students to the latest research and development activities in the industries.

In addition, UMP is committed to the development of human capital and technology to fulfil the needs of industries and contribute to national development. Thus, the campus is fully-equipped with the latest ICT systems, including a wireless broadband internet connection to facilitate the university electronic-based e-learning and e-management activities.

UMP has two campuses which are in Gambang and Pekan.
One of UMP campuses is the Gambang Campus, about 30 km west of the capital city of Kuantan. The campus is only 2½ hours away from Kuala Lumpur via the East Coast Expressway. Strategically located in the East Coast Industrial Belt of Peninsular Malaysia, which hosts a number of multinational corporations in the chemical, petro-chemical, manufacturing, automotive and biotechnology industries. Provide students with extensive exposure to the latest development in the fields of engineering and technology. Currently, six faculties operate from this campus: Faculty of Industrial Science & Technology, Faculty of Civil Engineering & Earth Resources, Faculty of Chemical & Natural Resources Engineering, Faculty of Computer System & Software Engineering, Faculty of Technology and Centre for Modern Languages & Human Science.
**UMP Campus Pekan**

UMP main campus of 745.6 hectares is under construction in the district of Pekan. The first phase of the construction started in 2010 with the building for Faculty of Mechanical Engineering and Faculty of Electrical and Electronic Engineering. Several other buildings have been in operation since, such as the Faculty of Manufacturing Engineering, Faculty of Electrical and Electronic Engineering, Library, Student Centre and Student Residential Colleges.

In the meantime, there are ongoing development work on other buildings such as UMP Main Administration Complex, the Centre for Modern Languages & Human Sciences and Centre for Information and Communication Technology. Upon completion, the campus can accommodate a total of 15,000 students and 2,000 staff.
1.2 VISION, MISSION, OBJECTIVES, PHILOSOPHY & CORE VALUES

VISION
To be a world-class technological university

MISSION
We provide high quality education, research and services in engineering and technology in culture of creativity and innovation

OBJECTIVES
- To produce outstanding graduates by providing competitive engineering and technological programmes.
- To spearhead cutting edge industry-relevant research initiatives.
- To be a leading service provider to industries and community based on our niche and areas of expertise.
- To be recognized as an institution for excellent management and work culture.

PHILOSOPHY
Knowledge, a trust bestowed by Allah to man vicegerent on earth, is to be fully utilized. Emphasis is on applied knowledge guided by Islamic values to develop human capital towards universal harmony and prosperity.

CORE VALUES
- Strong bond with the Creator.
- Steadfast in upholding shared principles.
- Creative in making wise decisions.
- Resolute in facing challenges.
- Taking actions.
1.3 MENTAL MODEL

UMP has its own Mental Model which is aimed at creating a spirit of togetherness and unification amongst staff. It is also as guidance for staff to understand and believe in the model for consistent planning and action towards the university vision and mission based on UMP core values. The foundation for the development of this Mental Model is the concept of Total Quality Organization (TQO). Its main base is the creation of quality work culture among staff. This model has gone through several phases of development since 2002. The latest UMP Mental Model is shown below:
1.4 UMP STRATEGIC PLAN 2011 - 2015

In line with the Malaysian government aspirations, UMP as a public Institution of Higher Learning (IHL) and a Federal Statutory Body is responsible for providing excellent services to its customers and stakeholders.

UMP Strategic Plan 2011 – 2015 is an audacious move to position UMP as a reputable university of choice and to remain relevant in the mainstream. The present challenge is to translate UMP Strategic Plan 2011-2015 into appropriate initiatives within the framework of implementation. It necessitates UMP community to join forces physically and mentally to produce the desired outstanding results. To succeed in making UMP the First Choice Technological University, UMP community must first be prepared to transform its approach and methodology as well as change attitudes and behaviours in order to position the university strategically in the world.

UMP Strategic Plan is now in its 3rd Phase that is to be the ‘First Choice Technological University’. In this phase, two new approaches are employed and they are:

1. **The Introduction of University Key Result Areas (UKRA) to replace Critical Success Factor (CSF)**

   The change from CSF to UKRA is the aspiration in line with the Government Transformation Programme (GTP), National Key Result Area (NKRA) and Ministry Key Result Areas (MKRA).

2. **The Measurement of Key Performance Indicator (KPI)**

   The output measurement is based on the achievement of KPI using four initiatives from the Ministry of Higher Education (MOHE) which are:

   - PSPTN as the main reference for all Public Institutions of Higher Learning in achieving world class status;
   - MyMohes that provides MoHE statistical data;
   - SETARA that rates all public IHLs and
   - MYRA that assesses the research status of IHLs.

The synergy of these two initiatives is aimed at driving UMP to ‘Generate Glory’ in the next phase.

**UMP Strategic Plan Milestones** and the **UKRA: The Continuation of Transformation Agenda** are shown in **Appendix 2 and 3**.
1.4.1 UNIVERSITY KEY RESULT AREAS (UKRA)

Four UKRAs have been identified by the university which are aligned with the NKRA and MKRA agenda; a joint initiative of PSPTN, MYMOHES, SETARA and MYRA. UMP Strategic Plan 2011 - 2015 requires every individual in UMP to play a role in the implementation of these UKRAs. Each academic staff is required to include their contribution to UKRA in their Annual Work Target (Sasaran Kerja Tahunan) document.

**UKRA 1 : Enhancement of Academic Quality**

*is defined as:*

“Every effort that is made by the university to be recognized as a World Class Technological University by strengthening academic programmes offered, providing conducive facilities, and improving the standard of students admission criteria as well as staff selection criteria.”

There are three (3) Key Performance Indicators as follows:

<table>
<thead>
<tr>
<th>KPI 1a - Quality Student Intake</th>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td><strong>Candidate’s Cumulative Grade Point Average (CGPA)</strong></td>
<td><strong>70% of student intake achieves a CGPA of 3.0</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Language competency level (MUET, TOEFL, IELTS etc.)</strong></td>
<td><strong>100% of students achieve English competency of MUET Band 3/TOEFL 550 and IELTS 5.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KPI 1b – Enhancement of Staff Competent</th>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td><strong>Percentage of PhD holders</strong></td>
<td><strong>55% of academics staff is PhD holders</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Years of industrial experience/ professional qualification for academics</strong></td>
<td><strong>30% of academic staff possess five years of industrial exposure/ professional qualification</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Levels of qualifications and years of relevant working/ industrial experiences for non-academics</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Levels of qualifications and years of relevant working/ experiences for technical staff</strong></td>
<td></td>
</tr>
</tbody>
</table>
### KPI 1c - Proficient Graduates

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Programme Outcomes and Programme Educational Objectives (PEO)</td>
<td>• Programme Outcomes (PO) achieved by graduates&lt;br&gt;• Programme Educational Objectives (PEO) achieved by graduates five years upon graduation&lt;br&gt;• Percentage of employed graduates within six months of graduation (<em>)&lt;br&gt;(</em>) graduates employed on convocation date</td>
<td>80% employability rate</td>
</tr>
</tbody>
</table>

### UKRA 2 : Financial Sustainability

**is defined as:**

“The ability of an organisation to manage the likely development and unexpected financial shocks in future periods without having at some stage to introduce substantial expenditure or revenue adjustments.”

### KPI 2a - Operational Sustainability

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ability of an organization to manage the likely development and unexpected financial shocks in future periods without having at some stage to introduce substantial expenditure or revenue adjustments</td>
<td>• Special Commercial Unit&lt;br&gt;• Revenue Generation / Cost Saving</td>
<td>25% of UMP income is generated through operational activities, grants and sponsorships</td>
</tr>
</tbody>
</table>

UKRA 3 : Socio-Economic Development

is defined as:

“UMP contribution to the country's social and economic development through producing proficient individuals and professionals that meet and exceed the requirements of the job market, and harnessing the country's resources by providing conducive infrastructure and educational opportunities to the community at large.”

There are two (2) Key Performance Indicators as follows:

**KPI 3a - Professional Human Capital Development**

**Definition:**

UMP staff and students who have acquired additional professional recognition and acknowledgement through engagement with industries and community that is related to their programmes and expertise.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Total number of professional/certificates of competency per student</td>
<td>1 certificate/recognition for service with the industry/community per student</td>
</tr>
<tr>
<td>• Level of Soft Skills competency</td>
<td></td>
</tr>
<tr>
<td>• Total number of community programmes per student</td>
<td></td>
</tr>
</tbody>
</table>

**KPI 3b - Enterprise Establishment**

**Definition:**

Spin off company through UMP product commercialisation Entrepreneurship programmes Students (UMP/CENFED) and SMEs/SMIs incubation programme initiatives Internal commercialisation programme – venture capital/spin off/registration of IP

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exposure to the students &amp; staffs regarding entrepreneurship programmes</td>
<td>500 students</td>
</tr>
<tr>
<td>• Total number of students/staff participating in entrepreneurship programmes</td>
<td>3% of graduate become entrepreneurs</td>
</tr>
<tr>
<td>• Total number of SMIs/SMEs in the incubation programmes</td>
<td>10 staff/ students/SMIs/SMEs are involved in incubation programmes</td>
</tr>
</tbody>
</table>
UKRA 3 : Socio-Economic Development

is defined as:

“UMP contribution to the country’s social and economic development through producing proficient individuals and professionals that meet and exceed the requirements of the job market, and harnessing the country’s resources by providing conducive infrastructure and educational opportunities to the community at large.”

There are two (2) Key Performance Indicators as follows:

**KPI 3a - Professional Human Capital Development**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators:</th>
<th>Target by 2015</th>
</tr>
</thead>
</table>
| UMP staff and students who have acquired additional professional recognition and acknowledgement through engagement with industries and community that is related to their programmes and expertise. | • Total number of professional/ certificates of competency per student  
• Level of Soft Skills competency  
• Total number of community programmes per student | 1 certificate/recognition for service with the industry/community per student |

**KPI 3b - Enterprise Establishment**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators</th>
<th>Target by 2015</th>
</tr>
</thead>
</table>
| Spin off company through UMP product commercialisation  
Entrepreneurship programmes  
Students (UMP/CENFED) and SMEs/ SMI’s incubation programme initiatives  
Internal commercialisation programme – venture capital/spin off/registration of IP | Exposure to the students & staffs regarding entrepreneur  
Total number of students/staff participating in entrepreneurship programmes  
Total number of SMIs/SMEs in the incubation programmes | 500 students  
3% of graduate become entrepreneurs  
10 staff/students/SMIs/SMEs are involved in incubation programmes |
KRA 4 – Branding for Strategic Positioning

Is defined as:

“To create an outstanding image of UMP and strong convictions among the public of UMP competitive advantage.”

There are two (2) Key Performance Indicators as below:

### KPI 4a - Staff satisfaction

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators:</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff satisfaction towards UMP offerings which meet or exceed their expectations</td>
<td>- Staff satisfaction index</td>
<td>Level of staff satisfaction at 95%</td>
</tr>
<tr>
<td>MyUMP</td>
<td>- Total staff involving in MyUMP Program</td>
<td>50% of UMP staff involving in MyUMP Program</td>
</tr>
</tbody>
</table>

### KPI 4b - Brand equity

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indicators:</th>
<th>Target by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Added value accomplished by UMP as an established brand in the thoughts, words, and actions of the public in creating a feel good impact.</td>
<td>- Brand recognition</td>
<td>UMP gains a high level of public awareness and brand recognition</td>
</tr>
<tr>
<td></td>
<td>- Brand credibility</td>
<td>Positive evaluations of UMP efforts and achievements</td>
</tr>
<tr>
<td></td>
<td>- Brand choice</td>
<td>UMP is a first choice for top notch students in engineering and technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UMP is able to secure financial support from customers and stakeholders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UMP receives priority in funded research and consultancy</td>
</tr>
</tbody>
</table>
1.5 UNIVERSITY EDUCATIONAL OBJECTIVES (UEO)

UMP has planned a number of strategies to improve the curriculum for existing academic programmes as well as set as benchmark for the new ones. The purpose of developing the University Educational Objectives (UEO) is as a point of reference for all faculties and centres in developing their own Programme Educational Objectives (PEOs) and Programme Outcomes (POs). The UEO was approved by Senate on 30 November 2011. UMP has three UEOs which are as follows:

**UEO 1**
Graduates will have essential knowledge in engineering and technology

*KPI: 80% employed within 6 months of graduation*
Assessment through exit survey and graduate tracer study done by the university

**UEO 2**
Graduates will master competencies for career development and self-enhancement

*KPI: 25% promoted to higher position or further studies within 5 years of employment*
Assessment through graduate tracer study done by the university

**UEO 3**
Graduates will function professionally and ethically

*KPI: 25% are actively involved with professional bodies and charitable activities*
Assessment through graduate tracer study done by the university
1.6 SENATE UNIVERSITY

1.6.1 DUTIES AND RESPONSIBILITIES

The Senate is the academic authority of the University which controls and is responsible for the general direction of instruction, examination, and the designation and award of degrees, diplomas, certificates and other academic distinctions (based on Section 22 of the Constitution of Universiti Malaysia Pahang).

In this regard, the Academic Management Division (BPA) has been entrusted as the secretariat to coordinate the university Senate and Senate Standing Committees meetings.

In general, the task of the Secretariat of the Senate, among others, include but are not limited to the following:

i. Plan the progression of the meeting;
ii. Prepare and file meeting agendas;
iii. Prepare, distribute minutes of meetings and solicit feedback on any required action;
iv. Manage and update documents and records relating to the Senate (papers, records and decisions etc.);
v. Update the membership list so that it is accurate and up to date which include the preparation of letters of appointment;
vi. Deal directly with the Senate Standing Committees;
vii. Manage academic matters for approval or notification;
viii. Manage the appointment of the Senate Standing Committees.

1.6.2 MEMBERSHIP OF THE SENATE

Senate membership consists of:

1. The Vice-Chancellor as Chairperson;
2. All the Deputy Vice-Chancellors (one appointed as Chairperson in the absence of the as Chair person);
3. All of the Deans of Faculties and centre;
4. Not more than twenty full-time professor elected for a duration three years; and
5. Not more than five members of the university to be co-opt by the Vice Chancellor for a duration three years.
1.6.3 SENATE STANDING COMMITTEES

The university has established **four (4)** Senate Standing Committees which are:

1. Jawatankuasa Perancangan & Pembangunan Akademik;
2. Jawatankuasa Penyelidikan & Pengembangan Ilmu;
3. Majlis Peperiksaan Universiti; dan
4. Majlis Pengajian Siswa Universiti

1.6.4 RELATIONSHIP BETWEEN THE SENATE AND THE SENATE STANDING COMMITTEES

Universiti Malaysia Pahang Constitution under Section 22 (7) states that:

In carrying out the duties, functions and responsibilities, the Senate may delegate any of the duties, functions and responsibilities to its members or a committee of members.

Senate Standing Committees have been established and have certain powers delegated in accordance with their respective functions as determined by the Senate.

The Senate Standing Committees will discuss and make recommendations to the Senate on academic matters (including the establishment of the faculty / centre, curriculum, examinations, appointment of external examiners and adjunct Professor / Visiting Professor, awards for excellence in academic, research or publication.
1.7 FACULTIES AND CENTRE

There are 8 faculties and 1 centre at UMP. They are:

1. Faculty of Civil Engineering & Earth Resources
2. Faculty of Chemical & Natural Resources Engineering
3. Faculty of Computer Systems & Software Engineering
4. Faculty of Industrial Sciences & Technology
5. Faculty of Technology
6. Faculty of Electrical & Engineering
7. Faculty of Manufacturing Engineering
8. Faculty of Mechanical Engineering
9. Centre for Modern Languages & Human Science

Each faculty offers programmes at both undergraduate programmes and postgraduate levels.

1.7.1 FACULTY OF CIVIL ENGINEERING & EARTH RESOURCES (FKASA)

<table>
<thead>
<tr>
<th>Faculty Management</th>
<th>Dean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fadzil Bin Mat Yahaya</td>
</tr>
<tr>
<td>Deputy Dean (Academic)</td>
<td>Noram Irwan Bin Ramli</td>
</tr>
<tr>
<td>Deputy Dean (Research)</td>
<td>Dr. Ahmad Tarmizi Bin Haron</td>
</tr>
<tr>
<td>Head of Programme (Civil Engineering)</td>
<td>Aizat Bin Alias</td>
</tr>
<tr>
<td>Head of Programme (Diploma)</td>
<td>Mohd Arif Bin Sulaiman</td>
</tr>
<tr>
<td>Assistant Registrar</td>
<td>Ernie Nurazlin Binti Lizam</td>
</tr>
</tbody>
</table>

Programme Offered

POSTGRADUATE PROGRAMMES

Programmes Offered (by Research)
Doctor of Philosophy
1.7 FACULTIES AND CENTRE

There are 8 faculties and 1 centre at UMP. They are:

1. Faculty of Civil Engineering & Earth Resources
2. Faculty of Chemical & Natural Resources Engineering
3. Faculty of Computer Systems & Software Engineering
4. Faculty of Industrial Sciences & Technology
5. Faculty of Technology
6. Faculty of Electrical & Engineering
7. Faculty of Manufacturing Engineering
8. Faculty of Mechanical Engineering

Each faculty offers programmes at both undergraduate programmes and postgraduate levels.

1.7.1 FACULTY OF CIVIL ENGINEERING & EARTH RESOURCES (FKASA)

Faculty Management
Dean
Fadzil Bin Mat Yahaya
Deputy Dean (Academic)
Noram Irwan Bin Ramli
Deputy Dean (Research)
Dr. Ahmad Tarmizi Bin Haron
Head of Programme (Civil Engineering)
Aizat Bin Alias
Head of Programme (Diploma)
Mohd Arif Bin Sulaiman
Assistant Registrar
Ernie Nurazlin Binti Lizam

Programme Offered

POSTGRADUATE PROGRAMMES

Programmes Offered (by Research)
Doctor of Philosophy
- Doctor of Philosophy (Civil Engineering)
- Doctor of Philosophy (Construction)
- Doctor of Philosophy (Environmental Management)

Master of Engineering
- Master of Engineering (Civil Engineering)
- Master of Engineering (Construction)

Master of Science
- Master of Science (Environmental Management)

UNDERGRADUATE PROGRAMMES

Bachelor of Civil Engineering
Diploma of Civil Engineering

Contact Info
Tel : +609-549 2999
Fax : +609-549 2998
Portal:
http://fkasa.ump.edu.my/

1.7.2 FACULTY OF CHEMICAL & NATURAL RESOURCES ENGINEERING (FKKSA)

Faculty Management
Dean
Professor Dato’ Dr. Rosli Bin Mohd Yunus

Deputy Dean (Academic)
Dr. Mohd Yusri Bin Mohd Yunus
Deputy Dean (Research)
Associate Professor Dr. Abdurahman Hamid Nour

Head of Programme (Diploma)
Dr. Mior Ahmad Khushairi Bin Mohd Zahari

Head of Programme (Chemical)
Dr. Mohd Sabri Bin Mahmud

Head of Programme (Bio-technology)
Dr. Nasratin Binti Masngut

Head of Programme (Technology Gas)
En. Syamsul Bahari Bin Abdullah

Assistant Registrar
Roziana Binti Shafiee

Programme Offered

POSTGRADUATE PROGRAMMES
Programmes Offered (by Research)
Doctor of Philosophy
Doctor of Philosophy (Chemical Engineering)
Doctor of Philosophy (Bioprocess Engineering)
Doctor of Philosophy (Gas Engineering)
Doctor of Philosophy (Environmental Technology)

Master of Engineering (Research Mode)
Master of Engineering (Chemical)
Master of Engineering (Bioprocess)
Master of Engineering (Gas)

Master of Science
Master of Science (Environmental Technology)

Programmes Offered (by Coursework and Dissertation Mode)
Master of Chemical Engineering with Entrepreneurship

UNDERGRADUATE PROGRAMMES
Bachelor (Hons.) of Chemical Engineering
Bachelor (Hons.) of Chemical Engineering (Biotechnology)
Bachelor (Hons.) of Chemical Engineering (Gas Technology)
Diploma in Chemical Engineering (Process Plant)
Contact Info
Tel : +609-549 2888
Fax : +609-549 2889
Portal: http://fkksa.ump.edu.my/

1.7.3 FACULTY OF COMPUTER SYSTEMS & SOFTWARE ENGINEERING (FSKKP)

<table>
<thead>
<tr>
<th>Faculty Management</th>
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<tbody>
<tr>
<td></td>
<td>Professor Dr. Jasni Binti Mohamad Zain</td>
</tr>
<tr>
<td></td>
<td>Deputy Dean (Academic) Dr. Mohamad Fadli Bin Zolkipli</td>
</tr>
<tr>
<td></td>
<td>Deputy Dean (Research) Dr. Mazlina Binti Abdul Majid</td>
</tr>
<tr>
<td></td>
<td>Head of Programme (Diploma) Dr. Liew Siau Chuin</td>
</tr>
<tr>
<td></td>
<td>Head of Programme (Software Engineering) Dr. Rohani Binti Abu Bakar</td>
</tr>
<tr>
<td></td>
<td>Head of Programme (Computer System &amp; Networking) Dr. Mohd Nizam bin Mohmad Kahar</td>
</tr>
<tr>
<td></td>
<td>Head of Programme (Graphic &amp; Multimedia)</td>
</tr>
</tbody>
</table>
### Programme Offered

#### POSTGRADUATE PROGRAMMES

**Programmes Offered (by Research)**

**Master by Research**
- Master of Science (Computer Science)
- Master of Science (Software Engineering)

**Doctor of Philosophy**
- Doctor of Philosophy (Computer Science)
- Doctor of Philosophy (Software Engineering)

**Programmes Offered (by Coursework)**

**Master by Coursework**
- Master of Science (Software Engineering)
- Master of Science (Computer Networking)
- Master of Science (Information & Communication Technology)

#### UNDERGRADUATE PROGRAMMES

- Bachelor of Computer Science (Software Engineering) with Honours
- Bachelor of Computer Science (Computer Systems & Networking) with Honours
- Bachelor of Computer Science (Graphics & Multimedia Technology) with Honours
- Diploma in Computer Science

### Contact Info

- Tel: +609-549 2133
- Fax: +609-549 2144

**Portal:** [http://fskkp.ump.edu.my/](http://fskkp.ump.edu.my/)
### 1.7.4  FACULTY OF INDUSTRIAL SCIENCES & TECHNOLOGY (FIST)

<table>
<thead>
<tr>
<th>Faculty Management</th>
<th>Dean</th>
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<tbody>
<tr>
<td></td>
<td>Professor Dr. Jamil bin Ismail</td>
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<tr>
<td></td>
<td><strong>Deputy Dean (Academic)</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Saiful Nizam Bin Tajuddin</td>
</tr>
<tr>
<td></td>
<td><strong>Deputy Dean (Research)</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Mohd Hasbi Bin Ab Rahim</td>
</tr>
<tr>
<td></td>
<td><strong>Head of Programme (Chemical Industries)</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Chong Kwok Feng</td>
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<tr>
<td></td>
<td><strong>Head of Programme (Biotechnology Industries)</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Nina Suhaity binti Azmi</td>
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<tr>
<td></td>
<td><strong>Head of Programme (Materials Technology)</strong></td>
</tr>
<tr>
<td></td>
<td>Dr. Mohd Ashry bin Jusoh</td>
</tr>
<tr>
<td></td>
<td><strong>Assistant Registrar</strong></td>
</tr>
<tr>
<td></td>
<td>Ahmad Fadly Bin Ibrahim</td>
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<table>
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<tbody>
<tr>
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<td><strong>Programmes Offered (By Research)</strong></td>
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<tr>
<td></td>
<td><strong>Doctor of Philosophy</strong></td>
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<tr>
<td></td>
<td>Doctor of Philosophy (Advanced Material)</td>
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<tr>
<td></td>
<td>Doctor of Philosophy (Chemistry)</td>
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<td></td>
<td>Doctor of Philosophy (Physics)</td>
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<tr>
<td></td>
<td>Doctor of Philosophy (Mathematics)</td>
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</tbody>
</table>
### Doctor of Philosophy
- Statistics
- Industrial Chemistry
- Biotechnology
- Food Technology
- Food Sciences

### Master of Sciences
- Advanced Material
- Chemistry
- Physics
- Mathematics
- Statistics
- Industrial Chemistry
- Biotechnology
- Food Technology
- Food Sciences

### UNDERGRADUATE PROGRAMMES
- Bachelor of Applied Science (Honours) - Industrial Chemistry
- Bachelor of Applied Science (Honours) - Industrial Biotechnology
- Bachelor of Applied Science (Honours) – Material Technology

### Contact Info
- Tel : +609-549 2767
- Fax : +609-549 2766

### Portal:
- [http://fist.ump.edu.my/](http://fist.ump.edu.my/)
### 1.7.5 FACULTY OF TECHNOLOGY (FT)

<table>
<thead>
<tr>
<th>Faculty Management</th>
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<tbody>
<tr>
<td></td>
<td>Associate Professor Dr. Zularisam Bin Ab Wahid</td>
</tr>
<tr>
<td>Deputy Dean (Academic)</td>
<td>Associate Professor Ir. Adnan bin Zulkiple</td>
</tr>
<tr>
<td>Deputy Dean (Research)</td>
<td>Dr. Mohd Arifpin bin Mansor</td>
</tr>
<tr>
<td>Head of Programme (Engineering Technology (Electrical))</td>
<td>Dr. Hadi bin Manap</td>
</tr>
<tr>
<td>Head of Programme (Project Management)</td>
<td>Fadzida binti Ismail</td>
</tr>
<tr>
<td>Head of Programme (Industrial Technology Management)</td>
<td>Suziyana binti Mat Dahan</td>
</tr>
<tr>
<td>Head of Programme (Occupational Safety &amp; Health)</td>
<td>Afiza binti Abdullah Suhaimi</td>
</tr>
<tr>
<td>Head of Programme (Pharmaceutical)</td>
<td>Dr. Chua @ Yeo Gek Kee</td>
</tr>
<tr>
<td>Assistant Registrar</td>
<td>Emma Melati binti Burhanuddin</td>
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<table>
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<tr>
<td><strong>Programmes Offered (By Research)</strong></td>
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<tr>
<td><strong>Doctor of Philosophy</strong></td>
<td>Doctor of Philosophy (Technology Management)</td>
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<tr>
<td><strong>Master of Technology Management</strong></td>
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<tr>
<td>Master of Technology Management (Industrial Safety &amp; Health)</td>
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</tr>
<tr>
<td>Master of Technology Management (Operation Management)</td>
<td></td>
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<tr>
<td>Master of Technology Management (Human Capital Resource)</td>
<td></td>
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<tr>
<td>Master of Technology Management (Project Management)</td>
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</table>
### Programmes Offered (by Coursework)

**Master by Coursework**

Master of Business Administration

### UNDERGRADUATE PROGRAMMES

- Bachelor of Occupational Safety and Health with Honours
- Bachelor of Industrial Technology Management with Honours
- Bachelor of Project Management with Honours
- Bachelor of Engineering Technology (Manufacturing) with Honours
- Bachelor of Engineering Technology (Electrical) with Honours
- Bachelor of Engineering Technology (Energy and Environmental) with Honours
- Bachelor of Engineering Technology (Infrastructure Management) with Honours
- Bachelor of Engineering Technology (Pharmaceutical) with Honours

### Contact Info

<table>
<thead>
<tr>
<th>Contact Info</th>
<th>Tel: +609-549 2166</th>
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<tbody>
<tr>
<td></td>
<td>Fax: +609-549 2167</td>
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</table>

**Portal:**

http://ftech.ump.edu.my/
### 1.7.6 FACULTY OF ELECTRICAL & ENGINEERING (FKEE)

<table>
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<th>Faculty Management</th>
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<tbody>
<tr>
<td><strong>Dean</strong></td>
<td>Associate Professor Dr. Kamarul Hawari Bin Ghazali</td>
</tr>
<tr>
<td><strong>Deputy Dean (Academic)</strong></td>
<td>Associate Professor Dr. Hamzah Bin Ahmad</td>
</tr>
<tr>
<td><strong>Deputy Dean (Research)</strong></td>
<td>Dr. Mohd Razali Bin Daud</td>
</tr>
<tr>
<td><strong>Head of Programme (Diploma)</strong></td>
<td>Dr. Hamdan Bin Daniyal</td>
</tr>
<tr>
<td><strong>Head of Programme (Power Electrical)</strong></td>
<td>Dr. Abu Zaharin Bin Ahmad</td>
</tr>
<tr>
<td><strong>Head of Programme (Electronics)</strong></td>
<td>Dr. Md. Rizal bin Othman</td>
</tr>
<tr>
<td><strong>Head of Programme (Control &amp; Instrumentation)</strong></td>
<td>Dr. Addie Irawan Bin Hashim</td>
</tr>
<tr>
<td><strong>Assistant Registrar</strong></td>
<td>Jamil Bin Basri</td>
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<td><strong>Programmes Offered (By Research)</strong></td>
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<tr>
<td><strong>Doctor of Philosophy</strong></td>
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<tr>
<td>Doctor of Philosophy (Electrical Engineering)</td>
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<tr>
<td>Doctor of Philosophy (Electronics Engineering)</td>
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<tr>
<td>Doctor of Philosophy (Instrumentation Engineering)</td>
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<tr>
<td><strong>Master of Engineering</strong></td>
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<tr>
<td>Master of Engineering (Electrical)</td>
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<tr>
<td>Master of Engineering (Electronics)</td>
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<tr>
<td>Master of Engineering (Instrumentation)</td>
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<tr>
<td><strong>UNDERGRADUATE PROGRAMMES</strong></td>
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</tr>
<tr>
<td>Bachelor of Electrical Engineering (Electronics)</td>
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<tr>
<td>Bachelor of Electrical Engineering (Power System)</td>
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<tr>
<td>Bachelor of Electrical Engineering (Control &amp; Instrumentation)</td>
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</tr>
<tr>
<td>Diploma in Electrical Engineering (Industrial Electronics)</td>
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</tr>
</tbody>
</table>
Contact Info
Tel: +609-424 6000
Fax: +609-424 6111
Portal:
http://fkee.ump.edu.my/

1.7.7 FACULTY OF MANUFACTURING ENGINEERING (FKP)

Faculty Management

Dean
Professor. Dr. Wan Azhar Bin Wan Yusoff

Deputy Dean (Academic)
Dr. Noraini Binti Mohd Razali

Deputy Dean (Research)
Dr. Ahmad Razlan Bin Yusoff

Head of Programme (Mechatronic)
Wan Hasbullah bin Mohd Isa

Head of Programme (Manufacturing)
Mohd Zairulnizam bin Mohd Zawawi

Assistant Registrar
Zuryaty binti Zol
## Programme Offered

### POSTGRADUATE PROGRAMMES

*Programmes Offered (by Research)*

**Doctor of Philosophy**
- Doctor of Philosophy (Manufacturing Engineering)
- Doctor of Philosophy (Mechatronic Engineering)

**Master of Engineering**
- Master of Engineering (Manufacturing)
- Master of Engineering (Mechatronic)

### UNDERGRADUATE PROGRAMMES

- Bachelor of Manufacturing Engineering
- Bachelor of Mechatronics Engineering
- Bachelor of Mechatronics Engineering (UMP – HsKA, Germany)

## Contact Info

<table>
<thead>
<tr>
<th>Tel:</th>
<th>+609-424 5800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fax:</td>
<td>+609-424 5888</td>
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</table>

**Portal:**

http://fkp.ump.edu.my/
## 1.7.8 FACULTY OF MECHANICAL ENGINEERING (FKM)

<table>
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<th>Faculty Management</th>
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<tbody>
<tr>
<td><strong>Dean</strong></td>
<td>Associate Professor Dr. Rizalman Bin Mamat</td>
</tr>
<tr>
<td><strong>Deputy Dean (Academic)</strong></td>
<td>Dr. Raja Noor Mohd Zuki bin Nik Mohamed</td>
</tr>
<tr>
<td><strong>Deputy Dean (Research)</strong></td>
<td>Dr. Mahadzir bin Ishak@Muhammed</td>
</tr>
<tr>
<td><strong>Head of Programme (Master)</strong></td>
<td>Dr. Zakri bin Ghazali</td>
</tr>
<tr>
<td><strong>Head of Programme (Diploma)</strong></td>
<td>Dr. Mohd Fadzil Faisae Bin Ab. Rashid</td>
</tr>
<tr>
<td><strong>Head of Programme (Mechanical)</strong></td>
<td>Dr. Mohd Fairusham Bin Ghazali</td>
</tr>
<tr>
<td><strong>Head of Programme (Automotive)</strong></td>
<td>Ir. Dr. Mohd Ruzaimi Bin Mat Mat Rejab</td>
</tr>
<tr>
<td><strong>Head of Programme (Biomechanical)</strong></td>
<td>Dr. Kumaran a/l Kadirgama</td>
</tr>
<tr>
<td><strong>Assistant Registrar</strong></td>
<td>Hazman Bin Abdul</td>
</tr>
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<table>
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<tbody>
<tr>
<td><strong>Programmes Offered (By Research)</strong></td>
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<tr>
<td>Doctor of Philosophy</td>
<td>Doctor of Philosophy (Mechanical Engineering)</td>
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<td>Doctor of Philosophy (Automotive Engineering)</td>
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<td>Doctor of Philosophy (Industrial Engineering)</td>
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<tr>
<td><strong>Programmes Offered (by Coursework)</strong></td>
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<tr>
<td><strong>Master by Coursework</strong></td>
<td>Master of Mechanical Engineering</td>
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</tbody>
</table>
UNDERGRADUATE PROGRAMMES

B.Eng (Hons.) Mechanical Engineering
B.Eng (Hons.) Mechanical Engineering (Automotive)
B.Eng (Hons.) Automotive Engineering - (Dual Degree)
Diploma In Mechanical Engineering

Part Time
Diploma In Mechanical Engineering

Contact Info
Tel : +609-424 6200
Fax : +609-424 6222
Portal:
http://fkm.ump.edu.my/

1.7.9 CENTRE FOR MODERN LANGUAGES & HUMAN SCIENCE (PBMSK)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Professor Dr. Abd Jalil bin Borham</td>
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<tr>
<th></th>
<th>Deputy Dean (Academic)</th>
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<tbody>
<tr>
<td></td>
<td>Dr. Norrihan binti Sulan</td>
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<tr>
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<th>Deputy Dean (Research &amp; Development)</th>
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<tbody>
<tr>
<td></td>
<td>Associate Professor Dr. Muhamad Nubli bin Abdul Wahab</td>
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<thead>
<tr>
<th></th>
<th>Head of Programme (Modern Languages)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Dr. Hafizoah binti Kassim</td>
</tr>
</tbody>
</table>

Contact Info
Tel : +609-424 6200
Fax : +609-424 6222
Portal:
http://fkm.ump.edu.my/
**Head of Programme (Human Sciences)**  
Ahmad Irfan bin Ikmal Hisham

**Head of Programme (Foreign Languages)**  
Dr. Aini binti Ahmad

**Head of Programme (Soft Skills)**  
Dr. Fatmawati binti Latada

**Assistant Registrar**  
Saharudin Bin Ramli

---

**Programme Offered**

**POSTGRADUATE PROGRAMMES**

Programmes Offered (By Research)

**Doctor of Philosophy**  
Doctor of Philosophy (Humanities Technology)

**Master of Humanities Technology**  
Master of Humanities Technology (English Language & Professional Communication)  
Master of Humanities Technology (Halal Management System)  
Master of Humanities Technology (Human Performance System)  
Master of Humanities Technology (Technology Enhanced Language Learning)

**UNDERGRADUATE UNIVERSITY AND ELECTIVE COURSES**

Courses offered  
**Modern Language Department**

<table>
<thead>
<tr>
<th>Diploma</th>
<th>UHL1412</th>
<th>Foundation English</th>
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<td></td>
<td>UHL1422</td>
<td>English for Academic Skills</td>
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<tr>
<td></td>
<td>UHL1432</td>
<td>English for Occupational Communication</td>
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<td>Degree</td>
<td>UHL2400 (Below Band 5.0)</td>
<td>Fundamentals of English Language</td>
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<tr>
<td></td>
<td>UHL2412 (Band 5.0)</td>
<td>English for Academic Communication</td>
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<td></td>
<td>UHL2422 (Band 6.0)</td>
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<td>UHL2432</td>
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### Foreign Language Department

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<td>Mandarin for Beginners</td>
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<td>German for Beginners</td>
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<td>UHF 1141</td>
<td>Arabic for Beginners</td>
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<td>UHF 1151</td>
<td>Spanish for Beginners</td>
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<td>Degree</td>
<td>UHF 1161</td>
<td>Malay Language for Beginners</td>
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<td>UHF 2111</td>
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<td>Spanish for Beginners</td>
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### Soft Skills Department

<table>
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<th>Soft Skills</th>
<th>Degree &amp; Diploma</th>
<th>Course Code</th>
<th>Course Title</th>
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<td>UHS 1021</td>
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<td>Soft Skills 1 (Basic Soft Skills)</td>
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<td>UHS 2021</td>
<td>Soft Skills 2 (Industrial Soft Skills)</td>
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### Human Sciences Department

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<td>Islamic &amp; Asian Civilization 1</td>
</tr>
<tr>
<td></td>
<td>UHM 2022</td>
<td>Ethnic Relations</td>
</tr>
<tr>
<td>Elective</td>
<td>UHE 3012</td>
<td>Contemporary Leadership in Community</td>
</tr>
</tbody>
</table>
SOFT SKILLS DEPARTMENT

Generally, today’s job market demands more than just knowledge and skills. Beyond these job-specific technical skills, soft skills are universally sought by employers. The challenge is to introduce a programme which allows students to learn and capitalize their soft-skills competencies. Soft Skills was first introduced to complement UMP students’ technical skills and knowledge.

The Soft Skills Department is given the responsibility to organize necessary programmes based on feedback from the industries (Fatmawati, Mansor, Mohd Azam, Muhammad Nubli & Norrihan, 2005). The implementation of the Soft Skills programme at UMP requires effort from all quarters as this programme cannot be realized without the support from each and every UMP associate and student. It is the university mission to produce proficient graduates physically, emotionally, spiritually and intellectually.

The Soft Skills concept was initiated in 2002, and has been implemented in stages since then. The Soft Skills programme is continually evaluated and improved with regards to its method of implementation, content and evaluation to match the current market and MOHE needs.

i. Mission
To develop a well-rounded personality with competencies based on positive values in an effort to uphold the vision and mission of UMP.

ii. Goals
- To develop Soft Skills among students of UMP;
- To produce graduates who are excellent in academics and to cultivate personality in line with the National Philosophy of Education;
- To develop awareness of responsibility towards self, the community, industry and nation.
iii. Current Implementation
Soft Skill programme is compulsory for all students and is inculcated through two methods. Both methods are implemented through one-credit courses:

- Embedded programme (UHS1011 Basic Soft Skills) - 1 credit
- Standalone programme (UHS2011 Industrial Soft Skills) – 1 credit

The basic elements of soft skills introduced and assessed at UMP include:

a) Leadership
b) Team working
c) Communication
d) Positive values
e) Learning capability

Contact Info

Tel : +609-549 3111
Fax : +609-549 3112

Portal:
http://cmlhs.ump.edu.my/
1.8 ADMINISTRATIVE OFFICES, UNITS & CENTRES

1.8.1 VICE CHANCELLOR OFFICE (PNC)

Background

Integrity and culture of excellence that is the mark of quality brands portrayed by the Vice-Chancellor Office staff in carrying out our duties and responsibilities as public servants in UMP. For this purpose it is the office’s determination to present personal qualities and work ethics that are admirable and can be set as an example to others. The Office’s employs value-focused strategies and performance based work ethics.

The Office of the Vice-Chancellor is a mirror that gives a general description of the entire UMP. Thus, the staff are responsible for providing the best service to the customers and stakeholders. The Vice-Chancellor's Office comprises of the Administration & Finance Unit, Policy Unit, Events & Promotions Unit, Public Relations Unit, Publications & Graphics Unit and Media Technology & Documentation Unit.

Functions

1. To manage matters relating to policies that can be used as a model by other Administrative Centres/Units /Offices,
2. To conduct matters relating to event management and protocol for all official functions of the university, especially ones that involve the Vice-Chancellor and outside guests,
3. To manage matters relating to public and media relations and promotion in order to ensure the university brand and image,
4. To manage matters relating to photography, videography and documentation involving the storage and archival of photographs, videos and ongoing development of UMP, and
5. To produce university publications and graphics in creating and enhancing UMP brand and image.

Any questions can be forwarded to:

VICE CHANCELLOR OFFICE
Universiti Malaysia Pahang
Lebuh Raya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel : 09-549 2501
Fax : 09-549 3199
http://pnc.ump.edu.my/
1.8.2 DEPARTMENT OF REGISTRAR

Background

The Department of Registrar is responsible for handling matters of general administration and human resource management. To ensure that planning, management and administration are implemented effectively and efficiently, there are five (5) divisions in the department which are: Human Resource Management Division, Academic Management Division, Competency Training & Development Division, Management Services Division and Administration Division of UMP Pekan.

Functions:

1. Planning and personnel management through budget processing, advertising, recruitment for placement and promotion.

2. Planning and handling of training programmes for staff, assessing the effectiveness of programmes, monitoring the competency of staff, and implementing improvisation measures.

3. Managing matters pertaining to academic study leave, scholarship under the Bumiputera Academic Training Scheme (SLAB) / IPTA Academic Training Scheme (SLAI) and UMP scholarship.

4. Strengthening the competency of staff through the implementation of general and specific induction courses, examination services, and Assessment for promotion (PTK).

5. Managing the assessment of staff, service records, in service confirmation, salary and allowances, housing loans, awards and disciplinary action, as well as retirement.

6. Managing the Academic Management Division.

Any questions can be forwarded to:

DEPARTMENT OF REGISTRAR
Universiti Malaysia Pahang
Lebuh Raya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel : 609-549 2512
Fax : 609-549 9181
http://pendaftar.ump.edu.my/
1.8.2.1 ACADEMIC MANAGEMENT DIVISION (BPA)

Background

The Academic Management Division was established in 2002 and in the beginning, the division was known as the Undergraduate Study Centre. The division was merged with the Students Affair Unit. Both units then were divided in May 2003. Now, the Academic Management Division is placed under the Department of Registrar.

Academic Management Division is divided into 5 units;

1. Students Intake & Academic Relations Section
2. Senate & Academic Administration
3. Data & Students Record
4. Examinations
5. Awards and Conferment
6. Academic Management Division of Pekan Campus

Functions:

The Academic Management Division is responsible towards the planning, supervision and execution of matters regarding undergraduates at UMP. Below are the affairs handled by this division:-

- Students intake and entry
- Students Registration
- Course Registration
- Students Record
- Examinations and Awards
- Academic Relations
- Undergraduate Promotional Activities
- Convocation
- Other affairs which are relevant to the administration and academic development of UMP

This division is also responsible of the University Senate in which it coordinates the University Senate Meetings. Senate is the highest academic body which administers and sets the policy regarding academic administration at the University.

Any questions can be forwarded to:

ACADEMIC MANAGEMENT DIVISION (BPA)
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel : 609-549 2550
Fax: 09-549 2555
http://bpa.ump.edu.my
1.8.2.2 COMPETENCY TRAINING & DEVELOPMENT DIVISION (BLPK)

Background

Since the establishment of UMP, the role of training and human resource development that operates through the Department of Registrar, generally manages staff training programmes. This include learning and teaching courses for academic staff confirmation and induction courses for all staff. The staff training programmes are often handled by this division and provided by UMP staff or external agencies.

Any questions can be forwarded to:

COMPETENCY TRAINING & DEVELOPMENT DIVISION (BLPK)
Jabatan Pendaftar
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel : 609-549 3243
Fax: 09-549 3260

http://blpk.ump.edu.my
1.8.3 DEPARTMENT OF ACADEMIC AFFAIRS & INTERNATIONALIZATION (JHEAA)

Background

Department of Academic Affairs & Internationalization (JHEAA) is a department responsible for academic affairs and Internationalization at the university. Its responsibilities include monitoring various aspects of academic programmes, the development of students and academic staff.

Prior to the establishment of JHEAA in January 2006, the department was an entity under the Deputy Rector (Academic) who is responsible for academic affairs at the University College of Engineering & Technology Malaysia (KUKTEM). In the early years, the department had 6 centres / units / divisions:

a. Office of the Deputy Vice-Chancellor (Academic & International)
b. Academic Staff Development Centre (ASDC)
c. Centre for Academic Services (IAS)
d. Graduate School (PPS)
e. International Unit (CU)
f. Academic Quality Assurance Unit (UJKA)

Today, JHEAA is headed by the Deputy Vice-Chancellor (Academic & International).

In line with the development of the university, the department was restructured into three (3) respective centres:

a. Office of the Deputy Vice-Chancellor (Academic & International)
b. Centre for Academic Innovation & Competitiveness (CAIC)
c. German Academic Career Centre (GACC)

Each centre is headed by a Director / Assistant Registrar, assisted by several support staff.

Any questions can be forwarded to:

DEPARTMENT OF ACADEMIC & INTERNATIONAL AFFAIRS
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel: +609-549 2649
Faks: +609-549 2616
http://jheaa.ump.edu.my/
1.8.3.1 CENTRE FOR ACADEMIC INNOVATION & COMPETITIVENESS (CAIC)

Background
The Centre for Academic Innovation & Competitiveness (CAIC), formerly known as the Centre for Academic Development & Quality Assurance (CAQaDE) is one of the centres under the Department of Academic Affairs & Internationalization (JHEAA). At the moment, three (3) units are established to run the initiatives by CAIC and they are;

a. Innovation of Best Practices Unit
b. Academic Assurance Unit and
c. Infrastructure Academic Unit

CAIC is headed by a Director and assisted by three Deputy Directors.

Vision
To be a centre for learning and teaching excellence which is innovative in practices and competitive in programmes offered through, academic quality assurance processes.

Quality Policy
Giving commitment to all our customers in meeting the required standards.

Mission
a. Ensuring that all academic programmes offered are of the highest quality and are accredited by professional agencies.
b. Foreseeing that the new programmes are competitive in the global market.
c. Sustaining the development of the academicians though effective monitoring so that commitment to professional roles and responsibilities is achieved.

Any questions can be forwarded to:

CENTRE FOR ACADEMIC INNOVATION & COMPETITIVENESS
Department of Academic & International Affairs
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Gambang, Kuantan, Pahang Darul Makmur
Tel: +609-549 2085
Fax: +609-549 2089
http://caic.ump.edu.my/
1.8.3.2 GERMAN ACADEMIC CAREER CENTRE (GACC)

Background

The main objective of the German Academic & Career Centre is to mediate between the various partners, such as UMP and HsKA, the industry as well as students and between German universities and students who would like to pursue their master degree or PhD overseas. In order to promote the Dual Award Degree Programme to interested national and international students as well as to the industry, GACC is constantly developing marketing strategies to draw attention to this unique programme.

Apart from symbolising the link between the mentioned parties, the three cog-wheels in the above logo also represent the three main areas of our responsibilities:

Language department:
   a) To seek suitable GFL-lecturers
   b) To coordinate and facilitate lecturers
   c) To facilitate the language department with up-to date books and media
   d) To coordinate the DSH-/ Test-DaF Exam

Academic:
   a) To facilitate guest professors in charge of curricula and exams
   b) To establish a comprehensive network with German universities
   c) To establish exchange programmes for outgoing UMP-HsKA students
   d) To counsel, prepare and supervise students under the dual degree Programme of UMP-HsKA for post-degree studies in Germany

Career Centre:
   a) To create a network with German industries in Malaysia and abroad
   b) To seek scholarships from the industry scholarships
   c) To coordinate internships in Malaysia and Germany
   d) To organise industry fairs at UMP
   e) To conduct vocational preparation seminars

Any questions can be forwarded to:

GERMAN ACADEMIC CAREER CENTRE (GACC)
Universiti Malaysia Pahang, Pekan Campus
26600 Pekan, Pahang Darul Makmur
Tel: +60 9 424 5991
Fax: +609 549 2759
1.8.3.2 GERMAN ACADEMIC CAREER CENTRE (GACC)

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Any questions can be forwarded to:

GERMAN ACADEMIC CAREER CENTRE (GACC)
Universiti Malaysia Pahang, Pekan Campus
26600 Pekan, Pahang Darul Makmur
Tel: +60 9 424 5991
Fax: +609 549 2759

1.8.4 INSTITUTE OF POSTGRADUATE STUDIES (IPS)

Background

Graduate study is integral to the core business of a university. Provision of graduate studies enables a university to transform its students into highly trained and knowledgeable professionals. Such professionals will be capable of embarking on R&D activities and of meeting industrial and organisational related challenges. The development of these professionals certainly helps meet the human resource requirement of the country.

For those involved, graduate studies will help to develop their career through the additional knowledge and skills acquired through graduate studies. These will put them many steps ahead in terms of abilities to meet employers’ requirements. Graduate studies would also make individuals more confident and independent to embark on entrepreneurial activities on their own.

University Malaysia Pahang (UMP) is committed towards facilitating highly motivated individuals to develop a distinctive career through graduate studies. Being a focussed university specializing in engineering and technical fields, UMP hopes to produce future leaders in these fields. As such the university invites final year undergraduates and graduates with relevant qualifications to consider choosing UMP as their destination for further studies.

Any questions can be forwarded to:

INSTITUTE OF POSTGRADUATE STUDIES (IPS)
University Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Pahang Darul Makmur
Tel: 09-549 2050/2578/2034
Fax: 09-549 2662

http://ips.ump.edu.my/
1.8.5 INTERNATIONAL OFFICE (IO)

Background
The International Office (IO) was established in 2009, with the aim of steering the internationalization endeavours of the university. The International Office (IO) collaborates with faculties and various departments at the university to promote and enhance international educational efforts, with the goal of increasing global competence for the university community and beyond.

IO also provides support services to international students and their dependents in matters related to immigration issues. To enrich the students’ Malaysian experience, IO periodically organizes numerous programmes that further enhance the overall integration of the international student population into the local community, both on- and off-campus.

Any questions can be forwarded to:

INTERNATIONAL OFFICE (IO)
University Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel : 09-549 2631
Fax : 09-549 2698

http://io.ump.edu.my/
1.8.6 DEPARTMENT OF STUDENTS & ALUMNI AFFAIRS (JHEPA)

Background

The Department of Students & Alumni Affairs (SAffAD) UMP was established in 2002. SAffAD is responsible for students' welfare and development to support the vision, mission, philosophy and core values of the university.

Objectives

The objectives of the department include:

a. To encourage student participation through the development of student activities on and off campus. To encourage student participation through the activity of development of student inside and outside campus.

b. To plan co-curricular activities and campus life activities in order to develop students holistically.

c. To provide comprehensive campus life environment (total campus experience) through infrastructure development, and providing conducive services and facilities.

d. To create a network of close and continual relationship between UMP alumni and their alma mater

There are one (1) centres directly under this department:

a. Co-curriculum Centre

DEPARTMENT OF STUDENTS & ALUMNI AFFAIRS
University Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel : 09-549 2545
Fax : 09-549 2535

Universiti Malaysia Pahang
26600 Pekan,
Pahang Darul Makmur
Tel : 09-424 5727
Fax : 09-549 5726

http://jhepa.ump.edu.my/
1.8.6.1 CO-CURRICULUM CENTER (KO-Q)

University Malaysia Pahang Curriculum Centre was established on January 16, 2009, in line with the university aspiration in producing proficient and balanced graduates. It also aims to produce students who have a strong sense of identity, innovation, resilience through co-curricular activities which are organized and innovative. The central role of the centre is in the delivery of co-curricular courses, which are allocated two credits in the university curriculum. All courses offered are designed to ensure that students gain value-added knowledge from the centre.

The objective of the Co-Curriculum Centre include:

a. To strengthen and enhance co-curricular programmes through systematic planning and management.

b. To give encouragement to the graduates in choosing programmes based on the interests and capabilities of each student.

c. To produce graduates who have high self-esteem, knowledge, integrity, and are innovative and creative in line with the requirements of the university.

d. To plan co-curricular activities and campus life activities by ensuring that the Learning Outcomes (LO) and Soft Skills are consistent with the Soft Skills courses at the university. This is to ensure a holistic student with IQ, EQ and SQ.

Any questions can be forwarded to:

CO-CURRICULUM CENTRE
DEPARTMENT OF STUDENTS & ALUMNI AFFAIRS
University Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel : 09-549 2545
Fax : 09-549 2535
http://jhepa.ump.edu.my/
1.8.7 INDUSTRY & SOCIAL NETWORKS DIVISION (BJIM)

Background

The Industrial Partnership and Community Relation Division also known as BJIM, was established on February 15, 2012. This Division acts as a bridge between the academia, industry and community. Currently, Strategic Alliance among university-industry-community is now considered necessary in view of not only the possible mutual gains for all of the parties involved but also the immense benefits it brings towards nation building and a better economy.

Roles

To bridge the gap between academia and industry cooperation through various measures. i.e. collaborate on industrial training of graduating students, initiate knowledge transfer programme, facilitate in staff industrial attachment, getting industry experts in the learning and teaching activities at the university, as well as collaborate with industry, government agencies and NGOs to secure sponsorships for excellent students.

Objectives

a) To act as a one-stop referral centre for industries and the community.

b) To ensure that linkages and engagements with industry and the community are meaningful and effective.

c) To increase and enhance the linkages and engagement within industry & community at national and international levels.

Any questions can be forwarded to:

INDUSTRY PARTNERSHIP & COMMUNITY RELATION DIVISION (BJIM)
Universiti Malaysia Pahang
Leburaya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel: 09-549 2758
Fax: 09-549 2759

http://bjim.ump.edu.my/
1.8.8 LIBRARY

Background

UMP has two libraries, one at each campus. The library plays an important role in providing services and resources for Teaching & Learning, Research and Consultancy. It is also a catalyst in promoting a culture of knowledge sharing at UMP and in the community, enriching various knowledge repositories. The library at Pekan campus started its service since March 2010 while the one in Gambang was in operation since the inception of the university. UMP libraries have a vast collection of books and multimedia for circulation and reference.

UMP also subscribes to various repository databases such as Ebscohost, IEEE/IET Electronic library, Proquest, Scopus, and Science Direct. Its physical facilities include discussion rooms, seminar rooms, multimedia rooms, auditorium, computer laboratories and audio visual rooms. The e-resource at UMP library provides comprehensive access to full-text e-journals available at the library. The portal allows users to search for online databases, e-journals, and e-books by title or browse title by subject. The e-resource is provided a both on and off-campus access to the library electronic resource.

Any questions can be forwarded to:

Pekan Campus
PERPUSTAKAAN UNIVERSITI MALAYSIA PAHANG,
Kampus Induk,
26600 Pekan, Pahang Darul Makmur
Tel : 09-424 5600
Fax : 09-424 5666

Gambang Campus
PERPUSTAKAAN UNIVERSITI MALAYSIA PAHANG,
Kampus Gambang,
Lebuhraya Tun Razak,
26300 Kuantan, Pahang Darul Makmur
Tel : 09-549 3131
Fax : 09-549 3132

http://umplibrary.ump.edu.my
1.8.9 ISLAMIC AND HUMAN DEVELOPMENT CENTRE (PIMPIN)

Background

The Islamic and Human Development Centre (PIMPIN), UMP was established on February 28, 2007. It was previously known as the Islamic Affairs Unit. The change from unit to centre is aimed at expanding the scope of work in tandem with the development in UMP. The centre is responsible for human development programmes among the UMP staff in line with the objective of creating a balanced human capital in terms of the mental, physical, emotional and spiritual. The activities undertaken are focussed on training, workshops, seminars, courses, lectures and so forth that lead to the enhancement of the understanding of Islam and universal moral values.

Objectives

The objectives of the centre are as follows:

a. To instill a deep understanding of Islam in UMP community.
b. To educate towards appreciating UMP core values.
c. To provide advice and guidance to UMP community and the surrounding communities on relevant issues.
d. To explain to non-Muslims about the advantages and privileges of Islam.

Any questions can be forwarded to:

Gambang Campus
PUSAT ISLAM & PEMBANGUNAN INSAN UMP
Universiti Malaysia Pahang
Lebuh Raya Tun Razak
26300, Gambang, Kuantan, Pahang Darul Makmur.
Tel : 09-549 2642
Fax : 09-549 2644

Pekan Campus
PUSAT ISLAM & PEMBANGUNAN INSAN
Universiti Malaysia Pahang,
Kampus Pekan
26600, Pekan, Pahang Darul Makmur.
Tel : 09-424 5731
Fax : 09-424 5732

http://pimpin.ump.edu.my/
1.8.10 STUDENT HEALTH CENTRE (PKP)

Background

The Student Health Centre (PKP) UMP was established on 2 August 2004. Prior to that, students with health problems were sent to the nearby clinics for treatment. In the beginning, the centre had only one medical officer and a nurse. Now, it has several employees which include Assistant Medical Officer, staff nurses, pharmacy assistants, drivers and Health Care Assistants.

Any questions can be forwarded to:

PUSAT KESIHATAN PELAJAR (PKP)
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel: 09-549 2536
http://klinik.ump.edu.my/
1.8.11 UMP ADVANCED EDUCATION SDN BHD (TRANSFORMATION FROM CENFED)

Background

UMP ADVANCED EDUCATION SDN BHD (UAE), wholly-owned by UMP, was recently established in October 2013 as a result of a strategic transformation from an entity known as CENFED (Centre for Continuing Education and Professional Development), which was established in 2004. CENFED’s primary focus was on Lifelong Learning Education; particularly on the development of human capital in the community by coordinating and providing re-training and professional development programs, short courses, and skills development programmes. Significantly, CENFED was the enabler and feeder for UMP to provide continuing educational opportunities to the industry and community.

With effect from 1st April 2014, UAE aims to continue CENFED’s legacy but with new vigour and enhanced momentum with the vision to “Empower Individuals and Business with Applied Knowledge” whereby education is made available for everybody to improve their lives.

Currently, UAE is the authorised training provider for:

a. Ministry of Education
b. Eastern Corridor Economic Region Development Council (ECERDC)
c. Human Resources Development Fund (HRDF)
d. Department of Safety & Health (DOSH)
e. Construction Industry Development Board (CIDB)

Any questions can be forwarded to:

UMP ADVANCED EDUCATION SDN BHD
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
Tel : 09-549 2658/ 3376/ 3364
Fax : 09-549 3384

http://cenfed.ump.edu.my/
1.8.12 OCCUPATIONAL SAFETY AND HEALTH UNIT (OSHU)

Background

In 2009, Occupational Safety and Health Unit (OSHU) was established under the Department of Research and Innovation (JPNI) as the starting point in achieving the objective of coordinating all programs related to occupational safety and health in the UMP. After 3 years of operation, OSHU then upgraded to Occupational Safety & Health Management Office (OSHMO).

Occupational Safety & Health Management Office (OSHMO) is responsible to manage any aspects related to safety and health in the UMP under the provisions of the Occupational Safety and Health Act 1994 (OSHA 1994) and Factories and Machinery Act (FMA 1967).

OSHMO also act as a planner for any program or activities undertaken to fulfill the requirement of the OSHA 1994. OSHMO also trying to implement any OSH program based on "as far as practicable" practice in the UMP and also promoting a safe work culture within the staff and students.

Any questions can be forwarded to:

OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT OFFICE (OSHMO)
Universiti Malaysia Pahang
Lebuhraya Tun Razak,
26300 Gambang, Kuantan Pahang Darul Makmur
Tel: 09-549 2240
Fax: 09-549 2241

http://oshmo.ump.edu.my/
1.8.13 CENTRE FOR ENTREPRENEURSHIP (MyPACE)

Background

Centre of Entrepreneurship at UMP (MyPACE) was approved by the Management of the University on October 1, 2010 as a center which responsible to plan, coordinate, monitor and evaluate programs and activities as well as entrepreneurial education. The center reports directly to the Vice-Chancellor of Universiti Malaysia Pahang.

Vision

As a referral center of entrepreneurial learning in competitive environment at the national and international level

Mission

1. To combine expertise in entrepreneurship at UMP in order to develop a consortium to work together and create a solid foundation of entrepreneurship education to students, graduates and existing entrepreneurs
2. As a consultant to students and young entrepreneurs in developing business
3. To conduct research on entrepreneurship issues

Services Offered

1. Consultancy and advisory services
   MyPACE offer consultation services and advice through mentoring and guidance to the potential entrepreneurs (UMP students, alumni and community UMP).

2. Training
   Conduct programs, workshops, seminars, training courses related to entrepreneurship for students and community.

3. Research & Publication
   Undertake research and produce publication compatible with all aspects of entrepreneurship through a combination of academic and other relevant agencies

Any questions can be forwarded to:

CENTRE OF ENTREPRENEURSHIP
Universiti Malaysia Pahang
Lebuhraya Tun Razak
26300 Kuantan, Gambang, Pahang Darul Makmur
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TEACHING & SUPERVISION

2.1 ACADEMIC STAFF WORKLOAD

2.1.1 BACKGROUND

UMP has developed a guideline to illustrate Academic Staff Workload. The Guideline for Academic Staff Workload is a faculty’s point of reference:

a. To determine academic staff workload for each semester
b. To plan for academic staff recruitment.

This guideline has been discussed extensively before it was formalized at the Mesyuarat Jawatankuasa Senat Kurikulum, Pengajaran & Pembelajaran Kali Ke- 26 Bil. 5/ 2011 and Mesyuarat Senat Kali Ke-78 Bil. 8/2011 dated 31 Oktober 2011.

The distribution of percentages in the Academic Staff Workload is essentially to determine each academic staff workload for each semester. Any variation in the distribution is open for discussion between the academic staff and the Dean of Faculty/ Centre.

In principle, the teaching workload is according to the three (3) main categories required of an academic staff:

(i) Teaching & Supervision
(ii) Research, Development & Commercialization
(iii) Administration & Special Duties.

The percentages for each category in the workload vary from one scheme to another.
2.1.2 JUSTIFICATION

The purpose of the guideline is:

a. To facilitate academic staff in determining their workload for each semester.
b. To assist faculty/dean/deputy dean in evaluating academic staff workload each semester.
c. To ensure quality of work is at its optimum and academic staff are not under/overload.
d. To assess the level of workload for reward and other purposes.
e. To plan for staff recruitment.

2.1.3 LEVELS OF WORKLOAD

Below are the general levels of academic staff workload for each semester:

<table>
<thead>
<tr>
<th></th>
<th>Under Load</th>
<th>Normal Load</th>
<th>Heavy Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 700 hours/semester</td>
<td>700 – 900 hours/semester</td>
<td>&gt; 900 hours/semester</td>
<td></td>
</tr>
</tbody>
</table>

2.1.4 IMPLEMENTATION

Essentially, the implementation of the guideline is as follows:

- **Scheme: DG (Guru Bahasa)**

<table>
<thead>
<tr>
<th>Duties</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG41</td>
<td>DG44</td>
</tr>
<tr>
<td>Teaching &amp; Supervision</td>
<td>80%</td>
</tr>
<tr>
<td>Research, Development &amp; Commercialization</td>
<td>5%</td>
</tr>
<tr>
<td>Administration</td>
<td>15%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: The distribution is for per semester.

- **Scheme: DS (University Lecturer)**

<table>
<thead>
<tr>
<th>Duties</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS45</td>
<td>DS51/52</td>
</tr>
<tr>
<td>Teaching &amp; Supervision</td>
<td>70%</td>
</tr>
<tr>
<td>Research, Development &amp; Commercialization</td>
<td>20%</td>
</tr>
<tr>
<td>Administration</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: The distribution is for per semester.
2.1.5 **CALCULATION OF WORKLOAD/ YEAR**

The calculation of working hours in a year is as follows:

<table>
<thead>
<tr>
<th>Number of weeks in a year</th>
<th>52 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Leave (19 days)</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Annual Leave (30 days)</td>
<td>6 weeks</td>
</tr>
<tr>
<td>Working time/ year</td>
<td>42 weeks</td>
</tr>
<tr>
<td>Working time / half year</td>
<td>21 weeks</td>
</tr>
</tbody>
</table>

Note: The total working hours per year = 42 weeks × 8 hours × 5 days = 1680 hours/year.

- To roughly determine the workload in terms of percentage just multiply with the percentage allocated. For example:
  
  - Teaching & Supervision for DS45 is 70% = 1680 hours × 70% = 1176 hours per year.
  - So the total workload for Teaching & Supervision per semester = 1176 / 2 = 588 hours.

2.1.6 **WORKLOAD CALCULATION BY TYPE OF DUTIES**

**PART 1 – TEACHING & SUPERVISION**

The hours allocated for Teaching & Supervision is based on three (3) things:

i) Teaching

ii) Student assessment

iii) Supervision

i) **TEACHING:**

- Generally for one (1) credit course, the time allocated for lecture category is 1 hour lecture and 2 hours for preparation. Therefore, the total workload for this is calculated as 3 hours.
A GUIDE TO LEARNING & TEACHING AT UMP

- The teaching workload is automatically calculated in the Lecturer Workload Form.

- The information that each academic staff need to fill in is the contact hours per week for each subject by entering the number of credit hours in the columns that correspond to:
  
  a) the level of subject taught (Diploma/ Bachelor/ Master/ PhD)
  b) the type teaching mode used (Lecture/ Tutorial/ Laboratory)

- For example, if you teach a 2 credit hour Diploma subject which is lecture and a 2 credit hour Bachelor subject which is tutorial, you fill in as follows (Figure 2.1):

Figure 2.1:

<table>
<thead>
<tr>
<th>Part 1 Level of Students/ Types of Teaching</th>
<th>Subject 1 Team Teaching (Yes/No)</th>
<th>Number of Team Lecturers</th>
<th>Contact Hours/Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>NO 1</td>
<td></td>
<td>42.00</td>
</tr>
<tr>
<td>Tutorial</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Laboratory</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Bachelor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Tutorial</td>
<td>NO 1</td>
<td></td>
<td>28.00</td>
</tr>
<tr>
<td>Laboratory</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Master</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>NO 1</td>
<td></td>
<td>28.00</td>
</tr>
<tr>
<td>Tutorial</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Laboratory</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>PhD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Tutorial</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Laboratory</td>
<td>NO 1</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Total for teaching</td>
<td></td>
<td></td>
<td>70.0</td>
</tr>
</tbody>
</table>

*The total workload for teaching is 70.*
ii) STUDENT ASSESSMENT:

- Students’ assessments may consist of assignment, labsheet, quiz, test, course project and final examination. The calculation is based on the actual number of students and time allocated of assessment.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Load (Minute/Student)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment/ labsheet</td>
<td>10</td>
</tr>
<tr>
<td>Quiz</td>
<td>5</td>
</tr>
<tr>
<td>Test</td>
<td>15</td>
</tr>
<tr>
<td>Course Project</td>
<td>30</td>
</tr>
<tr>
<td>Final Examination</td>
<td>30</td>
</tr>
</tbody>
</table>

- Total workload for students assessments is automatically calculated and academic staff just need to type in:
  a. Number of students taught for each subject
  b. Type and number of assessments

- For example, if a class consists of 30 students and there are 5 assignments which are 2 assignments, 1 quiz, 1 test and 1 course project, the following is how you fill in your workload form:

*The total workload for student assessment is 34.95*
iii) SUPERVISION:

- Supervision includes supervision of undergraduate final year project, postgraduate thesis, academic advisory, industrial training, and soft skills. The calculation is based on the following:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Load/Student/Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final year project</td>
<td>1 hour</td>
</tr>
<tr>
<td>Master Thesis</td>
<td>1 hour</td>
</tr>
<tr>
<td>PhD Thesis (Supervisor)</td>
<td>1 hour</td>
</tr>
<tr>
<td>PhD Thesis (Co-Supervisor)</td>
<td>30 minutes @ (0.5 hours)</td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>6 minutes @ (0.1 hours)</td>
</tr>
<tr>
<td>Industrial Training</td>
<td>30 minutes @ (0.5 hours)</td>
</tr>
</tbody>
</table>

- Basically to fill in the academic staff workload form, you just need to type in the number of students supervised in that semester.

- For example, if you have 2 Master students, 10 students in your academic advisory group and 4 students on industrial training, this is how you fill in the form:

<table>
<thead>
<tr>
<th>SUPERVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Final Project - Diploma &amp; Bachelor</td>
</tr>
<tr>
<td>Number of Project/Thesis - Master</td>
</tr>
<tr>
<td>Number of Thesis - PhD - Supervisor</td>
</tr>
<tr>
<td>Number of Thesis - PhD - Co-Supervisor</td>
</tr>
<tr>
<td>Number of students in Academic Advisory Group</td>
</tr>
<tr>
<td>Number of supervised students in industrial training</td>
</tr>
<tr>
<td>Number of supervised students in soft skill (3rd and 4th year students only)</td>
</tr>
<tr>
<td>Total for supervision</td>
</tr>
<tr>
<td>0.00</td>
</tr>
<tr>
<td>36.00</td>
</tr>
<tr>
<td>0.00</td>
</tr>
<tr>
<td>0.00</td>
</tr>
<tr>
<td>18.00</td>
</tr>
<tr>
<td>2.00</td>
</tr>
<tr>
<td>0.00</td>
</tr>
<tr>
<td>56.00*</td>
</tr>
</tbody>
</table>

*The total workload for supervision is 56*
PART 2 – RESEARCH, DEVELOPMENT & COMMERCIALIZATION

The calculation is based on the following:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Load/ Research/ Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>• Head of Research</td>
<td>90 hours/ semester</td>
</tr>
<tr>
<td>• Member</td>
<td>23 hours / semester</td>
</tr>
<tr>
<td>Consultancy</td>
<td></td>
</tr>
<tr>
<td>• Head of Project</td>
<td>48 hours / semester</td>
</tr>
<tr>
<td>• Member</td>
<td>12 hours / semester</td>
</tr>
</tbody>
</table>

- In the workload form you just fill in the number of research/ consultation projects according to your role in the project. i.e leader or member.
- For example, if you are a research leader and member of a consultation project this is how you input the information:

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PART 2 TYPE OF RESEARCH, DEVELOPMENT &amp; COMMERCIALIZATION</th>
<th>NUMBER OF POSITION</th>
<th>WORKLOAD (HOURS) FOR 1 SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of position as leader</td>
<td>1</td>
<td>90.00</td>
</tr>
<tr>
<td></td>
<td>Number of position as research team member</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>90.00</td>
</tr>
<tr>
<td></td>
<td>Consultation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of position as leader</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Number of position as research team member</td>
<td>1</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>Total of research, development &amp; commercialization</td>
<td></td>
<td>102.00*</td>
</tr>
</tbody>
</table>

*the total workload for Research, Development & Consultation is 102

*the total workload for Research, Development & Consultation is 102
PART 3 – ADMINISTRATION & SPECIAL DUTIES

The calculation is based on the following:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Load/ Hours/ Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean/ Director</td>
<td>16</td>
</tr>
<tr>
<td>Deputy Dean/ Deputy Director/ Hostel Principal</td>
<td>16</td>
</tr>
<tr>
<td>Head of Program/ Head of Technical</td>
<td>8</td>
</tr>
<tr>
<td>Course Coordinator</td>
<td>8</td>
</tr>
<tr>
<td>Committee Member at University Level</td>
<td>1</td>
</tr>
<tr>
<td>Committee Member at Faculty Level</td>
<td>1</td>
</tr>
<tr>
<td>Special Services.</td>
<td></td>
</tr>
<tr>
<td>Student Society Advisor/ Coordinator</td>
<td></td>
</tr>
<tr>
<td>Student Programme Advisor/ Coordinator</td>
<td></td>
</tr>
<tr>
<td>Hostel Fellow</td>
<td></td>
</tr>
<tr>
<td>Invited speaker</td>
<td></td>
</tr>
</tbody>
</table>

- For each appointment fill in the appropriate column for the post that you are appointed to.
- For example, if you are a coordinator of a course and have been appointed as a member of three faculty steering committees as well here is how the form is filled.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PART 3 TYPE OF ADMINISTRATIVE WORK</th>
<th>NUMBER OF POSITION</th>
<th>WORKLOAD (HOURS) FOR 1 SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMINISTRATION</td>
<td>Dean/Director</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Deputy Dean/ Deputy Director/ Hostel Principal</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Head of Programme/ Head of Technical</td>
<td></td>
<td>21.00</td>
</tr>
<tr>
<td></td>
<td>Course Coordinator</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of position in university steering committee</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Number of position in faculty steering committee</td>
<td></td>
<td>63.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>84.00*</td>
</tr>
</tbody>
</table>

*The total workload for administration is 84

- As for special duties such as appointment as fellow, student society advisor etc, you need to fill in the real hours you spent on the task.
- For example, as a student society advisor you probably spent 20 hours/ semester on the task. So you fill in the hours as such:
### 2.1.7 DEFINITION

#### a. Academic Staff

Academic staff include Language Teacher (Guru Bahasa/ Pegawai Perkhidmatan Pendidikan Siswa), Lecturer, Senior Lecturer, Associate Professor and Professor.

#### b. Workload

Academic staff official duties as endorsed by UMP. The duties are categorized as follows:

- **Teaching & Supervision**
  
  Teaching include at Diploma, Degree and Postgraduate level
  
  i) Preparation for lecture, laboratory, tutorial, SCL/PBL or equivalent.
  ii) Delivery of lecture, laboratory, tutorial, SCL/PBL or equivalent.
  iii) Assessment of teaching & learning.
  iv) Consultation with students.

- **Research, Development & Commercialization**
  
  Research, Development & Commercialization duties include:
  
  i) Research
  ii) Project with industry for example consultation, commercialization and development.
**Administration & Special Duties**

Administration & Special Duties include:

i) **Administration**
   - Academic staff appointed to specific posts by the faculty/centre/UMP or any institutions recognized by UMP.

ii) **Special Duties**
   - Official special duties as required by the faculty/centre/UMP or any institutions recognized by UMP.

   - These duties include activities which may contribute to academic staff development such as activities to enhance students’ potential and personality that are recognized by the faculty/centre/UMP or any institutions recognized by UMP.

   - Community service such as delivering lecture, becoming members of organizations as recognized by the faculty/centre/UMP or any institutions recognized by UMP.
2.2 TEACHING

2.2.1 ROLES AND RESPONSIBILITIES

Academic staff members are responsible for providing the highest quality Teaching & Learning experience which will help students achieve academic excellence as well as develop their personality.

Thus, an academic staff needs to adhere to these guidelines on roles and responsibilities to be carried out within a semester. One semester at the university consists of 14 weeks of instruction and another 5 weeks for mid-semester break, study week and examination. Usually, the mid-semester break is the week after Week 7 and the week after break is Week 8. Study week is in Week 15 and examinations are from Week 16 to 18.

<table>
<thead>
<tr>
<th>DURATION</th>
<th>ROLES AND RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Week 1</td>
<td>• Review syllabus and prepare teaching plan</td>
</tr>
<tr>
<td></td>
<td>• Get approval of Head of Programme &amp; endorsement of Dean/Deputy Dean</td>
</tr>
<tr>
<td></td>
<td>• Prepare teaching materials and attendance</td>
</tr>
<tr>
<td></td>
<td>• Print attendance</td>
</tr>
<tr>
<td>In first class</td>
<td>• Present and explain teaching plan, learning and course outcomes to all students.</td>
</tr>
<tr>
<td></td>
<td>• Circulate attendance for students to sign.</td>
</tr>
<tr>
<td>For the following classes</td>
<td>• Execute every lesson as stated in the teaching plan &amp; complete 14 weeks of Teaching &amp; Learning</td>
</tr>
<tr>
<td></td>
<td>• Start each class by introducing Lesson Outcomes (LO) and end class by stating conclusion of the lesson for the day.</td>
</tr>
<tr>
<td></td>
<td>• Circulate attendance for students to sign.</td>
</tr>
<tr>
<td>Before mid-semester break (By Week 7)</td>
<td>• Prepare a set of final exam question (if applicable) in accordance to the examination specifications.</td>
</tr>
<tr>
<td>During mid-semester break</td>
<td>• Present the final examination question in a workshop attended by an academic committee (vetting)</td>
</tr>
<tr>
<td>After mid-semester break (By Week 10)</td>
<td>• Submit finalized final examination questions to BPA through the Academic Office</td>
</tr>
<tr>
<td></td>
<td>• Key in and release 25% of course work marks in the IMS Academic Systems</td>
</tr>
<tr>
<td>By end of study week (Week 14)</td>
<td>• Key in all course work marks in the IMS Academic Systems and release for students' to view.</td>
</tr>
<tr>
<td>Week 15</td>
<td>• Study week</td>
</tr>
<tr>
<td>During examination week (Weeks 16 - 18)</td>
<td>• Duty as final examination invigilator.</td>
</tr>
<tr>
<td></td>
<td>• Check schedule and venue in IMS under Exam Invigilation.</td>
</tr>
<tr>
<td>Before faculty pre-BOE meeting (Week 19)</td>
<td>• Finish marking, conduct analysis of students’ results and key in marks in IMS Academic System.</td>
</tr>
<tr>
<td></td>
<td>• Present in a meeting with all teaching the course and Course Coordinator.</td>
</tr>
</tbody>
</table>

Note: These are the general guidelines of roles and responsibilities of an academic staff within a semester. The practise may differ slightly in accordance to faculty management.

2.2.2 ADDITIONAL ROLES AND RESPONSIBILITIES

- Always check and update teaching materials and teaching plan for the courses you are teaching.
- Upload teaching plan and teaching materials for the courses you are teaching in the e-learning system.
- Optimize the application of e-learning in Teaching & Learning.
- Use a variety of Teaching & Learning methods and approaches appropriate to the course.

2.2.3 INSTRUCTIONAL STUDENT’S EVALUATION (E-PAT)

Instructional students’ evaluation is the ongoing effort by the Centre for Academic Innovation & Competitiveness (CAIC) to ensure the effectiveness of the teaching and learning process of academic staff at Universiti Malaysia Pahang (UMP). One of the methods that is widely used by most institutions of higher learning is through the process of teaching evaluation by students. The elements and methods of evaluation should be realistic so that the result of the evaluation of the lecturer is accurate and valid.

In UMP, this initiative was started in Semester II Session 2005/2006 by the Academic Staff Development Centre, ASDC. The assessment has been through a series of transitions
2.2.1 ROLES AND RESPONSIBILITIES

Academic staff members are responsible for providing the highest quality Teaching & Learning experience which will help students achieve academic excellence as well as develop their personality. Thus, an academic staff needs to adhere to these guidelines on roles and responsibilities to be carried out within a semester. One semester at the university consists of 14 weeks of instruction and another 5 weeks for mid-semester break, study week and examination. Usually, the mid-semester break is the week after Week 7 and the week after break is Week 8. Study week is in Week 15 and examinations are from Week 16 to 18.

**DURATION ROLES AND RESPONSIBILITIES**

- **Before Week 1**
  - Review syllabus and prepare teaching plan
  - Get approval of Head of Programme & endorsement of Dean/Deputy Dean
  - Prepare teaching materials and attendance
  - Print attendance

- **In first class**
  - Present and explain teaching plan, learning and course outcomes to all students.
  - Circulate attendance for students to sign.

- **For the following classes**
  - Execute every lesson as stated in the teaching plan & complete 14 weeks of Teaching & Learning
  - Start each class by introducing Lesson Outcomes (LO) and end class by stating conclusion of the lesson for the day.
  - Circulate attendance for students to sign.

- **Before mid-semester break (By Week 7)**
  - Prepare a set of final exam question (if applicable) in accordance to the examination specifications.

- **During mid-semester break**
  - Present the final examination question in a workshop attended by an academic committee (vetting)

- **After mid-semester break (By Week 10)**
  - Submit finalized final examination questions to BPA through the Academic Office
  - Key in and release 25% of course work marks in the IMS Academic System

- **By end of study week (Week 14)**
  - Key in all course work marks in the IMS Academic Systems and release for students' to view.

- **Week 15**
  - Study week

- **During examination week (Weeks 16-18)**
  - Duty as final examination invigilator.
  - Check schedule and venue in IMS under Exam Invigilation.

- **Before faculty pre-BOE meeting (Week 19)**
  - Finish marking, conduct analysis of students’ results and key in marks in IMS Academic System.
  - Present in a meeting with all teaching the course and Course Coordinator.

- **During faculty pre-BOE meeting (Week 19)**
  - Present the students’ achievement, performance by subject and by lecturer as well as JKTS formatting a meeting between Course Coordinator and Head of Programme.

- **During faculty BOE meeting (Week 20)**
  - Head of Programme present course performance of all courses offered in the department.
  - Head of Programme / lecturer finalize marks in the IMS Academic System

- **2 weeks after faculty BOE meeting (Week 22)**
  - Submit to Head of Programme/ Academic Office Course file containing Teaching Assignment, Teaching Plan, Attendance Checklist, Course Work Samples, Final Examination Questions (if applicable), Answer Scheme & Samples of Answers and Students’ Achievement in OBE format.

**Note:**

These are the general guidelines of roles and responsibilities of an academic staff within a semester. The practise may differ slightly in accordance to faculty management.

2.2.2 ADDITIONAL ROLES AND RESPONSIBILITIES

- Always check and update teaching materials and teaching plan for the courses you are teaching.
- Upload teaching plan and teaching materials for the courses you are teaching in the e-learning system.
- Optimize the application of e-learning in Teaching & Learning.
- Use a variety of Teaching & Learning methods and approaches appropriate to the course.

2.2.3 INSTRUCTIONAL STUDENT’S EVALUATION (E-PAT)

Instructional students’ evaluation is the ongoing effort by the Centre for Academic Innovation & Competitiveness (CAIC) to ensure the effectiveness of the teaching and learning process of academic staff at Universiti Malaysia Pahang (UMP). One of the methods that is widely used by most institutions of higher learning is through the process of teaching evaluation by students. The elements and methods of evaluation should be realistic so that the result of the evaluation of the lecturer is accurate and valid.

In UMP, this initiative was started in Semester II Session 2005/2006 by the Academic Staff Development Centre, ASDC. The assessment has been through a series of transitions
since: starting from manual OMR forms distributed to the students and the latest is online assessment which is called E-PAT. At the beginning the completed assessment forms must be submitted by academic staff to ASDC for analysis. Today, students just need to fill in the form online accessible through the e-community system at the university.

Mid 2012, CAIC took preliminary steps to make changes to the questions in the evaluation. New questions, focused more on the evaluation of teaching instead of other things that support teaching process such as quality of academic infrastructure and so on were proposed. Modification to the teaching evaluation questions was necessary to encompass all aspects of teaching and learning. The new questions (a total of 24) represented eight (8) clusters to be evaluated which include:

- Learning & Learning Outcomes
- Teaching with Technology
- Enthusiasm
- Breadth
- English Language Competency & Communication
- Assessment
- Teaching Approach
- Professional Practices.

To ensure that the new questions are accurately understood, a pilot test was conducted on December 19, 2012 in collaboration with the Academic Executive Council, of the Student Representative Council (SRC). The findings of this pilot test showed that the new questions were generally understood by the students who participated. However, some questions were reviewed following the students' feedback. Prior to that, the questions have also been through a series of discussions with the Deputy Dean of all faculties and centres at UMP before it was finalized. Approval for the use of the new questions was acquired at the Mesyuarat Jawatankuasa Tetap Senat Kurikulum, Pengajaran & Pembelajaran Kali Ke 37 Bil.8/2012 dated 29 November 2012. The new questions were used starting from Semester II Session 2012/2013.

In 2013, several other initiatives were taken to ensure the validity and reliability of the new questions. It was found that the new questions has a high reliability. The next initiatives proposed was a policy to encourage students to evaluate lectures' teaching. In Mesyuarat Senat dated 30 Ogos 2013, the new policies as stated below was approved:

<table>
<thead>
<tr>
<th>No.</th>
<th>NEW POLICIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students MUST evaluate the teaching of every lecturer as stated in the E-PAT System. <strong>(COMPULSORY)</strong></td>
</tr>
<tr>
<td>2</td>
<td>Students who fail to complete the instructional evaluation <strong>WILL NOT BE ABLE</strong> to print the slip to sit for the final examination.</td>
</tr>
</tbody>
</table>

2.2.4 UNIVERSITY ACADEMIC AWARD (AAU)

The Excellent Teaching Award was introduced in 2009 to honour, reward and encourage academicians who continually work hard to improve the quality of teaching and learning at the university. Continuous improvement is important to ensure students experience learning processes that develop their passion for excellence and guide them towards a successful academic and working life. In 2012, a rebranding exercise by the Centre for Academic Innovation & Competitiveness (CAIC) has renamed the Excellent Teaching Award to University Academic Award. The centre has also introduced two additional new awards which are the Innovation Award for e-learning and Innovation Award for Student-Centered Learning.

The general objectives of these awards are:

i. To encourage continuous quality improvement in teaching and learning.
ii. To promote usage of various innovative and creative teaching techniques and methods,
iii. To share good teaching practices among academicians.

For the University Academic Award, the selection is open to all academicians who have received a minimum of 80% in their Instructional Evaluation by students or famously known as E-PAT as well as their Annual Assessment Marks with three (3) years teaching experience and have been recommended by the Dean of their faculty. The candidates fall into three (3) categories which are Engineering, Applied Sciences and Social Sciences. After a rigorous screening process, one winner will be chosen for each category.

For the Innovation Award, only one (1) winner will be selected for each award. The selection is open to all academicians with three (3) years of teaching experience and has been recommended by the Dean of their faculty.
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2.3 TRAINING FOR ACADEMIC STAFF

2.3.1 ACADEMIC TRAINING

In the University’s Strategic Plan 2011 – 2015, it is clearly stated that competent academic staff is an important asset to the development of the university. To enhance the potential and quality of academic staff various initiatives have been set in motion. One of the initiatives is to ensure that new academic staff are provided ample opportunities to improve especially in terms of their Learning & Teaching skills. In tandem with this aspiration, the Basic Learning & Teaching courses were developed, specifically aimed at new academic staff as an element for job confirmation.

To facilitate the progress of new academic staff training, this guide contains listings and information of all the courses provided by the Centre for Academic Innovation & Competitiveness (CAIC) in collaboration with Bahagian Latihan & Pengembangan Ilmu (BLPK). We highly recommend that you use your Continuous Professional Development (CPD) allocated days to plan and select the courses that we offer this year.

2.3.2 BASIC LEARNING & TEACHING COURSES

<table>
<thead>
<tr>
<th>MODULE</th>
<th>DETAILS MODULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1 (Academic Leadership)</td>
<td></td>
</tr>
<tr>
<td>Module 1: Unit 1</td>
<td>Teaching and Learning Concept in Higher Education</td>
</tr>
<tr>
<td>Module 1: Unit 2</td>
<td>UMP Teaching &amp; Learning Practices</td>
</tr>
<tr>
<td>Module 1: Unit 3</td>
<td>Ethics in Academia</td>
</tr>
<tr>
<td>Module 2 (Curriculum Design)</td>
<td></td>
</tr>
<tr>
<td>Module 2: Unit 1</td>
<td>The Process of Developing Outcomes</td>
</tr>
<tr>
<td>Module 2: Unit 2</td>
<td>Design of Course Outcomes</td>
</tr>
<tr>
<td>Module 2: Unit 3</td>
<td>Design of Learning Outcomes</td>
</tr>
</tbody>
</table>
## Module 2 (Curriculum Design)

<table>
<thead>
<tr>
<th>Module 2: Unit 1</th>
<th>The Process of Developing Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 2: Unit 2</td>
<td>Design of Course Outcomes</td>
</tr>
<tr>
<td>Module 2: Unit 3</td>
<td>Design of Learning Outcomes</td>
</tr>
</tbody>
</table>

## Module 3 (Understanding Learning & Teaching)

<table>
<thead>
<tr>
<th>Module 3: Unit 1</th>
<th>Theories of Learning and Learning Perspectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 3: Unit 2</td>
<td>Learner Diversity and Learning Styles</td>
</tr>
<tr>
<td>Module 3: Unit 3</td>
<td>Effective Teaching and Delivery Approaches</td>
</tr>
</tbody>
</table>

## Module 4 (Effective Teaching & Learning)

<table>
<thead>
<tr>
<th>Module 4: Unit 1</th>
<th>Teaching in Large &amp; Small Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 4: Unit 2</td>
<td>Student-Centred Learning</td>
</tr>
<tr>
<td>Module 4: Unit 3</td>
<td>Technology in Teaching</td>
</tr>
</tbody>
</table>

## Module 5 (Learning Assessment & Evaluation)

<table>
<thead>
<tr>
<th>Module 5: Unit 1</th>
<th>Basic Concepts of Assessment &amp; Evaluation In Higher Education (from Unit 1 &amp; 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 5: Unit 2</td>
<td>Aligning Learning Outcomes to Contents, Teaching and Assessment in Higher Education (Unit 3)</td>
</tr>
<tr>
<td>Module 5: Unit 3</td>
<td>Test Format, Preparation, Administration, Scoring and Interpretation in Teaching and Learning (Unit 4 &amp; 5)</td>
</tr>
</tbody>
</table>

## Module 6 (Professional Practices)

<table>
<thead>
<tr>
<th>Module 6: Unit 1</th>
<th>Academic Student Advisory System (Coaching &amp; Mentoring)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 6: Unit 2</td>
<td>Teaching Folder &amp; Teaching Portfolio</td>
</tr>
<tr>
<td>Module 6: Unit 3</td>
<td>Internationalization</td>
</tr>
</tbody>
</table>

## Module 7 (Practicum)

<table>
<thead>
<tr>
<th>Module 7: Unit 1</th>
<th>Teaching Practicum Orientation</th>
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</thead>
<tbody>
<tr>
<td>Module 7: Unit 2</td>
<td>Classroom Management Skills</td>
</tr>
<tr>
<td>Module 7: Unit 3</td>
<td>Plan, Practice and Reflect (In-Class Observation)</td>
</tr>
</tbody>
</table>
2.4 SUPERVISION

2.4.1 APPOINTMENT OF SUPERVISOR

- The appointment of a supervisor must meet the following criteria:

  ✓ **Master degree by research**

<table>
<thead>
<tr>
<th>No.</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A supervisor must have a minimum qualification of one level higher than the degree level enrolled in by the candidate e.g. a Doctoral Degree for Master student.</td>
</tr>
<tr>
<td>2.</td>
<td>Where a supervisor is without the required qualification, a supervisor must have at least five years experience:</td>
</tr>
<tr>
<td></td>
<td>a) in teaching and research; or</td>
</tr>
<tr>
<td></td>
<td>b) as a co-supervisor</td>
</tr>
<tr>
<td>3.</td>
<td>Additional criteria are subject to the approval of the Senate Meeting.</td>
</tr>
</tbody>
</table>

  ✓ **Doctoral degree by research**

<table>
<thead>
<tr>
<th>No.</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A supervisor must have a minimum qualification of the equivalent degree level enrolled in by the candidate and at least two years experience:</td>
</tr>
<tr>
<td></td>
<td>a) in teaching and research; or</td>
</tr>
<tr>
<td></td>
<td>b) as a co-supervisor.</td>
</tr>
<tr>
<td>2.</td>
<td>Additional criteria are subject to the approval of the Senate Meeting.</td>
</tr>
</tbody>
</table>

- The appointment of a Supervisor shall take into account the research skills and experiences which are consistent with the research field of the candidate.

- Supervisors suggested by prospective candidates, are given priority to supervise, except in cases where the faculty feels that other supervisors are more qualified to supervise.

- Academic staff on sabbatical leave may be allowed to supervise until the end of the leave, provided the leave does not affect the candidate’s supervision. However, based on some specific reasons, the Supervisor may apply to not supervise the candidate while on leave and the decision is based on the discretion of the faculty.

- For academic staff who will be coming to the end of their services, the faculty should ensure that a replacement supervisor is appointed at least six (6) months prior to the end of the service date of the initial supervisor so that both of them can co-supervise without affecting the progress of the candidate’s research.
Appointment of an external party (either academic or non-academic) as co supervisor or field supervisors can be considered if the external party is able provide research facilities and the expertise which will in turn assist the candidates in their research.

Appointment of second supervisor among local academic staff is a must for the international candidate with the main supervisor is an expatriate with a contract position.

Appointment of supervisors shall be managed by the faculty in compliance with all the criteria specified in UMP’s Post Graduate Supervision Policy. Appointment made shall take into account the space, resources and expertise to support and assist candidates, with their research.

If the appointment of a new supervisor is required for some reason, the appointment shall be made according to merit and this case is considered as a special case. This case cannot be referred to and be an example or a precedent for a case to come.

In the event of problems of supervision between supervisor and candidate, the faculty should address this problem. If the problem cannot be resolved, the matter may be submitted to the Dean, Institute of Postgraduate Studies for further action.

2.4.2 RATIO BETWEEN SUPERVISOR AND CANDIDATE

The maximum number of students that can be monitored at one time:

- Professor - 10 supervisees
- Associate Professor - 7 supervisees
- Senior Lecturer - 5 supervisees

Faculty may approve a higher maximum number of candidates provided that supervisor has shown excellent supervision performance.

2.4.3 CHANGE OF SUPERVISOR

Change of supervisor can be implemented as follows:

If there is strong justification and excuse, the candidate may apply to change the supervisor, not more than once during the period of candidature.

If there is a supervisor who did not perform the supervisory duties satisfactorily, the Dean of the Faculty may appoint any other qualified academic staff to replace the said supervisor.

2.4.4 FAMILY LINK

Supervisors appointed shall not have a close family link to the candidate.
Both the appointed supervisors also must not have any family relationship with each other.

2.4.5 GENERAL ROLES AND RESPONSIBILITIES OF SUPERVISOR

Academic staffs who have been appointed as a supervisor will play roles as listed below:

- Before starting, the supervisor to the candidate will need to know the latest university rules and regulations relating to higher degree programs.
- Supervisors should have adequate knowledge, enhanced theoretical and conceptual framework, and is up to date in the field of research of the candidate.
- Supervisors should be knowledgeable about the work schedule provided for the completion of a research project so that it complies with the provisions of certain degrees. This is to ensure the smooth running of the candidate's research project.
- Supervisors are responsible for providing relevant and adequate guidance and academic support to students during the supervision period to enable the candidate to carry out excellent research and writing. This responsibility includes guiding the careful planning of the research, the background and library research, the need to attend courses to complete the research, including scientific methods. Awareness about the impact of fraud and plagiarism should be informed to the candidate.
- Supervisors should interact with the candidate at least two (2) times per month in the first semester and once (1) a month for the next semester. For the first meeting, the supervisor and the candidate must talk face to face, while, the next meeting may be conducted via other methods such as on-line.
- Supervisors are responsible to ensure that candidates could communicate with relevant experts should the research area requires so. In certain cases, an additional supervisor or consultant may be appointed.
- Supervisors should be appointed to the candidates should know their responsibilities respectively and explained to the candidates on the aspects that will be monitored. In the event that two (2) supervisors were appointed for each candidate, the effective working relationship between all parties needs to be maintained together.
- Supervisors need to help candidates in the preparation with regards to the presentation at conferences, seminars, meetings and workshops.
- Supervisors are encouraged to record every meeting and discussion with the candidate about the study and research of the candidate by providing and updating the file on record of achievement and progress of research projects for each candidate.
- Supervisors should evaluate the progress of the candidates by getting a written report and monitor the performance in a relative manner according to the quality set for a certain degree. Candidates should be informed if the quality of his/her work did
not reach the required standard. If progress of the candidates is not satisfactory, the supervisor must take action to help the candidates improve their performance. Progress report for each semester for each candidate must be submitted by the supervisor to the Academic / Faculty / Institute / Centre as scheduled.

- Supervisors should help candidates in academic writing, presentations in conferences and submitted for publication. For all the academic papers submitted for publication, written jointly by the supervisor and candidate, both have to agree to publish them together.

- Supervisors need to help manage and secure any funds for research projects.

- Supervisors must ensure work safety rules are followed during the research and are carried out in accordance with health and safety ethics policy specified by the University.

- Supervisors should provide constructive and critical comments on the candidate’s drafts of the thesis within a reasonable time and advise the candidate regarding the format of the thesis as specified by the University.

- Supervisors should suggest and advise the Faculty in the process of nomination and evaluation of expertise of internal and external examiner. The supervisors also need to ensure that there are no delays in the process.

- The role of supervisor in the Board of Examiners is as the advisor. The supervisor is not involved in any discussions relating to the results of work submitted by the candidate. The supervisor does not function as an examiner.

- The supervisor’s attendance in the Board of Examiners shall be by invitation only.

- The supervisor should also help the candidates on the corrections to be done based on the comments raised by the Board of Examiners and continue to oversee the candidate in cases where the thesis is referred back for further study.

### 2.4.6 THESIS GUIDE

The Universiti Malaysia Pahang (UMP) Thesis Guide describes the formatting standards set forth by the Center for Graduate Studies. This guide helps students in the preparation of their theses. The guide covers facet of thesis writing from the language to be used, to technical specifications that include typeface and font size, number of pages for a Masters and PhD thesis, pagination, line spacing, units, chapter format and references style. The guide is divided into five chapters which explain in detail the formatting requirements and submission options to be followed by all students writing theses at the Universiti Malaysia Pahang. Currently this guide available only in hard copy and can be purchased at IPS Office.
2.5 OPEN REGISTRATION

What is an Open Registration System (OR System)?

Open Registration System is a system that allows students to register for their academic courses (some of us call them “subjects”) based on their own Study Plan. This is possible since almost all courses are offered every semester. OR System is different from the “Program-based Registration System” in which a student’s study plan is pre-determined by the faculty based on the Programme Course Structure. Programme-based system is a fixed menu system while the OR system is a flexible menu system.

What is a Program Course Structure?

A Programme Course Structure is a list of courses that lead to a particular programme award for a particular student intake. In general, a programme course structure consists of four course categories:

a. university courses,
b. faculty courses,
c. programme core courses
d. programme core elective courses.

An example of a Programme Course Structure for Bachelor (Honours) of Chemical Engineering is shown below.

Table: Bachelor (Honours) of Chemical Engineering

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHL2412</td>
<td>English For Academic Communication</td>
<td>1</td>
</tr>
<tr>
<td>BUM2133</td>
<td>Ordinary Differential Equations</td>
<td>1</td>
</tr>
<tr>
<td>UHS1021</td>
<td>Soft Skills 1</td>
<td>1</td>
</tr>
<tr>
<td>BUM2123</td>
<td>Applied Calculus</td>
<td>1</td>
</tr>
<tr>
<td>UHL2422</td>
<td>English For Technical Communication</td>
<td>1</td>
</tr>
<tr>
<td>UQB1**1</td>
<td>Co-Curriculum I</td>
<td>1</td>
</tr>
<tr>
<td>UHL2432</td>
<td>English For Professional Communication</td>
<td>2</td>
</tr>
<tr>
<td>BUM2413</td>
<td>Applied Statistics</td>
<td>2</td>
</tr>
<tr>
<td>UHR1012</td>
<td>Islamic And Asian Civilisations 1</td>
<td>2</td>
</tr>
<tr>
<td>UGE2002</td>
<td>Technopreneurship</td>
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<tr>
<td>UHM2022</td>
<td>Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>UHS2021</td>
<td>Soft Skills 2</td>
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</tr>
<tr>
<td>UQ*2**1</td>
<td>Co-Curriculum II</td>
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</tr>
<tr>
<td>UHF11**1</td>
<td>Foreign Languages Level 1</td>
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<tr>
<td>UHE3**2</td>
<td>Elective Courses</td>
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</tr>
<tr>
<td>UHF21**1</td>
<td>Foreign Languages Level 2</td>
<td>4</td>
</tr>
</tbody>
</table>
2.5 **OPEN REGISTRATION**

Table:

**Bachelor (Honours) of Chemical Engineering**

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKF2751</td>
<td>Basic Science &amp; Engineering Lab</td>
<td>1</td>
</tr>
<tr>
<td>BKF1313</td>
<td>Engineering Mechanics</td>
<td>1</td>
</tr>
<tr>
<td>BKF1243</td>
<td>Analytical Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>BKF1323</td>
<td>Organic Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>BKF1253</td>
<td>Physical Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>BKF1333</td>
<td>Thermodynamics</td>
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</tr>
<tr>
<td>BKF1513</td>
<td>Engineering Ethics &amp; Professionalism</td>
<td>1</td>
</tr>
<tr>
<td>BKF2432</td>
<td>Mass Transfer</td>
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<td>BKF2413</td>
<td>Chemical Engineering Thermodynamics</td>
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</tr>
<tr>
<td>BKF2343</td>
<td>Material &amp; Energy Balance</td>
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</tr>
<tr>
<td>BKF2443</td>
<td>Numerical Methods &amp; Optimization</td>
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<tr>
<td>BKF2353</td>
<td>Fluid Mechanics</td>
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</tr>
<tr>
<td>BKF1332</td>
<td>Electrical &amp; Instrumentation Technology</td>
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<tr>
<td>BKF2453</td>
<td>Chemical Reaction Engineering I</td>
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</tr>
<tr>
<td>BKF2143</td>
<td>Computer Programming For Engineers</td>
<td>2</td>
</tr>
<tr>
<td>BKF2423</td>
<td>Heat Transfer</td>
<td>2</td>
</tr>
<tr>
<td>BKF3731</td>
<td>Unit Operation Lab</td>
<td>3</td>
</tr>
<tr>
<td>BKF3413</td>
<td>Process Control &amp; Dynamic</td>
<td>3</td>
</tr>
<tr>
<td>BKF3553</td>
<td>Process Simulation &amp; Computer Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>BKF4142</td>
<td>Process Engineering Economics</td>
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<tr>
<td>BKF3472</td>
<td>Chemical Reaction Engineering II</td>
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</tr>
<tr>
<td>BKF4791</td>
<td>Process Control &amp; Instrumentation Lab</td>
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</tr>
<tr>
<td>BKF3463</td>
<td>Unit Operation</td>
<td>3</td>
</tr>
<tr>
<td>BKF3812</td>
<td>Process Engineering Management</td>
<td>4</td>
</tr>
<tr>
<td>BKF4916</td>
<td>Industrial Training</td>
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</table>

**Faculty Core Courses**

**Program Core Courses**

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKF3741</td>
<td>Chemical Reaction Engineering Lab</td>
<td>2</td>
</tr>
<tr>
<td>BKC3363</td>
<td>Science &amp; Engineering Materials</td>
<td>2</td>
</tr>
<tr>
<td>BKC3533</td>
<td>Osh In Chemical Industries</td>
<td>3</td>
</tr>
<tr>
<td>BKC3492</td>
<td>Separation Process</td>
<td>3</td>
</tr>
<tr>
<td>BKC3922</td>
<td>Undergraduate Research Project I</td>
<td>3</td>
</tr>
<tr>
<td>BKC4944</td>
<td>Undergraduate Research Project II</td>
<td>4</td>
</tr>
<tr>
<td>BKC3913</td>
<td>Process &amp; Plant Design I</td>
<td>4</td>
</tr>
<tr>
<td>BKC4934</td>
<td>Process &amp; Plant Design II</td>
<td>4</td>
</tr>
<tr>
<td>BKC3543</td>
<td>Environmental Engineering</td>
<td>4</td>
</tr>
</tbody>
</table>

**Program Core Elective Courses**

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKC3**3</td>
<td>Program Core Elective 1</td>
<td>3</td>
</tr>
<tr>
<td>BKC 3**3</td>
<td>Program Core Elective 2</td>
<td>4</td>
</tr>
<tr>
<td>BKC4**3</td>
<td>Program Core Elective 3</td>
<td>4</td>
</tr>
</tbody>
</table>

Students must be aware that some of the courses are pre-requisite to other advanced courses. For example, a student must pass the UHL2412 English for Academic Communication before registering UHL2422 English for Technical Communication. Student need to refer to their faculty for the exact pre-requisite requirements before registering.
2.6 INTERGRATED MANAGEMENT SYSTEM (IMS)

2.6.1 INTEGRATED MANAGEMENT SYSTEM (IMS) – E-COMMUNITY

The E-Community system is actually a community portal acting as the single gateway to all other E-Management application systems, which allows for a single sign-on for all applications. A user no longer has and does not need to create a different and several login usernames and passwords to access the different applications in the E-Management system but requires only one and a single sign-on access through the E-Community portal.

Aside from acting as a single gateway, the E-Community portal has several convenient and beneficial applications for both students and staff, such as setting up appointment, task manager, files library, memo, email, forum, announcement board and news. These applications help create an effective communication system within UMP.

2.6.2 INTEGRATED MANAGEMENT SYSTEM (IMS) – STUDENT INFORMATION/Academic

This is an efficient and a highly-reliable information management system responsible for collating and handling student’s and academic information matters. With dynamic and constructive functions embedded in the system, university staff can efficiently perform various tasks with regards to students’ administrative and academic matters.

Simultaneously, students, too, can access the system to browse and register for academic courses, and pay for their tuition fees online via student e-community system. With such a system made available, students are expected to and will be more inclined to peruse their
academic information and study notes to share with fellow course-mates online anytime and anywhere.

2.6.3 INTEGRATED MANAGEMENT SYSTEM (IMS) – FINANCIAL INFORMATION SYSTEM

This Financial Information System is SAGA compliance. It was developed to ensure effective financial management starting and ranging from budgeting, general ledger, asset and inventory monitoring, vendor management, all the way to the preparation of financial reports.

IMS Financial was designed based on an integrated and comprehensive concept. Its development at the tertiary education level is expected to bring about an effective and efficient financial process to offer the best service to the university students, staff and other interested entities. The system allows for data-sharing within a safe and firewalled security, with access via a single database centre.

2.6.4 INTEGRATED MANAGEMENT SYSTEM (IMS) – HUMAN RESOURCE & ADMINISTRATION

This is an information management system responsible for collating and handling administrative and human resources matters, with embedded modules to ensure quality and effective online administration of recruitment, remuneration, human capital development, retirement benefits, and many other aspects.

2.6.5 INTEGRATED MANAGEMENT SYSTEM (IMS) – E-LEARNING

This teach-and-study online system was designed with the capability of catering to high academic demands in mind – inclusive of individual student requirement and a self-directed study system. This system also makes tertiary education available outside a physical classroom atmosphere and allows for higher and unlimited additional support to courses offered and assignments planned.

With this system, students can now schedule their academic courses in a flexible manner, and pursue their studies anytime, anywhere according to their timetable. Meanwhile, instructors and lecturers alike may use the system to enhance the quality of their teaching courses tailored to the students’ requirements.
2.6.6 INTEGRATED MANAGEMENT SYSTEM (IMS) – LIBRARY

The IMS Library forms part of the IMS Education system currently implemented at the university’s library. It functions as a fully integrated system – which indirectly eases off administrative workload – as well as operating as a search engine to help effectively and efficiently locate records and information.

The IMS Library was developed to operate on a web-based platform to allow the system and database to be accessed by any client anywhere. The computers installed within the local network at the library have been programmed to access the system without additional software installations.

In addition, to ensure that the library offers the best service to its users, the IMS Library has set up an iPortal module where the users can view relevant information, and execute profile update, product order and apply for information online. This "self-service" concept is in line, timely and appropriate with the progress of modern technology, which is developing at a tremendous pace, and has proven beneficial as a university library in raising efficiency and reducing the lead-time at the Circulation Division.
2.7 STUDENT ACADEMIC GUIDELINES AND REGULATIONS

UMP has developed a book for Academic Regulation as a reference for both Diploma and Bachelor Degree Programme students as well as for the academic and administration staff. There are several parts in the book which should be taken into serious consideration:

2.7.1 ASSESSMENT

(1) Attendance

i. Students must attend all lectures set for a particular course including Compulsory Courses (HW) and Attendance Only Courses (HS). However, based on reasons that can be accepted by the university, students are permitted to miss not more than 20% of the total stipulated lectures.

ii. Students who do not comply with Rule 2.7.1 (1) (i) without valid reasons that can be accepted by the university, the student is considered to have failed the course. Zero (0) marks is given for the course or Attend and Fail (HG) for Compulsory Courses (HW).

iii. Attendance Only courses (HS) will be omitted from the transcript if students do not meet Rule 2.7.1 (1)(i).

(2) Assessment Scheme

i. Assessment for every course is made periodically and continuously in a particular semester according to the method determined by the faculty and subject to university approval.

ii. Assessment for Industrial Training must follow the method set by the faculty and subject to university approval.

iii. For all courses, marks for the final examination must not be more than 40% and the marks for coursework must not be less than 60% of the overall marks.

iv. 100% coursework assessment can be implemented subject to faculty approval.

(3) Final Examination

Final examination must be carried out within the period stipulated and according to the method set by the university.
(4) Special Examination

i. Special Examination can be held for the following cases:

a) Students who are unable to sit for the final examination because of illness as confirmed by the university or government hospital medical officer.

b) Final semester diploma programme students who pass with the status KB or KC but fail one (1) course in previous semesters.

c) Second last semester bachelor programme students who pass with the status KB or KC but fail one (1) course in previous semesters.

d) Students with death of mother/father/guardian/husband/wife/child.

e) Students who have to provide intensive care to their seriously ill mother/father/guardian/husband/wife/child.

f) Other reasons that can be accepted by the university.

ii. The special examination marks under Rules 2.7.1 (4)(i)(a), 2.7.1 (4)(i)(d), 2.7.1 (4)(i)(e), and 2.7.1 (4)(i)(f) above, will replace the final examination marks only, whereas the coursework marks remain the same.

iii. The special examination marks for Rule 2.7.1 (4)(i)(b) and 2.7.1 (4)(i)(c) above will determine the course results if either pass or fail and will not be considered in the GPA and CPA calculation.

iv. The special examination cannot be held for the following case:

a) Students who did not sit for their final examination without reasons that can be accepted by the university.

(5) Course Grade Announcement

The faculty must announce the grade for every course within the period set by the university.

(6) Subject Grade Appeal

Students who are not satisfied can make an appeal to re-check the final examination answer script for any course at the faculty within one week after the course grade result is announced.
2.8 ACADEMIC ADVISORY SYSTEM

Academic advisors’ main responsibility is to advice students (advisee) on which courses should be taken in response to the student’s capability and plan of study. The academic advisor will have to inform students which courses are appropriate for a specific student requirement.

For example, students who are in P1 or P2 status (probation) may take a different route towards graduation compared to students who are in the Dean’s list. In addition to that, the academic advisor can inform the level of difficulty of each course so that the students can design a plan of study that is mixed with heavy and light courses. In sum, the academic advisor is the advisor for all academic matters.

2.9 OUTCOME BASED EDUCATION (OBE)

“Outcome-Based Education (OBE) means clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. This means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, instruction, and assessment to make sure this learning ultimately happens” (Spady, 1994).

Hence, OBE is a process that involves the restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of higher order learning and mastery rather than accumulation of course credit.

2.9.1 WHY OBE?

- Promotes high expectations and greater learning for all students.
- Prepares students for life and work in the 21st Century.
- Fosters more authentic forms of assessment (i.e., students write to show they know how to use English well, or complete math problems to demonstrate their ability to solve problems.
- Encourages decision making regarding curriculum, teaching methods, faculty structure and management at each faculty or university level.
- Advocated by Washington Accord (current permanent signatories; US, UK, Canada, Japan)
- Increased possible employment as engineers in those countries without further examinations. Accredited Engineering Graduates are recognized by other signatory countries.
2.9.2 HOW WE IMPLEMENT OBE?

- Guided by EAC Accreditation Manual
- Documentation to satisfy EAC requirements (SOP, Unit files, PBL assignments, exam/test, lab manual, samples, thesis, industrial training reports, etc.)
- Outcome assessment methods and survey
- Continuous Quality Improvement (CQI)
- Problem-based Learning (PBL)

![Figure 1: Outcome-Based Education (OBE) Flowchart](image)

2.9.3 WHAT IS PEO (PROGRAMME EDUCATIONAL OBJECTIVES)

Programme educational objectives are broad statements that describe the career and professional accomplishments that the programme is preparing graduates to achieve.

2.9.4 WHAT IS PLO (PROGRAMME LEARNING OUTCOMES)

Statement that describes what students are expected to know and able to perform or attain by the time of graduation in terms of skills, knowledge and behaviour/attitude that the student has acquired after following the programme.
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Statement that describes what students are expected to know and able to perform or attain by the time of graduation in terms of skills, knowledge and behaviour/attitude that the student has acquired after following the programme.

2.9.5 CLO (COURSE LEARNING OUTCOMES)

Describes the specification of what a student should learn as a result of a period of specified and supported course.

Assessment: Assessment is the formative or / and summative determination for a specific purpose of a student’s competence in demonstrating a specific outcome. It is also the processes that identifies, collects, uses and prepares data that can be used to evaluate achievement.

2.9.6 CQI (CONTINUOUS QUALITY IMPROVEMENT)

It focuses on closing the loop process which promotes the need for objective data to analyze and improve its process.
2.10 PROFESSIONAL BODIES

2.10.1 THE BOARD OF ENGINEERS MALAYSIA (BEM)

The Board of Engineers Malaysia (BEM) is a statutory body constituted under the Registration of Engineers Act 1967 with perpetual succession and a common seal, which may sue and be sued. It was formed on 23 August 1972.

BEM falls within the ambit of responsibility of the Minister of Works. Vested with wide powers, the Minister may suspend the operation of the Registration of Engineers Act 1967 (REA 1967) in any part of Malaysia by notification in the gazette. The appointment of the Board Members and the Registrar is made by the Minister.

Its primary role is to facilitate the registration of engineers and regulate the professional conduct and practice of registered engineers in order to safeguard the safety and interest of the public.

Through its mechanism of control, BEM has taken upon itself to reclassify the engineering works, streamline the Scale of Fees and amend the Engineers Act to reflect the pragmatic needs of the engineers and engineering industry. For example, the latest amendments of The Registration of Engineers Act 1967 was made on 1st April 2007 to meet the challenges of globalization and companion trade liberalisation. The objectives among others are:

a. To enforce the implementation of Continuing Professional Development (CPD).

b. To add more functions and advise the Government & Public.

c. To strengthen the penalty in the REA 1967.

d. To strengthen the suspension period.

e. To introduce a new part that deals with the establishment, powers & conduct of proceedings of a Disciplinary Committee.

f. To act in action on submitting engineer related to CCC or others.

g. To impose additional conditions to ensure engineers follow latest developments.

2.10.2 FUNCTIONS OF BEM

The functions of BEM according to Section 4 of the Registration of Engineers Act 1967 (Revised 2007) are:

a. Maintain the Register

The Board shall keep and maintain a Register which shall be in five Parts:

**Part A** - which shall contain the names, addresses and other particulars of Professional Engineers.

**Part B** - which shall contain the names, addresses and other particulars of Graduate Engineers.
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   - Part A - which shall contain the names, addresses and other particulars of Professional Engineers.
   - Part B - which shall contain the names, addresses and other particulars of Graduate Engineers.
   - Part C - which shall contain the names, addresses and other particulars of Temporary Engineers.
   - Part D - which shall contain the names, addresses and other particulars of Engineering consultancy practices.
   - Part E - which shall contain the names, addresses and other particulars of Accredited Checkers.

b. Process Applications for Registration

BEM through its Examination and Qualification Committee conducts Professional Assessment Examination (PAE) to assess the quality of experience gained by the Graduate Engineers and their competency. Every application for registration, be it as Graduate Engineers, Professional Engineers, Engineering Consultancy Practices or Temporary Engineers (foreign engineers) is scrutinized thoroughly by the Application Committee to ensure compliance with the Act and with the policy of BEM. Application to register as Accredited Checkers will be assessed by Accredited Checkers Committee.

BEM also applies restrictions on practices of corporate bodies with the aim that engineering consulting services provided by these corporate bodies will be done professionally for the benefit of the client/public. Restrictions are also imposed on Temporary Engineers.

c. Assessment of Academic Qualifications

BEM through the Engineering Accreditation Council (EAC) conducts accreditation of engineering degree programmes offered by institutions of higher learning within Malaysia. Accreditation is done through the evaluation panel (from academic and industry/practice) whose members are appointed by EAC. The accreditation panel will visit the institution to evaluate the curriculum, facilities and the quality management system and have dialogue with the management, academic and support staff, students and industry stakeholders.

The period of full accreditation shall be five years after which it has to be revalidated. Where there are minor shortcomings in meeting the accreditation requirement, the programme may be given accreditation for a period of less than five years during which the faculty must take necessary corrective measures.

Prior to conduct of a new engineering programme institution of higher learning shall obtain approval from the relevant authorities. The authority normally will require supporting document from the EAC.

In general, BEM through the EAC uses as a guide the list of accredited degree programmes leading to Professional/Chartered Engineer, by accreditation organisations of the country where the degree is issued.

* The Engineering Accreditation Council is the body for accreditation, representing the Board of Engineers Malaysia, the Institution of Engineers Malaysia, Malaysian Qualification Agency and Jabatan Perkhidmatan Awam Malaysia (JPA).
d. Regulate the Conduct and Ethics of the Engineering Profession

Since its inception in 1972, BEM has been a medium for the engineers to decide on matters relating to their professional conduct or ethics. Any matter concerning the professional conduct of registered engineers will be studied by the BEM to determine whether there is a breach of professional ethics or code. If the need arises, BEM will carry out investigations to establish whether there is a prima facie case against a registered engineer for contravening the Act. The procedures to follow are prescribed in Section 15 of the Act.

If there is a breach of professional ethics or code of conduct on the part of the engineer but such breach is not serious enough to warrant suspension or cancellation of registration, appropriate action, e.g. warning, censure or advice would be taken by BEM as deemed fit. Such measures should be viewed by the engineers at large as a concerned effort on the part of BEM to rid the black sheep of the engineering fraternity.

e. Disputes on Professional Conduct and Ethics

BEM through its Professional Practice Committee hear and determine disputes relating to Professional Conduct and Ethics of registered engineers.

f. Fix the Scale of Fees

In this respect the Scale of Fees Committee of BEM continues to have dialogues sessions with the Treasury of Malaysia on issues involving mode of remuneration, quantum and conditions of payment.

g. Stakeholder

To be a stakeholder in a contract for Professional Engineer services when requested.

h. Publication

The Publication Committee of BEM undertakes the task of promoting engineering profession through *The Ingenieur* and other printed materials. *The Ingenieur* (4 issues per year: March, June, Sept and December) is used as a communication tool for BEM to disseminate information on activities of the Board, regulations, code of ethics, career development, update and guidelines and such other news as decided by the BEM.
i. **Promotion of Continued Learning and Education**

BEM has set certain guidelines in connection with the financial assistance provided. BEM will consider providing financial assistance to a seminar or conference which is organised by a non-profit making organisation. The seminar or conference must be technical one that will benefit the registered engineers.

The promotion of continued learning and education does not stop here. BEM would also consider giving grant to selected type of study related to engineering or contribute prizes for selected competition also related to engineering. In order to keep abreast with changing technology, BEM encourages all registered engineers to continually improve themselves through Continuous Professional Development (CPD) programmes.

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**CONTACT INFO**

Address:

Board of Engineers Malaysia  
Tingkat 17  
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Jalan Sultan Salahuddin  
50580 Kuala Lumpur  
Tel: +603-2691 2090  
Fax: +603-2692 5017
2.11 ACCREDITATION BODIES

2.11.1 THE ENGINEERING ACCREDITATION COUNCIL (EAC)

The Engineering Accreditation Council (EAC) is a delegated body by the Board of Engineers Malaysia as the only recognized accrediting body for engineering degree programmes offered in Malaysia. Membership of the EAC comprises five (5) stakeholders namely, the Board of Engineers (BEM) [5-6 representatives], the Institution of Engineers Malaysia (IEM) [5-6 representatives], Industry Employers [3-4 representatives], Malaysian Qualification Agency (MQA) [1 representative] and the Public Service Department (JPA) [1 representative].

The EAC has provided leadership and quality assurance in engineering higher education since 2000. The EAC accredits 190 programmes at 26 institutions of higher learning (IHL) nationwide.

The EAC has been strengthened with respect to its administrative arm with the set up of the Engineering Accreditation Department. The Department presently operates at the Kelana Jaya office. The set up includes a director, four associate directors, a manager and five administrative personnel. The Department is also supported by its committees that oversee the development of the Manual, the outcome-based culture change at institutions of higher learning, quality assurance and international affairs.

On 18th June 2009 the Board of Engineers Malaysia was accepted as the 13th signatory of the Washington Accord. The EAC was instrumental in ensuring Malaysia’s EAC accredited engineering programmes are substantially equivalent to the engineering degrees of the signatories of the Washington Accord.

CONTACT INFO

Address:
Engineering Accreditation Department
Board of Engineers Malaysia
Tingkat 9 Kelana Park View Tower
No 1 Jalan SS 6/2, Kelana Jaya
47301 Petaling Jaya, Selangor

Tel: +603-7804 9851 / 7804 9776
Fax: +603-7804 9131
Email: eac@bem.org.my
2.11.1.1 PROCESS FLOW FOR EAC ACCREDITATION (DEGREE IN ENGINEERING PROGRAMME)

EAC RECOGNITION PROCESS FOR BACHELOR OF ENGINEERING

<table>
<thead>
<tr>
<th>RESPONSIBILITY / DESCRIPTION</th>
<th>WORK</th>
<th>REFERENCES</th>
<th>CONTROL PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) CAIC / Faculty: Identify the programme to apply for recognition</td>
<td>(1) CAIC: Check Managing Recognition</td>
<td>Table records the recognition of UMP</td>
<td></td>
</tr>
<tr>
<td>(2) CAIC: Inform paper format recognition EAC and information.</td>
<td>(2) CAIC: Hold briefings and meetings with faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Faculty: To hold a meeting with Stakeholders</td>
<td>(3) Faculty: Meeting with Stakeholders (IAP / BOS / Alumni)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Academic Quality Assurance Committee (JTKA): Check the document and if there is any improvement, inform the faculty (6)</td>
<td>(5) JTKA: Check document</td>
<td>There are changes</td>
<td></td>
</tr>
<tr>
<td>(7) CAIC Send documents (5 copies) to the EAC no later than January 31 of each year</td>
<td>(7) CAIC: Send five copies of the documents to EAC</td>
<td>No change</td>
<td>Faculty print documents EAC-SAR of 1 copy of the hardcopy and softcopy and send it to the CAIC</td>
</tr>
<tr>
<td>(8) CAIC: Tour dates will be confirmed by the EAC and then inform the faculty to prepare</td>
<td>(8) CAIC: Receive tour dates and tour information from the EAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) &amp; (10) CAIC Coordination meeting face visits EAC</td>
<td>(9) CAIC: Preparing for a day trip</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10) CAIC / Faculty: Day ACCREDITATION VISIT EAC</td>
<td></td>
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</table>
EAC RECOGNITION PROCESS FOR
BACHELOR OF ENGINEERING

<table>
<thead>
<tr>
<th>RESPONSIBILITY / DESCRIPTION</th>
<th>WORK</th>
<th>REFERENCES</th>
<th>PROCESS CONTROL</th>
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<tbody>
<tr>
<td>(11) CAIC / Faculty:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving reports the visits and faculty shall give immediate feedback (within 10 days)</td>
<td>(11) CAIC / Faculty: Visit Outcome Report</td>
<td></td>
<td></td>
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<tr>
<td>(12) Faculty:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare and submit to the CAIC report within 10 days</td>
<td>(12) FACULTY: Prepare and submit reports to the CAIC</td>
<td></td>
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<tr>
<td>(13) JTKA:</td>
<td></td>
<td></td>
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<tr>
<td>Review feedback from faculty and faculty make improvements (if any)</td>
<td>(13) JTKA: Check feedback from faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(14) CAIC:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received a letter of recognition results (3 months after the first report out)</td>
<td>(14) Faculty: Followup To Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(15) CAIC:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inform the approval of the Senate and the recognition of LPU</td>
<td>(15) BEM / EAC Evaluations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16) CAIC (Through TNCA &amp; A): Note in the Senate and BOD Meeting</td>
<td>(16) CAIC (Through TNCA &amp; A): Note in the Senate and BOD Meeting</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

END

2.11.2 THE MALAYSIAN QUALIFICATIONS AGENCY (MQA)

2.11.2.1 BACKGROUND

The establishment of a new entity which merges the National Accreditation Board (LAN) and the Quality Assurance Division, Ministry of Higher Education (QAD) was approved by the Government on 21 December 2005. This entity is responsible for quality assurance of higher education for both the public and the private sectors. The new entity, the Malaysian Qualifications Agency (MQA), was established on 1 November 2007 with the coming in force of the Malaysian Qualifications Agency Act 2007. The MQA was officially launched by the Honorable Minister of Higher Education, Dato' Mustapa Mohamed, on 2 November 2007.

The main role of the MQA is to implement the Malaysian Qualifications Framework (MQF) as a basis for quality assurance of higher education and as the reference point for the criteria and standards for national qualifications. The MQA is responsible for monitoring and overseeing the quality assurance practices and accreditation of national higher education.

The establishment of the MQA saw LAN dissolved and its personnel absorbed into the MQA.

With the vision to be a credible and internationally recognised higher education quality assurance body and the mission to inspire the confidence of its stakeholders through best practices, the MQA is set to chart new boundaries in higher education quality assurance.

2.11.2.2 FUNCTIONS

As a quality assurance body, the functions of MQA are:

a. To implement MQF as a reference point for Malaysian qualifications.
b. To develop standards and credits and all other relevant instruments as national references for the conferment of awards with the cooperation of stakeholders.
c. To quality assure higher education institutions and programmes.
d. To accredit courses that fulfill the set criteria and standards.
e. To facilitate the recognition and articulation of qualifications.
f. To maintain the Malaysian Qualifications Register (MQR).
2.11.2 THE MALAYSIAN QUALIFICATIONS AGENCY (MQA)

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- To accredit courses that fulfill the set criteria and standards.
- To facilitate the recognition and articulation of qualifications.
- To maintain the Malaysian Qualifications Register (MQR).
2.11.2.3 CONTRIBUTIONS

The establishment of the MQA and the implementation of the MQF will benefit national higher education and the development of human capital.

In brief, the contributions of MQA and the benefits of implementing the MQF is shown below:

Contact info:

Address:

Tingkat 14B, Menara PKNS-PJ,
17, Jalan Yong Shook Lin,
46050 Petaling Jaya,
Selangor Darul Ehsan

Tel: +603 - 7968 7002
Fax: +603-7956 9496
Email: webadmin@mqa.gov.my
## MQA RECOGNITION PROCESS FOR NON-ENGINEERING

### RESPONSIBILITY / DESCRIPTION

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) CAIC / Faculty</strong></td>
<td>Identify the programme to apply for recognition</td>
</tr>
<tr>
<td><strong>(2) CAIC</strong></td>
<td>Inform paper format MQA recognition and information.</td>
</tr>
</tbody>
</table>
| **(3), (4) & (5) Faculty** | - Meet with stakeholder (IAP / BOS) 
- Organize Workshop on Data Collection:
  i) Working Paper should be sent 
  ii) Supporting documents (Essential presented at management level faculty for review purposes) |
| **(6) Technical Committee on Quality Assurance (JTKK)** | Check and Print (1-2 weeks) and if there is a correction (7), submitted to the faculty (8) |
| **(8) Faculty** | Print documents MQA-02 (Part B, C & D) of 1 copy of the hardcopy & softcopy and send it to the CAIC. (CAIC provide Part A) |
| **(9) CAIC** | Send documents (5 copies) to the MQA at least 6 months prior to graduating students |

### WORK

<table>
<thead>
<tr>
<th>Work</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) CAIC / FACULTY</strong></td>
<td>Check Managing Recognition</td>
</tr>
<tr>
<td><strong>(2) CAIC</strong></td>
<td>Briefings and meetings with faculty involved</td>
</tr>
<tr>
<td><strong>(3) FACULTY</strong></td>
<td>Held a joint meeting of the Industry Advisory Panel / Board of Studies</td>
</tr>
<tr>
<td><strong>(4) Faculty</strong></td>
<td>Document Preparation Workshop</td>
</tr>
<tr>
<td><strong>(5) Faculty</strong></td>
<td>Expanding to the checking of</td>
</tr>
<tr>
<td><strong>(6) Review Committee Academic / Faculty Accreditation Committee</strong></td>
<td>Improve</td>
</tr>
<tr>
<td><strong>(7) Process improvement</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(8) Faculty</strong></td>
<td>Send the document to the CAIC</td>
</tr>
<tr>
<td><strong>CAIC</strong></td>
<td>Check documents MQA-02 Check &amp; Print (1-2 weeks)</td>
</tr>
<tr>
<td><strong>(9) CAIC</strong></td>
<td>Send application recognition MQA</td>
</tr>
</tbody>
</table>

### REFERENCES

- Paper Guidelines Recognition (MQA-02, COPPA 2nd Edition)

### PROCESS CONTROL

- The preceding year
- 6 Months before the students graduate / pre-Li
- Faculty are encouraged to make Mock Audit / Self-review before the MQA visit
- Be sure to send 6 months before the students graduate / before the student is on LI

---

**KELUARAN: 01 M/S : 1/2 TARIKH PELAKSANAAN:**
### MQA RECOGNITION PROCESS FOR NON-ENGINEERING

<table>
<thead>
<tr>
<th>RESPONSIBILITY / DESCRIPTION</th>
<th>WORK</th>
<th>REFERENCES</th>
<th>PROCESS CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>(11) PP CAIC</td>
<td>Let the right tour dates determined by the MQA and Panel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12) CAIC</td>
<td>Receive Report Evaluation of the results of the audit visit MQA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(13) Faculty / CAIC</td>
<td>Faculty should take note and act quickly (14 days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(14) JTJKA</td>
<td>Will review the feedback provided and faculty to take immediate action (if any improvements)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16) CAIC</td>
<td>In the absence of any correction, the CAIC will print and send feedback to the MQA (1-3 days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(17) PP CAIC</td>
<td>- Receives Accreditation Decision Letter (Confirmation name of the programme) - Making payments on Accreditation Programme for the issuance of certificates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(18) CAIC</td>
<td>Notification to the Senate &amp; LPU through DVC (A &amp; A)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REFERENCES**

1. **INDUSTRIAL TRAINING**
   1.2 **INTRODUCTION**
   Industrial Training (IT) means guided practice based on a previously learned theory. In particular, IT provides opportunities for students to practice and apply the theories that they have learned at the University to the actual situation in the working world. IT is a compulsory course listed in the UMP curriculum and a requirement for graduation for all degree and diploma students.

   **OBJECTIVES**
   
   a) To expose the real working environment in the industry to students before their graduation in fields related to their specialisation.
   b) Provide opportunities for students to apply their knowledge and communication skills that have been learned in the UMP to the real working world.
   c) Provide opportunities for students to learn the practical from the industry and apply this knowledge to their learning process at UMP (IT Sandwich).
   d) Cultivate professionalism and quality work ethics in order to be efficient, motivated and responsible professional.
   e) Provide opportunities for the industry to recognize the potential of UMP students and increase students’ employability upon graduation.

**ELIGIBILITY AND REGISTRATION TO UNDERGO INDUSTRIAL TRAINING**

   a) For students of Bachelor of Engineering, they are eligible to register and undergo IT at the earliest of the 3rd year of study and fulfil pre-conditions courses and additional requirements set by the Faculty.
   b) For students of Bachelor and Diploma of non-engineering, they are eligible to register and undergo IT after passing all courses and earn a minimum of Good Standing (KB) in the current examination.
   c) For students of Diploma in Engineering, they are eligible to register and undergo IT after passing all courses and earn at least a Good Standing (KB) in the current examination.
2.12 INDUSTRIAL TRAINING

2.12.1 INTRODUCTION

Industrial Training (IT) means guided practice based on a previously learned theory. In particular, IT provides opportunities for students to practice and apply the theories that they have learned at the University to the actual situation in the working world.

IT is a compulsory course listed in the UMP curriculum and a requirement for graduation for all degree and diploma students.

2.12.2 INDUSTRIAL TRAINING OBJECTIVES

IT objectives are to:

a) To expose the real working environment in the industry to students before their graduation in fields related to their specialisation.

b) Provide opportunities for students to apply their knowledge and communication skills that have been learned in the UMP to the real working world.

c) Provide opportunities for students to learn the practical from the industry and apply this knowledge to their learning process at UMP (IT Sandwich).

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c) For students of Diploma in Engineering, they are eligible to register and undergo IT after passing all courses and earn at least a Good Standing (KB) in the current examination.
2.12.4 EXEMPTION FROM UNDERGOING INDUSTRIAL TRAINING

Students who have working experiences may apply for an exemption from undergoing IT. Exceptions will be given to students who meet the requirements set by each faculty as follows: Have the relevant technical work experiences of not less than two (2) years. Apply to the Faculty for exemption to undergo IT.

a) Submit a complete and certified (by the employer) report on working experiences to the Faculty.

b) Successful in an interview conducted by the Faculty. (Panel of interviewers are members from the Faculty Academic Committee)

2.12.5 INDUSTRIAL TRAINING BRIEFING

a) Industrial Training Unit & Graduate Employability (ITU & GE) will organize briefings to all students who will undergo IT one semester before the IT attachment.

b) The briefings are related to attachment application and preparation to undergo IT. Students are required to attend the briefings.

2.12.6 PLACEMENT AND DURATION OF INDUSTRIAL TRAINING

2.12.6.1 Placement

- Students are responsible to find an IT placement.

- Students are advised to apply for placement at least one semester before the IT period. All applications must go through the ITU & GE.

- Students are required to undergo IT at the industry/organisation that is appropriate to the area of specialisation, subject to the approval of the Faculty

2.12.6.2 Duration

- IT duration is 10 weeks or 24 weeks continuously depending on the programs and students must complete within the time prescribed by the Faculty.

- IT duration according to the program: -
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- IT duration is 10 weeks or 24 weeks continuously depending on the programs and students must complete within the time prescribed by the Faculty.
- IT duration according to the program:
  
<table>
<thead>
<tr>
<th>Programme</th>
<th>Duration of Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Engineering</td>
<td>10 weeks</td>
</tr>
<tr>
<td>Bachelor of Non-Engineering</td>
<td>24 weeks</td>
</tr>
<tr>
<td>Engineering &amp; Non-Engineering Diploma</td>
<td>24 weeks</td>
</tr>
<tr>
<td>Diploma in Electrical Engineering</td>
<td>12 weeks</td>
</tr>
</tbody>
</table>

2.12.7 DISCIPLINARY DURING INDUSTRIAL TRAINING

- While undergoing IT, students must behave accordingly and maintain a good relationship with industry personnel and the good name of the University. Students must adhere to all rules and regulations of the industry.
- Students who violate the rules of the industry / organization at attachment, tarnish the good name of universities, shall be subjected to disciplinary action in accordance with the Universities and University Colleges Act (UUCA), 1971.

2.12.8 STUDENT RESPONSIBILITIES

2.12.8.2 Before Undergoing IT

- Verify eligibility to undergo IT by filling and summiting IT Application Form approved by the Academic Advisor.
- Register IT course during the registration process.
- Attend the IT briefing held in the semester before the students undergo IT. Students can apply for placement in five (5) external agencies at one time through ITU & GE.
- If the agency rejects the application, students can apply for assistance in another agency through ITU & GE.
- Students must notify ITU & GE when getting offers from the agencies. If a student receives more than one offer, the student must notify ITU & GE on the selected agency and submit the list of agencies that are not selected. However, students are responsible for providing rejection letter to the non-selected agencies.
- Allowances and the provision of facilities such as accommodation / hostel and
transportation are subjected to the agency. No demand shall be made on these facilities. Students are advised to take into account the above factors before accepting the offer.

- Students who have yet to receive any placement offer are required to contact ITU & GE at least two (2) weeks before the date of registration at the IT placement.
- Students are to check and verify the placement particulars issued by ITU & GE.

2.12.8.3 While undergoing IT

- Students are required to submit a Self-Reporting Verification Form (Form A1) to ITU & GE latest a week later after the start of IT.
- Change of IT placement is not allowed.
- Students should always dress in accordance with the conditions and regulations on the training ground.
- Students are required to attend training as required by the industry. Students are not allowed to take annual leave during a period of IT. Leave can only be considered if there are EMERGENCY / VERY IMPORTANT matters and shall not be more than 20% of the IT duration. Leave application approval is at the discretion of Industrial Supervisor. Students must notify the relevant faculty if taken any leave. Students shall not engage in any activity except IT.
- Students are required to fill out the log book and provide Industrial Training Report. Report and log book to be reviewed and approved by the Industrial Supervisor.
- Students are subjected to all rules and regulations stipulated by the agency during the training duration and keep the good name of UMP.
- Students who are unethical, undisciplined and damage the properties of the agency attached can be terminated from pursuing IT at any time as a disciplinary action.
- Students are required to notify the faculty supervisor for any related problems concerning with IT for appropriate action.

2.12.9 INSURANCE, MEDICAL AND INDEMNITY

2.12.9.1 Insurance

- All students undergoing IT in Malaysia are protected by the Family Takaful Insurance Scheme. This protection scheme covers injury and death as contained in the insurance policy. Any claim against the insurance should be supported by documents issued by the clinics / hospitals and the police report.
- For students undergoing IT outside Malaysia, they should apply in writing and notify ITU & GE for insurance coverage at least TWO (2) months before the attachment date. Coverage on the insurance will be advised accordingly.

2.12.9.2 Medical Treatment

- While undergoing IT in Malaysia, students can seek treatment at government clinics / hospitals. In emergency cases where there is no government hospital, a student may seek treatment in private clinics / hospitals. Claims related to treatment in private clinics / hospitals are only eligible if approved by the Medical Officer of the UMP Student Health Centre by providing the relevant documents.
- For students undergoing IT outside Malaysia, please contact the Department of Student Affairs and Alumni (JHEPA) UMP.

2.12.9.3 Letter of Indemnity

Letter of indemnity is issued by the Department of Student Affairs and Alumni (JHEPA) UMP.
2.12.8.4 **After Undergoing IT**

- Students are required to submit reports and Log Book to the Faculty / University Supervisor at the date prescribed by the Faculty.

- Students are required to submit feedback form to ITU & GE on the last week of the IT.

---

2.12.9 **INSURANCE, MEDICAL AND INDEMNITY**

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- All students undergoing IT in Malaysia are protected by the Family Takaful Insurance Scheme. This protection scheme covers injury and death as contained in the insurance policy. Any claim against the insurance should be supported by documents issued by the clinics / hospitals and the police report.

- For students undergoing IT outside Malaysia, they should apply in writing and notify ITU & GE for insurance coverage at least **TWO (2) months** before the attachment date. Coverage on the insurance will be advised accordingly.

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- While undergoing IT in Malaysia, students can seek treatment at government clinics / hospitals. In emergency cases where there is no government hospital, a student may seek treatment in private clinics / hospitals. Claims related to treatment in private clinics / hospitals are only eligible if approved by the Medical Officer of the UMP Student Health Centre by providing the relevant documents.

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2.12.9.3 **Letter of Indemnity**

Letter of indemnity is issued by the Department of Student Affairs and Alumni (JHEPA) UMP.
2.12.10 SUPERVISORY RESPONSIBILITIES

2.12.10.1 Responsibilities of Faculty / University Supervisor

- Faculty Supervisor is made up of faculty members appointed by the University. Responsibilities of Faculty Supervisor appointed are as follows:
  - Responsible for the supervision of students under the supervision over the IT duration.
  - Establish a good relationship with the industry.
  - Conduct visits to industries / organizations for the purpose of monitoring and evaluation at least once during the period of training or when necessary.
  - Discuss with industry representatives and making recommendations to improve the IT.
  - Assess the performance of students, such as evaluating the Logbook, Reports and others.

2.12.10.2 Industrial Supervisor Responsibilities

Industrial Supervisor is an officer appointed by the agency who is responsible in supervising UMP students who underwent IT. Industrial Supervisor tasks are as follows:

- Coordinate with the faculty supervisor on IT.
- Establish a good relationship with the Faculty Supervisor.
- Discuss with the Faculty Supervisor and making recommendations to improve the IT.
- Assess the performance of students, such as evaluating the Logbook, Reports and others.

2.12.11 INDUSTRIAL TRAINING REPORT

Students undergoing IT must prepare report. This report shall contain detailed information relating to the work or activities that have been carried out during the training period. Training format is dependent on the respective faculty.
2.12.12 INDUSTRY TRAINING ASSESSMENT

The students' performance and soft skills should be evaluated by the Faculty Supervisor and Industrial Supervisor. Evaluations are based on student work performances and the soft skills. Detail breakdown of the assessment shall be obtained from the respective faculty.

2.12.2 Supervisor Evaluation Report

- **Report of the University Supervisor**

  The students' performances assessed by the Faculty supervisor are based on observations and interviews with students and also the result of feedback from the Industrial Supervisor. Among the aspects evaluated in terms of understanding, commitment, adaptability, level of discipline and quality of work performed.

- **Industrial Supervisor Report**

  Industrial Supervisor is also responsible for assessing the performance of students. Assessment of student work includes performance, commitment, level of discipline and adaptability and quality of work performed.

  In the final week of training, supervisors were asked to complete Industrial Supervisor Confidential Report Form (Form C). These reports include among others the following aspects:
  
  a) Knowledge of the work.
  b) The quality of work.
  c) Willingness to learn and help new tasks.
  d) Relationship with other workers.
  e) Discipline.
  f) Timeliness.
  g) The efforts and initiatives.

- **Assessment of Logbook**

  Log book is a diary during the run IT students. Through the Log Book, the supervisor can evaluate the work done by the student at industry. Contents of this log book should include important details such as work experience, the results of discussions, comments/information from industry etc.

2.12.12.2 Effectiveness Of Industrial Training Report

University is concerned about the effectiveness of IT. To strengthen the IT program in the future, students should complete Industrial Training Program Effectiveness Report Form (Form A3) which covers the following elements:

a) Appropriateness of the training.
b) Comment on the training schedule.
c) Problems encountered during training.
d) Recommendations for improving the training.
2.12.12.3 Industrial Training Final Report And Presentation

- Students are required to provide an IT report in English, except at the request of the industry with the permission of the Faculty.

- This report contains brief background information industry, the scope of training, content of training, industrial training feedback and conclusions. Please refer to the Guidelines Report of the respective faculty.

- Students are required to submit this report to the Faculty Supervisor and Industrial Supervisor as specified by the respective faculty. Students who fail to do so can be given Failing Grade (HG) despite fulfilling other requirements. Presentation is required for the Bachelor Degree students. This presentation shall be conducted either on completion of the industrial training or during visits by university supervisor, subject to their respective faculties.

2.12.13 GRADUATION REQUIREMENTS FOR INDUSTRIAL TRAINING

2.12.13.1 Faculty Supervisor is required to certify the status students undergoing IT by either pass (HL) or fail (HG) based on industry training evaluation format specified.

2.12.13.2 The minimum score to pass the IT was 50%.

2.12.13.3 Students may also be given the status of failed (HG) for the following reasons:

- The student fails to report to the agency within the prescribed period without reasonable excuse recognized by the Faculty.
- Change the IT placements without written permission from the Faculty.
- Students are not undergoing IT within the period prescribed by the Faculty.
- Faculty receives a written disciplinary report from the agency.
- Any misconduct that is certified by the Faculty Academic Committee.

2.12.14 CONCLUSION

Changes in the implementation of IT can be carried under any provision of this IT Guideline. All changes to the implementation must be observed. Nevertheless, the UMP Senate is entitled to amend these guidelines from time to time when the need arises.
2.13 UMP – EPT

2.13.1 BACKGROUND

The KRA 1A – UMP Strategic Plan 2011-2015 has set the level of English language proficiency of undergraduate students at MUET Band 3/IELTS 5.5/TOEFL 550, and postgraduate students at IELTS 6.0/ TOEFL 570. Through a study, it was found that only 52% of UMP students achieved Band 3 for their MUET. This shows a huge gap between students’ English language proficiency level and the target of KRA 1A – UMP Strategic Plan 2011-2015.

As a consequence, to achieve the target of the KRA 1A at the internal level, CMLHS has suggested three solutions which include:

a. introducing UMP-EPT as the benchmark for identifying students’ level of English proficiency,
b. restructuring the courses offered by the Modern Languages Department, CMLHS, and,
c. restructuring the Preparatory Intensive English (PIE) program.

2.12.2 OBJECTIVE

- To implement UMP English Proficiency Test (UMP-EPT) as the benchmark for English language proficiency level at UMP.
- To restructure the courses offered by the Modern Languages Department, CMLHS.
- To restructure the Preparatory Intensive English (PIE) program.

2.13.3 JUSTIFICATION

The implementation of this program is suggested based on the needs for a benchmark that can measure UMP students’ level of English language proficiency effectively and at a low cost. There should also exist a link between UMP Strategic Plan 2011-2015 and the English communication courses offered by the Modern Languages (ML) Department, CMLHS. ML curriculum needs to support the KPI set by UMP. Indirectly, this can meet the market demand which requires graduates who possess high English language proficiency and effective communication skills.

2.13.4 IMPLEMENTATION

All local undergraduate students will sit for the UMP-EPT during the induction week (MINDS) and the international undergraduate and postgraduate students will sit for the test during a specific date set by CMLHS. For international students, the UMP-EPT will be organised four times a year. There is a required test fee to sit for UMP-EPT.
2.13.5 FINANCIAL IMPLICATION

UMP-EPT Fee:

- Undergraduate students – RM100.00
- Postgraduate students – RM200.00
- UMP associates – RM200.00

2.13.6 UMP-EPT CONVERSION TABLE

<table>
<thead>
<tr>
<th>BAND</th>
<th>READING MARKS</th>
<th>GRAMMAR MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>39 - 40</td>
<td>59 – 60</td>
</tr>
<tr>
<td>8.5</td>
<td>37 – 38</td>
<td>57 – 58</td>
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<tr>
<td>8.0</td>
<td>35 – 36</td>
<td>54 – 56</td>
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<tr>
<td>7.5</td>
<td>33 – 34</td>
<td>51 – 53</td>
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<td>31 – 32</td>
<td>49 – 50</td>
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<tr>
<td>1.0</td>
<td>1 - 2</td>
<td>1 - 2</td>
</tr>
</tbody>
</table>
3.1 INTERNAL GRANTS

3.1.1 UNIVERSITY RESEARCH GRANT (UMP RESEARCH GRANT SCHEME)

University Research Grant is offered to academic staff with the aim of providing early exposure to the research process before they apply for research funding from external agencies such as from the Ministry of Higher Education or Ministry of Science and Innovation. Apart from providing exposure, the University Research Grant is also a platform for academic staff to produce a research that can enhance of UMP reputation as a competitive research and innovation university nationally and internationally. In addition, it is hoped that this research grant can be a catalyst for the university to become a world class technical university.

<table>
<thead>
<tr>
<th>Eligibility requirements</th>
<th>University Research Grant is offered to academic staff with the aim of providing early exposure to the research process before they apply for research funding from external agencies such as from the Ministry of Higher Education or Ministry of Science and Innovation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount allocated</td>
<td>A maximum of RM 40,000.00 is allocated for each research grant.</td>
</tr>
<tr>
<td>Tenure of grant</td>
<td>The maximum duration for the project is 24 months.</td>
</tr>
</tbody>
</table>
3.1.2 UMP POSTGRADUATE RESEARCH GRANT SCHEME (PGRS) GUIDELINE

Providing financial support to assist UMP full time postgraduate students (both Masters and PhD) to undertake meritorious research activities. The application for research proposals is now open to all main supervisors at University Malaysia Pahang (UMP).

<table>
<thead>
<tr>
<th>Eligibility requirements</th>
<th>This grant is open to all main supervisors of full time research students (Masters and PhD) currently enrolled at UMP.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount allocated</strong></td>
<td>Total amount of budget is based on the criteria as stated below. The amount depends on when the grant is applied.</td>
</tr>
<tr>
<td><strong>Engineering &amp; Pure Science Student</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Msc.</strong></td>
</tr>
<tr>
<td>First Year Student</td>
<td>RM 3,500.00</td>
</tr>
<tr>
<td>Second &amp; Third Year Student</td>
<td>RM 2,500.00</td>
</tr>
<tr>
<td><strong>Computer Science &amp; Social Science Student</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Msc.</strong></td>
</tr>
<tr>
<td>First Year Student</td>
<td>RM 2,500.00</td>
</tr>
<tr>
<td>Second &amp; Third Year Student</td>
<td>RM 2,500.00</td>
</tr>
<tr>
<td><strong>Tenure of grant</strong></td>
<td>The maximum duration for the project is 36 months.</td>
</tr>
</tbody>
</table>

3.1.3 UMP SEED MONEY RESEARCH GRANT

UMP Seed Money is one of the initiatives from the university to encourage acculturation in research, especially for the research that is related to the industry. The grant is provided with the intention of assisting academic staff in starting their industry-based research. Therefore, the grant is designed to encourage academic staff. To locate, identify and solve problems faced by the industry. The problems faced by the industry can be reviewed and resolved through this research. The maximum allocation for this grant is RM 5,500.00.

<table>
<thead>
<tr>
<th>Eligibility requirements</th>
<th>This grant is open to all staff, who do not have any grant at the current time. However, priority is given to young lecturers who have the initiative to embark on an industry-based research.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount allocated</strong></td>
<td>A maximum of RM 5,500.00 is provided for the research process. The usage of this grant is allowed only for V-Series 21000, which is for traveling and subsistence</td>
</tr>
<tr>
<td><strong>Tenure of grant</strong></td>
<td>The period/tenure of the Seed Money Grant is one (1) year.</td>
</tr>
</tbody>
</table>

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3.2 NATIONAL GRANTS

3.2.1 FRGS - FUNDAMENTAL RESEARCH GRANT SCHEME

<table>
<thead>
<tr>
<th>Definition</th>
<th>This is a grant specifically provided for fundamental / basic research that can produce theories, concepts, and ideas for the advancement of knowledge.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Purpose</th>
<th>This research aims to encourage the generation of theories, concepts and new ideas that can be a catalyst for new discoveries and innovative creation that can expand the boundaries of knowledge.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Research areas</th>
<th>FRGS grant funding covers basic areas that can support the country's strategic agenda. The areas identified are: -</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Pure Science (Pure Science)</td>
</tr>
<tr>
<td></td>
<td>• Applied Science (Applied Science)</td>
</tr>
<tr>
<td></td>
<td>• Technology and Engineering (Technology and Engineering)</td>
</tr>
<tr>
<td></td>
<td>• Health and Clinical Sciences (Clinical and Health Sciences)</td>
</tr>
<tr>
<td></td>
<td>• Social Sciences (Social Sciences)</td>
</tr>
<tr>
<td></td>
<td>• Professional Arts and Humanities (Arts and Applied Arts)</td>
</tr>
<tr>
<td></td>
<td>• Natural Sciences and National Heritage (Natural Sciences and National Heritage)</td>
</tr>
<tr>
<td></td>
<td>• Information and Communication Technology (Information and Communication Technology)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eligibility requirements</th>
<th>The grant is open to academic staff in public and private institutions who meet the following conditions: -</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Malaysian citizenship</td>
</tr>
<tr>
<td></td>
<td>2. Permanent academic staff (Professor, Associate Professor, Lecturer Senior Lecturer) or</td>
</tr>
<tr>
<td></td>
<td>3. Employees on contract must have researchers who are permanent staff in the team.</td>
</tr>
<tr>
<td></td>
<td>4. For non-citizens, they must have researchers who are Malaysian citizens.</td>
</tr>
<tr>
<td></td>
<td>5. Application of the University Branch must comply with the following conditions: -</td>
</tr>
<tr>
<td></td>
<td>• If the Principal Researcher is not a citizen, member of the research team must be Malaysian.</td>
</tr>
<tr>
<td></td>
<td>• Research grant must be used within the country.</td>
</tr>
<tr>
<td></td>
<td>6. Applicants are only allowed to be the Principal Researcher for one project and only one application will be approved for each phase / cycle.</td>
</tr>
<tr>
<td></td>
<td>7. The applicant is allowed to apply for one of the research modes for each phase / cycle.</td>
</tr>
<tr>
<td></td>
<td>8. New applications for grants will only be approved when evidence of completion of the previous project at the rate of 75 per cent (75%) is submitted.</td>
</tr>
<tr>
<td></td>
<td>9. The total allocation requested should not exceed the ceiling specified.</td>
</tr>
</tbody>
</table>
10. Each applied research project aims to produce Human capital development as in PSPTN. Which are as follows:

- Three (3) year project:
  - Researchers are required to train at least one (1) PhD student or two Masters students or combination of both.

- Two (2) year project:
  - Researchers are required to train at least one (1) Master student.

11. Lecturers on study leave are not allowed to become Principal Researcher. However, he/she may be a member of a research group.

12. Principal Investigator who leaves the university must release the position as principle researcher. However, he/she can remain as a member of the research group.

13. Application from Research Institutions under the Ministry of Science, Technology and Innovation (MOSTI) fulfill the following conditions:

- Compulsory Research Officer / Research Scientist permanent, and
- Research institutions should collaborate to be admitted for the proposed research project.

### 3.2.2 ERGS - EXPLORATORY RESEARCH GRANT SCHEME

**Definition**
Exploratory research is research that can answer the questions "what" and "where". This can generate new ideas in a domain of knowledge that has not been fully explored. Essentially this grant aims to generate new ideas in various domains of knowledge or investigate problems in specific research areas.

**Purpose**
This research aims to encourage inquisitive minds, to explore new ideas and concepts that could be a catalyst to new discoveries and innovative creation that can expand the boundaries of knowledge.

**Research areas**
ERGS grant funding covers basic areas that can support the country's strategic agenda. The areas identified are:

- Pure Science (Pure Science)
- Applied Science (Applied Science)
- Technology and Engineering (Technology and Engineering)
- Health and Clinical Sciences (Clinical and Health Sciences)
- Social Sciences (Social Sciences)
- Professional Arts and Humanities (Arts and Applied Arts)
- Natural Sciences and National Heritage (Natural Sciences and National Heritage)
- Information and Communication Technology (Information and Communication Technology)
Each applied research project aims to produce human capital development as in PSPTN. Which are as follows:

- **Three (3) year project:** Researchers are required to train at least one (1) PhD student or two Masters students or combination of both.

- **Two (2) year project:** Researchers are required to train at least one (1) Master student.

Lecturers on study leave are not allowed to become principal researchers. However, he/she may be a member of a research group.

Principal investigator who leaves the university must release the position as principle researcher. However, he/she can remain as a member of the research group.

Application from research institutions under the Ministry of Science, Technology and Innovation (MOSTI) fulfill the following conditions:

- Compulsory Research Officer / Research Scientist permanent, and

Research institutions should collaborate to be admitted for the proposed research project.
### 3.2.3 PRGS - PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME (PRGS)

<table>
<thead>
<tr>
<th><strong>Definition</strong></th>
<th>This fund is established for the development of prototypes to bridge the gap between laboratory discovery / research and its pre-commercialization stage. This includes proof of concept, assessment (evaluation), up-scaling, pre-clinical testing (pre-clinical testing) and field testing (field testing).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>PRGS fund is created to help bridge the gap between laboratory discovery / research and commercialization for the research of creation technology / new findings in accordance with the requirements of the K-economy and the implementation of the New Economic Model.</td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td>Open to all fields of research in which the findings require prototype development.</td>
</tr>
</tbody>
</table>

### 3.2.4 LRGS - LONG TERM RESEARCH GRANT SCHEME

<table>
<thead>
<tr>
<th><strong>Definitions</strong></th>
<th>LRGS is fundamental research involving a more extensive scope, and a longer period of time. LRGS can be research that produces new theories or ideas at the forefront of strategic niche areas.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>This research aims to enhance excellence in the generation of theories, new ideas and the creation of innovation in a strategic niche area.</td>
</tr>
</tbody>
</table>
| **Research areas** | LRGS grant funding includes high impact niche areas such as: -  
  - Global warming  
  - Tropical medicine / infectious disease  
  - Non-communicable diseases  
  - Energy & Water Security v. adequacy of food  
  - Advanced manufacturing and value-added  
  - Information and Communication Technology (ICT)  

Research areas may also comprise other than the aforementioned niche. However, emphasis is given to the (7) seven niche areas as stated above. |
### 3.2.3 PRGS - PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME (PRGS)

**Definition**

This fund is established for the development of prototypes to bridge the gap between laboratory discovery/research and its pre-commercialization stage. This includes proof of concept, assessment (evaluation), up-scaling, pre-clinical testing (pre-clinical testing) and field testing (field testing).

**Purpose**

PRGS fund is created to help bridge the gap between laboratory discovery/research and commercialization for the research of creation technology/new findings in accordance with the requirements of the K-economy and the implementation of the New Economic Model.

Research is open to all fields of research in which the findings require prototype development.

### 3.2.4 LRGS - LONG TERM RESEARCH GRANT SCHEME

**Definitions**

LRGS is fundamental research involving a more extensive scope, and a longer period of time. LRGS can be research that produces new theories or ideas at the forefront of strategic niche areas.

**Purpose**

This research aims to enhance excellence in the generation of theories, new ideas and the creation of innovation in a strategic niche area.

Research areas LRGS grant funding includes high impact niche areas such as:

- Global warming
- Tropical medicine/infectious disease
- Non-communicable diseases
- Energy & Water Security adequacy of food
- Advanced manufacturing and value-added
- Information and Communication Technology (ICT)

Research areas may also comprise other than the aforementioned niche areas. However, emphasis is given to the seven niche areas as stated above.

### Eligibility requirements

The grant is open to public and private universities academic staff with the following conditions:

1. Research is open to all institutions of higher learning (IPTA), Private Higher Education Institutions (HEIs) and the University Branch.
2. The project must involve a minimum of 3 different institutions.
3. The project must be multi-disciplinary, involving the corpus of science & technology and the social sciences & humanities.
4. Total allocation requested should not exceed a ceiling of (RM 3 million per year).
5. Only Malaysians can lead LRGS an project. Each person can only lead one LRGS project at a time.
   - Permanent academic staff (Professor and Professor Associate).
   - Employees on contract, must have a permanent citizen as a researcher.
6. Applications from University Branch must comply with the following conditions:
   - Only Malaysians can lead LRGS projects. Each person can only lead one LRGS project.
   - Research grant must be used within the country.
7. Each applicant is allowed to submit only one application for each phase/cycle.
   - Research period
     Duration of the research project and top-down/bottom-up project is 3 to 5 years.
   - Monitoring is done every year. If the project does not show the required progress it could be terminated.
   - Extention of research is subject to the excellence of research progress shown and the availability of funds.
8. Lecturer on study leave cannot be the Principal Researcher. However, he may be a member of the research group.
9. Principal of Researcher who leaves the university must release the position. However, he/she can remain as a member of the research group.
3.2.5 MOSTI - (SCIENCEFUND)

<table>
<thead>
<tr>
<th>Definition</th>
<th>ScienceFund is a grant provided by the Government to carry out R&amp;D projects that can contribute to the discovery of new ideas and the advancement of knowledge in applied sciences, focusing on high impact and innovative research</th>
</tr>
</thead>
</table>
| Purpose             | The objectives of the ScienceFund are:  
  • to support research that can lead to the innovation of products or processes for further development and commercialisation; and / or  
  • to generate new scientific knowledge and strengthen national research capacity and capability |
| Research areas      | ScienceFund focuses on the following areas:  
  • Life Sciences;  
  • Computer Sciences and Information and Communication Technology (ICT);  
  • Agriculture Sciences / Agricultural Engineering;  
  • Environmental Sciences;  
  • Advanced Materials Science;  
  • Chemical Sciences;  
  • Physical and Mathematical Sciences;  
  • Engineering;  
  • Medical and Health Sciences; and  
  • Social Sciences and Humanities |
| Eligibility         | 1. This fund is open to all research scientists and engineers who are employed on a permanent or contractual basis from the following organisations:  
  a. Government Research Institutions (GRIs);  
  b. Government Science, Technology and Innovation (STI) Agencies; and  
  c. Public and Private Institutions of Higher Learning (IHL) with accredited research programmes.  
  Note:  
  • Expatriates working under contract with any of the above institutions are eligible to apply. However, the project must have a permanent Malaysian co-researcher from the same institution, well-versed with the project, to ensure its completion in the event that the expatriate’s contract is terminated.  
  • The service of a contract researcher must be valid during the period of the proposed research and contractual documents must be furnished as proof of employment for the period.  
  2. The following organisations are not eligible for ScienceFund:  
  a. Private Research Institutions (PRIs) in the private sector;  
  b. Other departments / agencies that carry out research under their purview; and  
  c. Research Institutions (RIs) with internal research funding such as Cess Fund.  
  Note:  
  • These organisations can participate by collaborating with the eligible institutions.  
  3. Project proposals substantially similar to proposals submitted to any other government funding agencies.  
  4. Researchers can lead only one (1) project at any time. Researchers have to submit the End of Project Report (EPR), before submitting a new application.
3.3 COMMERCIALIZATION

Commercialization of technology is a collaborative process between the Technology Transfer Office, researchers, and partners. Therefore, University Malaysia Pahang (UMP) now has an Office of Technology Transfer (TTO) under the Department of Research & Innovation dedicated to identifying research which has potential commercial interest and providing of strategies for how to exploit it. For instance, a research result may be of scientific and commercial interest, but patents are normally only issued for practical processes. Successful technology transfer often results in a business license or a start-up company. In addition to traditional technology transfer, the TTO carries out a number of other functions, such as working with faculty to facilitate their research activities and collaborations with other institutions and with commercial partners. The TTO also serves as an interface between UMP and the business community, including economic development efforts.

The establishment of TTO at UMP is also in line with government initiatives that have been introduced to ensure Malaysia continues to grow at a healthy rate. This includes the 1Malaysia Programme, the Economic Transformation Programme (ETP) and the Government Transformation Programme (GTP). Under the Prime Minister’s initiative, the Unit Inovasi Khas (UNIK) was established in August 2010 to act as the focal point for innovation in Malaysia and to drive forward towards developing an innovation-led economy. As a result of UNIK’s recommendation, the National Innovation Agency (Agensi Inovasi Malaysia, or AIM) was set up by an Act of Parliament (Akta Agensi Inovasi Malaysia 2010).

The AIM Act 2010 was tabled for its first reading in Parliament on 13 December 2010 before being passed at its third and final reading on 21 December 2010. The AIM Act 2010 spells out the rationale and philosophies behind AIM and also enumerates the specific mandate of the statutory body. AIM has two clear objectives that provide the foundation for the innovation blueprint:

1. To bring about societal well-being through the cultivation of an innovation ecosystem.
2. To drive the national innovation agenda to generate new-wave wealth.

Given the nature of its mandate, AIM operates across the boundaries of government, allowing it to employ a whole-of-government approach in its operations. AIM will cut across borderlines to engage with all Ministries and Agencies on any matters relating to innovation to ensure the entire country’s efforts are being effectively focused on accomplishing Malaysia’s national innovation goals.
3.3.1 ABOUT THE TECHNOLOGY TRANSFER OFFICE AT UNIVERSITY MALAYSIA PAHANG

Commercialization of technology is a collaborative process between the Technology Transfer Office, researchers, and partners. Our approach is to provide a resource to any individual or group interested in commercial activity, working hand-in-hand with corporate partners and support groups. The Technology Transfer Office at University Malaysia Pahang pursues three primary goals:

- **Intellectual Property Management**

  Patenting is the most common way to protect UMP intellectual property. Other methods include confidential disclosure agreements, trademarks, copyrights, and trade secrets. According to the university Policy on Patents and Inventions, inventions and software that are created as part of the research process are owned by the university. Circumstances associated with intellectual property ownership are complex and company representatives are encouraged to talk to TTO prior to engaging a faculty member in research or consultation.

- **Invention Evaluation**

  TTO reviews invention disclosures and interviews the inventor(s) in order to develop a clear understanding of the invention’s technical merit, patentability or protect ability, and commercial potential. The evaluation process also determines whether funds will be expanded to patent invention and serves as the foundation for the commercialization strategy.

- **Commercialization & Collaboration**

  Establishing collaborations and working relationships between industry and each of the research and creative areas of UMP. Whether working with existing alliance partners, new corporate partners, spin-off companies, entrepreneurs, venture capital or angel investors, Technology Transfer Office staff are continuously in the process of patenting technologies, licensing inventions, and helping spin-out new ventures.
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### 3.3.2 WORK PROCESS: PRE-COMMERCIALIZATION GRANTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Work Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Register and enter project information through the Research on UMP E-Community by the Principal Researcher.</td>
</tr>
<tr>
<td>2.</td>
<td>Principal researcher submits data through the system once satisfactorily complete.</td>
</tr>
<tr>
<td>3.</td>
<td>Assistant Register reviews and approves applications submitted through the system.</td>
</tr>
<tr>
<td>4.</td>
<td>A Letter of Approval for the project is issued to the Principal Researcher.</td>
</tr>
<tr>
<td>5.</td>
<td>A Letter of Transfer of Allocation and new vote is issued to the Principal Researcher.</td>
</tr>
<tr>
<td>6.</td>
<td>Print and append letter of Acceptance for Principal Researcher.</td>
</tr>
<tr>
<td>7.</td>
<td>Principal Researcher returns a signed Letter of Acceptance.</td>
</tr>
<tr>
<td>8.</td>
<td>Monitor progress and budget spending of project.</td>
</tr>
<tr>
<td>9.</td>
<td>End.</td>
</tr>
</tbody>
</table>
### 3.3.2 WORK PROCESS: PRE-COMMERCIALIZATION GRANTS

1. Register and enter project information through the Research on UMP E-Community by the Principal Researcher.
2. Principal researcher submits data through the system once satisfactorily complete.
3. Assistant Register reviews and approves applications submitted through the system.
4. A Letter of Approval for the project is issued to the Principal Researcher.
5. A Letter of Transfer of Allocation and new vote is issued to the Principal Researcher.
6. Print and append letter of Acceptance for Principal Researcher.
7. Principal Researcher returns a signed Letter of Acceptance.
8. Monitor progress and budget spending of project.
9. End.

#### Step 1: Patenting
- Prepare Invention Disclosure (ID)
- Submit ID to officer in PNI
- Officer mail ID to appointed lawyer
- Patent drafting and clarification
- Researcher finalize patent draft
- Registration at MyIPO

#### Step 2: Pre-Commercialization
- Find anchor company
- Apply UMP Pre-commercialization Fund from agencies
- Prototype development
- Performance validation
- Researcher
- TTO
- Researcher
- PNI officer
- Lawyer & researcher
- Researcher
- Lawyer
- IP leasing, licensing, ownership transfer

#### Step 3: Scale-Up
- Funds is investment, we suggest the inclusion of commercialization potential in approval
- Commercial value?
  - Yes
    - TTO & UMPH
  - No
    - Result-oriented R&D

#### Step 4: Spin-Off Formation
- Constant revenue generation
- Secure pilot development fund
- Anchor company alliance formation
- Pilot operation development
- Near-mass-scale production
- Spin-off business strategy negotiation
- Spin-off business plan
- TTO & UMPH
  - Incubator, anchor company
  - Incubator, anchor company
  - TTO
  - UMPH

- Termination
  - No commercialization output.
  - NOT ALLOWED for patent filing.
- Graduation of incubator
- Formation of spin-off company
- Mass scale production
- Product marketing
PUBLICATION

Penerbit UMP is willing to accept and publish books, original works, translations, research monographs, journals, teaching modules, proceedings, inaugural lecture series or other forms of publication which are appropriate, especially but not limited to the areas of engineering, science and technology as well as social sciences. This is open to anyone from UMP.

Penerbit UMP encourages academic staff to participate in publishing through creating five (5) categories of publication which are:

a. Learning Module
b. Original Work (in the form of book)
c. Research Monograph
d. Journal Article
e. Professorial lecturer

Publication can be in either or both in Bahasa Melayu and English. Each contribution that is submitted to Penerbit UMP will be assessed by a publication committee before it is considered for publication.

4.1 GUIDE TO WRITING A LEARNING MODULE

4.1.1 DEFINITION OF MODULE

a. A learning module is a learning resource of a course which may consist of the knowledge and skills required by students of the course.
b. The module is specifically for students and has not gone through peer / expert review.
c. Publication of a learning module is more appropriate for courses in which the materials / facts are continually changing.
d. The duration between submission to publication is at least two months.
e. A learning module will also be given an international Standard Book No. (ISBN)
4.1.2 CHARACTERISTICS OF A MODULE

a. Prepared in the form of learning course materials for teaching and learning.
b. The module should have a ratio of 70:30, 70 for practical work and 30 for theory.
c. Includes the course objectives and learning outcomes.
d. Focuses on fulfilling the course objectives and learning outcomes.
e. Contains the learning schedule to guide users of the module on the domains that should be covered in the course.
f. Includes a reference and reading list.
g. Consists the assessment plan.
h. Lists out the units and topics.
i. Consists a working paper format.
j. Uses language that is easy for students to understand. Avoid *jargon* and abbreviated words: (*jargon* – words used in specific field)

4.1.3 ELEMENTS THAT MUST BE AVOIDED

a. Sensitive elements, which are elements that can give rise to prejudice, discrimination, degrading or demeaning to race, religion, culture, gender, age or occupation;
b. Negative elements, which are elements that involve attitudes, thoughts and behaviours that are contrary to common values,
c. Subversive elements, which are elements that are conflicting with national policies.
d. Three (3) important elements to be included in learning modules:
   (i) At the end of the course, students will gain a comprehensive picture of the objectives of the course.
   (ii) Students can acquire the skills and knowledge through the module.
   (iii) Learning can be applied in everyday life.
4.2 GUIDE TO WRITING RESEARCH MONOGRAPH

4.2.1 DEFINITION OF RESEARCH MONOGRAPH

Document which reports on, research and the output which could be
developed and used as reference, written either in Bahasa Melayu or
English.

4.2.2 TYPES OF MONOGRAPHS

a. Monograph - Research Output
b. Monograph - Extension from previous Research (addition of chapters/s or
discussion).
c. Monographs of Serials - Academic
   • Example: - Political Science Monographs; Education Monograph,
     Monograph Islamic Finance and others.

4.2.3 CHARACTERISTICS OF MONOGRAPHS

A monograph should be :

a. The output of a research project which has potential for further
development and has never been published,
b. Supported by facts and data,
c. Consistent in its scope and writing style,
d. Able to portray the research credibility/potential of UMP academic staff,
e. If the submission is a team effort, it is suggested that the team appoints a
   member to be a leader who will liaise with Penerbit UMP.
4.3 GUIDE TO WRITING JOURNAL ARTICLE

4.3.1 INTRODUCTION

Manuscripts submitted to any journal issued by Penerbit UMP must be original work that has not been published or considered for publication anywhere else. Manuscripts written in Malay or English should be submitted in two (2) clean copies, typed on A4 sized paper with double spacing and typeface size 12, with a complete reference list. Manuscripts should not exceed 20 pages including tables, diagrams and illustrations. All submissions will be evaluated.

4.3.2 UMP JOURNALS

Currently, the five journals published by Penerbit UMP are:

a. Journal UMP - Engineering & Computer Systems
b. Journal UMP - Social Science & Technology Management
c. International Journal Of Automotive & Mechanical Engineering (IJAME)
d. International Journal Of Civil & Geo-Environmental Engineering (IJCEG)
e. International Journal Of Technology Management (IJTM)
### 4.4 GUIDE TO WRITING INAUGURAL PROFESSORIAL LECTURER

#### 4.4.1 COLLECTION OF UMP PROFESSORIAL LECTURERS

The collection of professorial speech which is in press will consist of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>Section</th>
<th>Particular</th>
<th>Item should be</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Front Cover</td>
<td>• Logo and university name&lt;br&gt;• Name of the Public Lecture Series&lt;br&gt;• Lecture Title&lt;br&gt;• Name of author&lt;br&gt;• Illustration</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>Front Part</td>
<td>• Pictures&lt;br&gt;• Partial Title&lt;br&gt;• Issue&lt;br&gt;• Full Title&lt;br&gt;• Copyright Page</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>Main Text</td>
<td>• Text&lt;br&gt;• Acknowledgements&lt;br&gt;• Biodata</td>
<td>/</td>
</tr>
<tr>
<td>4</td>
<td>Back Part</td>
<td>• References / Bibliography&lt;br&gt;• Appendix&lt;br&gt;• Author’s Biography</td>
<td>/</td>
</tr>
<tr>
<td>5</td>
<td>Back Cover</td>
<td>• Publisher Imprint&lt;br&gt;• Barcode&lt;br&gt;• Blurb (Abstract)</td>
<td>/</td>
</tr>
</tbody>
</table>
4.5 GUIDE TO WRITING AN ORIGINAL WORK (BOOK)

4.5.1 INTRODUCTION

Original work (scientific / general) is essentially published to meet the needs of teaching and learning, providing benefits to the community, reflecting on the excellence and expertise of staff and the university niche areas. UMP academic or non-academic staff can publish their work with Penerbit UMP. The publisher also welcomes books written by non-UMP staff if the publication committee recommends it for publication.

4.5.2 BUILDING A MANUSCRIPT

The author is responsible for providing appropriate manuscript that meets the current requirements of Penerbit UMP. Manuscript must be written, complete with all the appropriate illustrations. The manuscript is considered as the final draft of the book.