## POSTGRADUATE HANDBOOK 2019/2020 SESSION

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Welcome to the Faculty of Medicine.

I am delighted that you have chosen to study at the University of Malaya. The Faculty of Medicine University of Malaya prides itself in being the oldest medical school with the largest post graduate clinical and research based post graduate programs in the country.

Whether you are pursuing a Clinical Masters in Medicine program or a graduate research program ie an MSc, PhD or DrPH, you are now part of the largest Faculty in the University, joining over 3082 full-time and part-time undergraduate and postgraduate students including more than 500 postgraduate researchers.

The Faculty is fortunate to have a large number of very experienced academic staff who oversee high-quality teaching and research programmes provided at the Faculty. We are also privileged to have a large and busy tertiary care teaching hospital on site with the widest range of clinical specialities and subspecialities provided by any hospital in the country.

To those pursuing the Clinical Masters program, the experience and training that you will receive at the University Malaya Medical Centre and the Faculty of Medicine will certainly prepare you for your years ahead as a specialist.

For those undertaking a research based postgraduate programme you will join in a long tradition of research undertaken at the Faculty of Medicine that has made major contributions to the understanding of a wide range of diseases and conditions that has led to better patient outcomes and to improvement in public health policies. We pride ourselves in providing the highest quality laboratory and study facilities for our students and postgraduate researchers. The Faculty offers a stimulating study and research environment with recent investment in the state-of-the-art equipment and research facilities. The Faculty of Medicine have also developed a vast network of international collaborations which provide further opportunities to enrich your learning and research experience.

I wish you every success and enjoyment in your time here and warmly welcome you to the Faculty.

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Associate Professor Dr Jesjeet Singh Gill  MBBS (Mal), MPM (Mal)
Associate Professor Dr Koh Ong Hui  MBBS (Manipal, India), MPM (Mal)
Associate Professor Dr Ng Chong Guan  MBBS (Mal), MPM (Mal), MSc (Utrecht University, the Netherlands), PhD (Utrecht University, the Netherlands)
Associate Professor Dr Muhammad Muhsin bin Ahmad Zahari  MBBS (Ire), MPM (Mal)
Associate Professor Dr Rusdi bin Abd Rashid  BBS (Mal) MPM (Mal)
Associate Professor Dr Stephen Thevananthan Jambunathan  MBBS (Manipal, India), MPM (Mal), Cert. In Psychotherapy (Melbourne)
Associate Professor Dr Subash Kumar Pillai  MBBS (Karachi, Pakistan), MPM (Mal)

Senior Lecturers:
Dr Aida Sharinaz binti Ahmad Adlan  MBBS (Mal)
Dr Amarpreet Kaur  MBBS (Wales, UK), MRCPsych (UK), Dip Med Sci in Clinical Psychiatry (UK), Dip in Clinical Hypnosis (D.Hyp)
Dr Rusdi bin Abd Rashid  MBBS (Mal) MPM (Mal)
Dr Yee Hway Ann @ Anne Yee  MBBS (Mal), MPM (Mal)
Dr Zuraida Ahmad Sabki  MD (Mal), MPM (Mal)
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Associate Professors:
Associate Professor Dr Nazirah Hasnan MBBS (Mal), MRehabMed (Mal), CIME (USA), PhD (USyd), AM (Mal)
Associate Professor Dr Julia Patrick Engkasan MBBS (Mal), MRehabMed (Mal), PhD (UM)
Associate Professor Dr Mazlina Mazlan MBBS (Mal), MRehabMed (Mal), Fellow in Rehabilitation of Acquired Brain Injury (Monash)
Associate Professor Dr Loh Siew Yim BSc in Applied Rehab (UK), MSc in Medical Edu (UK), M Counselling (Mal), PhD (Aust)

Senior Lecturers:
Dr Chung Tze Yang MBBS (Mal), MRehabMed (Mal)
Dr Anwar Suhaimi MBBS (Mal), MRehabMed (Mal)
Dr Aishah Ahmad Fauzi MBBS (Mal), MRehabMed (Mal)
Dr Norhamizan Hamzah MBCUB (UK) MRehabMed (Mal)
Dr Chan Soo Chin

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Professor Dr Claire Choo Wan Yuen  
BSc (Hons) (Mal), MMedScPH (Mal), MAppStats (Mal), PhD (Aus)
Professor Dr Maznah Dahlui  
MD (Mal), MPH (Mal), PhD (Mal), FPH (Royal College of Physicians, UK)
Professor Dr Sanjay Rampal  
MBBS (Banglore), MPH (Harvard) PhD (Johns Hopkins), AMM, CPH (US NBPE)
Professor Dr Victor Hoe Chee Wai Abdullah  
MBBS (Mangalore), MPH (Mal), MPH (OH) (Mal), Meng (Safety, Health & Env) (Mal), PhD (Monash)
Professor Dr Wong Li Ping  
BSc, (Hons)/(UPM), MMedSc (UKM), PhD (Mal)

**Associate Professors:**
Associate Professor Dr Farizah bt Mohd Hairi  
MBBS (Mal), MSc (Wales), MPH (Mal), MPH (Health Services Mgt) (Mal), DSc (Public Health) (NL)
Associate Professor Dr Hazreen bin Abdul Majid  
BSc (Hons), Dietetics (UKM), MSc (Nutrition & Dietetics), Deakin (Melb), PhD (Lond)
Associate Professor Dr Mas Ayu Said  
MBBS (Mal), MPH (Mal), MPH (Epid) (Mal), PhD (Mal)
Associate Professor Dr Moy Foong Ming  
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Associate Professor Dr Ng Chiu Wan  
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Associate Professor Dr Noran Naqiah Hairi  
MBBS (Mal), MPH (Mal), MPH (Epid) (Mal), PhD (Sydney)
FPH (Royal College of Physicians, UK)
Associate Professor Dr Tin Tin Su  
MBBS (Yangoon), MSc. CHHM (Heidelberg), Dr Med (Heidelberg)

**Senior Lecturers:**
Dr Abqariyah binti Yahya  
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Dr Marzuki bin Isahak  
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Dr Maslinor Ismail  
MD (UKM), MPH (Mal), MPH (Family Health) (Mal)
Dr Nasrin Agha Mohammad  
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Dr Nik Daliana binti Nik Farid  
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Dr Ralzakah binti Ahmad Zaki  
MBChB (Liverpool), MPH (Mal), DrPH (Mal)
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FRCS (Edin), FAMM
Professor Dr Nur Aishah binti Mohd Taib  
MBBS (Mal), MRCS (Edin), MS (Mal)
FRCS (Glasg), FAMM
Associate Professor Dr Ng Khoon Leong  
MBBS, FRCS (Edin), FRCS (Glasg) – Sabatical leave
Associate Professor Dr Yoong Boon Koon  
BSc (Med), MBBS (UNSW), MRCSEd, MS (Mal)
Associate Professor Dr Khong Tak Loon  
MBBS (Edin), MSc Surg Sc (Lond), MD (Lond), FRCS (UK)
Dr Ahmad Rafizi Hariz bin Ramli  
MBBS (Mal), MS (Mal) – study leave
Dr Koh Peng Soon  
MS (Mal)
Dr Lau Peng Choong  
MBBS (Mal), MS (Mal)
Dr Suniza binti Jamaris  
MBBS (Mal), MS (Mal)
Dr Nora binti Abdul Aziz  
MS BCHBAD (NUIUCD), MS (Mal)
Dr See Mee Hong  
B.Med (UPM), MD (UPM), MS (Mal)
Dr Koong Jun Kit  
MBBS (IMU) MRCS (Ire) MS (Mal)
Dr Poh Keat Seong  
BSc (MedSci) (Hons) MD (UPM) MRCSEd(UK) MS(UKM)
Dr Hoh Siew Yew  
MBBS (Mal) MS (Mal)
Dr Chong Shun Siang  
MBBS (Mal) MS (Mal)
Dr Mohammad Rezal bin Abdul Aziz  
MBBS (Ireland), MRCI (Ire)
Dr Wong Lai Fen  
MB BCH BAO (Ire)
Dr Tania Islam  
MBBS (Chittagong), PhD (Jap)
Dr Lim Hiong Chin  
MBBS (IMU), MSurg (Mal)
Dr Teh Mei Sze  
MD(USM), MSurg(Mal), MRCS (Edin)
Dr Teoh Li Ying  
MBBS (Mal), MSurg (Mal)

Cardiothoracic Surgery:
Professor Dr. Raja Amin bin Raja Mokhtar  
MBBS (Mal), MS (Mal), FRCS (Edin)
Associate Professor Dr Shahruil Amry bin Hashim  
MBChB (UK), MRCS (Edin), FRACS (Edin)
Dr Sivakumar a/l Krishanasamy  
MBBS (Mal), MRCSEd (Edin), MS (Mal) – study leave
Dr Cheng Keng Peng (Kenny)  
MBBS (Mal), MS (Mal)

Paediatric Surgery:
Professor C R Thambidorai  
MBBS, MS (Gen Surg), FRCS (Edin), FRACS (Paed Surg), MNAMS (Gen Surg)
Associate Professor Dr Yik Yee Ian  
MBBS (Mal), MS (Mal), MRCSEd, PhD (Melb)
Dr Srijarvi Singaravel  
MBBS (Chennai India), MS (Pediatric Surgery) (Mal)
Dr Ganesh a/l P.Vythilingam  
MAHE, MS (Pediatric Surgery) (Mal), MRCSEd (Ireland) – study leave

Urology:
Professor Dr Azad Hassan bin Abdul Razack  
MBBS (Mal), FRCS (Edin)
Associate Professor Dr Ong Teng Aik  
MBBS (Mal), MS (Mal), FRCS (UK), FEBU (European), FRCSI (Ireland)
Associate Dr Shanggar a/l Kuppusamy  
MBBS (MAHE), MS (Mal)
Dr Khaidhir bin Hajj Abu Bakar  
MBBS (Queensland), MS (Mal)
Dr Siti Nur Masyihah binti Ma’arof  
MBBS (Mal), Ms (Mal), Master of Clinical (Equal to PhD)
Dr Sivaprakasam a/l Sivalingam  MS (Mal), MRCS (Edin)
Dr Ahmad Nazran bin Fadzil  MBChB (Leic), MS (Mal)

**Plastic Surgery:**
Associate Professor Dr Alizan bin Abdul Khalil  MBB (Mal) MS (Mal), PhD (Plastic Surgery)(Aust)
Dr Kong Chee Kwan  MD (UNIMAS), MS (Mal)
Dr Muhammad Ridwan Mirza  MBBS (Mal), MS (Mal)

**Neurosurgery:**
Professor Dr Vickneswaran a/l Mathaneswaran  MBBS (Hons)(Mal), FRCS (Edin), Japanese Council for Medical Training (Japan), FRCS(Edin)(Neurosurgery)
Professor Dr Dharmendra a/l Ganesan  MBBS (Mal), MS (Mal) FRCS (Edin), FRCS (Ire)
Associate Professor Dato’ Dr Hari Chandran a/l Thambinayagam  MBBS (Chennai, India), FRCS (Edin)
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Associate Professor Dr N V V E Vairavan  MD (UKM), MS (UKM), FRCS Edin (Neuro Surg)
Associate Professor Dr Sia Sheau Fung  MD (UKM), MS (Mal), MRCS, AFRCs (Ire), PhD (Aust)
Dr Nor Faizal bin Ahmad Bahuri  MBBS (Mal), MS (Mal), Dphil (Oxon)
Dr Ravindran A/L Karuppiiah  MBBS (Thanjavur), MRCS(Edin),MS (Mal)- study leave
Dr Aditya Tri Hernowo  M.D, PhD

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Associate Professor Dr Marniza binti Saad MBCh (UK), MRCP Part I (UK), FRCR (UK)
Associate Professor Dr Rozita binti Abdul Malik MBBS (Mal), Mco (Mal)
Associate Professor Dr Wan Zamaniah binti Wan Ishak MBBS (Mal), Mco (Mal)

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Dr Jasmin Loh Pei Yuin MBChB, FRANZCR (NZ)
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Associate Professor Dr Mohamad Shariff bin A Hamid  MBBS (Adel), MSpMed (Mal)

Senior Lecturers:
Dr Goh Siew Li  MD (USM), MSpMed (Mal)
Dr Samiah binti Abdul Karim  MD (UPM), MSpMed (Mal)
Dr Zulkarnain bin Jaafar  MD (USM), MSpMed (Mal)
Dr Choong Wai Kwong  MSpMed (Mal), MD (UPM)

Trainee Lecturer (SLAI):
Dr Ahmad Hazwan bin Ahmad Shushami  MBBS (Mal)
Dr Muhammad Kashani bin Mohd Kamil  MD (Universitas Sumatera Utara Indonesia)
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Professor:
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Associate Professors:
Associate Professor Dr Mohd Idzwan bin Zakaria  
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Associate Professor Dr Rishya a/l Manikam  
MBBS (Mal), Mmed (Emergency Medicine) (Mal)

Senior Lecturers:
Dr Abdul Muhaimin Noor Azhar, MBbCh (Wales, UK), MMed Emerg Med (UM)
Dr Aidawati Bustam @ Mainudin  
MA, MB BCHir (Cambridge), MRCP (UK), MMed Emerg Med (UM)

Lecturers:
Dr Ahmad Zulkarnain Ahmed Zahedi, MBBS (Mal), MMed Emerg Med (UM)
Dr Khadijah Poh Yuen Yoong, MBBS (Mal), MMed Emerg Med (UM)
Dr Mohd Zahir Amin Mohd Nazri  
MBBS (Mal), MMed Emerg Med (UM)

Trainee Lecturers:
DrMohd Hafyzuddin bin Md Yusuf  
MB BCh BAo (Ireland)
Dr Mohammad Azizuddin Azizah Ariffin  
MBBS (Otago, New Zealand)
Dr Siti Nur Aliyah binti Zambri  
MBBCh BAo (Ireland)
Head of Unit:
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Professors:
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Associate Professor:
Associate Professor Dr Vinod Pallath  PhD (India), MSc (India), BSc (India)

Senior Lecturers:
Dr Sim Joong Hiong  PhD (UM), MEd (UM), LLB Hons. (UK), BScEd (Hons) (USM)
Dr Foong Chan Choong  PhD (Mal), BSc.Ed (Hons) (Mal)
Dr Hong Wei-Han  PhD (UM), MEd (UM), BScEd (Hons) (UTM)
Graduates of the University of Malaya will be able to:

1. Demonstrate knowledge and skills in their field of study, appropriate research and professional practices, and the processes of critical thinking, creative thinking, and problem solving.

2. Use effective methods including contemporary technology to manage information, to achieve diverse professional goals aligned with professional standards and make decisions based on appropriate data and information.

3. Engage in continuous self-improvement and professional growth, support the professional development of others, and display positive leadership and professional behaviours and disposition for effective practice.

4. Communicate effectively with other professionals, and the community, and project a coherent vision of social responsibilities.

5. Appreciate and continue to be guided by the University's core values of integrity, respect, academic freedom, open-mindedness, accountability, professionalism, meritocracy, teamwork, creativity and social responsibility.
VISION & MISSION

VISION

To become a Centre of Excellence in Medicine

MISSION

To become a premier medical centre that is world renowned and to provide excellent health care, education, and research programmes delivered with efficiency, sensitivity and enthusiasm.
HISTORY OF FACULTY OF MEDICINE

POSTGRADUATE HANDBOOK. 2019/2020 SESSION
The University of Malaya was established on 8 October 1949 as a national institution to serve the higher educational needs of the Federation of Malaya and of Singapore. In 1960, the Government of the Federation of Malaya indicated that the Kuala Lumpur Division of the University of Malaya should become the national University in the Federation with effect from the beginning session 1962/63. Likewise, the Singapore Division should become the national University of Singapore. Steps to achieve the establishment of these two separate universities were finalized during the year 1961 and the University of Malaya was established on 1st January 1962. The student population at that time was about 330. Since then, the University has grown and developed rapidly. Today, the student population has grown to almost 30,000.

Establishment of the Faculty of Medicine at the University of Malaya

Up to the 1950's, the Faculty of Medicine, University of Singapore, which was known previously as King Edward VII College of Medicine had been the only medical school in Malaya and Singapore. The output of doctors at that time was small: 60 per year. Many Malaysians had to go overseas to seek undergraduate medical education. It was not until 1960 that a determined effort was made to double the intake of students to 120 per year in Singapore. In 1960, a board of studies of the University of Malaya was appointed to study the feasibility of establishing a medical school with its own teaching hospital. The board recommended the early establishment of both.

To this end, the Government agreed and the Ministries of Education and of Health provided the necessary capital funds. In 1962, a Dean for the Faculty of Medicine was appointed.
The first batch of medical students was admitted to the Faculty in 1964. A year earlier, these students, 40 of them, were placed in the Faculty of Science as pre-medical students. Construction of the faculty building began in July 1963, was completed in 10 months, so that the pioneer students were able to begin their course in May 1964. The building programme continued and the second phase was ready in time for Year II teaching the following May. Throughout this period, planning, building, ordering and receiving of equipment, recruitment of staff, organization of the Faculty, and discussions on the curriculum continued unremittingly. Phase I of the University Malaya Medical Centre consisting of the main block together with podium or “technical box” (operating theatres, radio-diagnostic, accident and emergency, polyclinic, pharmacy, central sterile supply, cafeteria, administration and medical records) was completed in December 1966, and the first wards were opened as on March 1967. Phase II of the Hospital consisting of Paediatric, Maternity and Rehabilitation Units was completed in December 1967, and became functional in March 1968. The total construction period for the Medical Centre consisting of the faculty departments, hospital (740 beds), Hostel for Clinical Students, Nurses Quarters with Nursing School and Central Animal House was three and a half years. Over the past three decades, the medical centre has expanded tremendously, and today it has 900 beds (the number will be increased to 1200 beds after renovation).

Philosophy of the Faculty of Medicine

The philosophy of the Faculty is to mould students to be competent, highly-skilled and knowledgeable health professionals, who can work with others as a team, who are caring and concerned about their patients and society, and who can emerge as leaders in their community.
## TERM SYSTEM

(52 weeks including introduction week, revision and exam)

<table>
<thead>
<tr>
<th>Event</th>
<th>Date Range</th>
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<tbody>
<tr>
<td>Introduction Week</td>
<td>10.06.2019 – 17.06.2019</td>
</tr>
<tr>
<td>Courses/Placement</td>
<td>18.06.2019 – 30.11.2019</td>
</tr>
<tr>
<td>Revision / Exam part I/II/III/Final*</td>
<td>September/October/November 2019</td>
</tr>
<tr>
<td>Courses / Placement</td>
<td>01.12.2019 – 31.5.2020</td>
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<tr>
<td>Revision / Exam I/II/III/Final*</td>
<td>Mac/April/May 2020</td>
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* Examination Schedule according to the program of study
<table>
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<tr>
<th></th>
<th>Weeks</th>
<th>Start Date</th>
<th>End Date</th>
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<tr>
<td><strong>SEMESTER I</strong></td>
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<tr>
<td>Introduction Week</td>
<td>1</td>
<td>01.09.2019 - 08.09.2019</td>
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<tr>
<td>Lectures</td>
<td>8*</td>
<td>09.09.2019 - 03.11.2019</td>
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<td>Mid Semester I Break</td>
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<td>04.11.2019 - 10.11.2019</td>
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<tr>
<td>Semester I Break</td>
<td>4*</td>
<td>20.01.2020 - 16.02.2020</td>
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<td><strong>Summary</strong></td>
<td>24</td>
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<tr>
<td><strong>SEMESTER II</strong></td>
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<td>Lectures</td>
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<td>17.02.2020 - 19.04.2020</td>
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<tr>
<td>Mid Semester II Break</td>
<td>1</td>
<td>20.04.2020 - 26.04.2020</td>
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<tr>
<td>Lectures</td>
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<td>27.04.2020 - 31.05.2020</td>
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<tr>
<td>Revision Week</td>
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<td>01.06.2020 - 07.06.2020</td>
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<tr>
<td>Examinations Semester II</td>
<td>3</td>
<td>08.06.2020 - 28.06.2020</td>
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<tr>
<td><strong>Summary</strong></td>
<td>19</td>
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<tr>
<td><strong>SESSION BREAK</strong></td>
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<tr>
<td>Session Break</td>
<td>11</td>
<td>29.06.2020 - 13.09.2020</td>
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<tr>
<td><strong>SPECIAL SEMESTER</strong></td>
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<td>Lectures</td>
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<td>29.06.2020 - 16.08.2020</td>
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<tr>
<td>Examination</td>
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<td>17.08.2020 - 23.08.2020</td>
<td></td>
</tr>
<tr>
<td><strong>Summary</strong></td>
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</tr>
</tbody>
</table>
Name of Programme : Master of Anaesthesiology  
Faculty : Faculty of Medicine  

1. Classification of Programme  

The Master of Anaesthesiology programme is a clinical coursework programme in which the  
research component comprises less than thirty (30) percent of the whole programme of study.  

2. Entry Requirements  

(1) Entry qualifications  
   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University  
       or an equivalent medical qualification approved by the Senate; and  
   (b) At least one year of post-full registration clinical experience approved by the  
       Senate.  

(2) Other requirements  
   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971  
       (Act 50) of Malaysia; and  
   (b) Satisfies the Department responsible for the candidate’s programme of study  
       in an Entrance Evaluation recognised by the Faculty.  

3. Duration of Study  

(1) The minimum duration of study shall be four years.  
(2) The maximum duration of study shall be seven years.  

4. Structure of Programme  

The programme of study comprises three stages as follows:  

(1) Stage I in the first year of study encompassing clinical training in basic skills in  
    anaesthesia and resuscitation for patient management  

(2) Stage II comprising training in the second and third year of study in:  
   (a) clinical anaesthesiology and in non-anaesthesiology postings undertaken in  
       rotation such as general medicine, radiology, emergency medicine, or any  
       other posting as may be approved by the Department responsible for the  
       candidate’s programme of study; and  
   (b) Research methodology, including the conduct of a research project in any field  
       of anaesthesia, intensive care or pain management.  

(3) Stage III comprising clinical training in the fourth year in specialised fields of  
    anaesthesiology or intensive care or of anaesthesiology and intensive care.  

(4) A candidate is required to maintain a log book throughout his period of study to  
    document tasks undertaken.
5. **Registration**

   (1) Registration for the programme of study shall commence the week prior to the start of the academic session.

   (2) A candidate may be permitted to register directly for Stage II of the programme of study if he/she has -

   (a) a minimum of two years experience in clinical anaesthesiology in a hospital recognised by the Faculty and passed any one of the examinations listed below-

   (i) the Primary Examination of the Royal College of Anaesthetists;

   (ii) the Primary Examination of the Australian and New Zealand College of Anaesthetists;

   (iii) the Primary Examination for the degree of Master of Medicine in Anaesthesia of the National University of Singapore;

   (iv) the Part II Examination of the Royal College of Anaesthetists;

   (v) the Final Examination of the College of Anaesthetists Ireland; or

   (vi) any other examination as may be approved from time to time by the Senate on the recommendation of the Faculty; or

   (b) a minimum of three years clinical anaesthesiology experience in a hospital recognised by the Faculty, but has not passed any of the above examinations.

6. **Attendance**

   During his/her programme of study -

   (1) a candidate may be permitted to undertake part of his/her programme of study in other hospitals or centres recognised by the Faculty;

   (2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. **Supervision**

   (1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

   (2) A consultant shall be appointed for a candidate who undertakes part of his/her programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. **Title of Research**

   The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. **Submission**
A candidate is required to submit his/her log book and posting reports not later than one month before the Final Examination.

A candidate is required to submit his/her research report not later than six months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination

(b) the Final Examination

(2) No candidate shall be permitted to sit for the Final Examination unless he/she has –

(a) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he/she passed any one of the examinations listed below:

(v) the Primary Examination of the Royal College of Anaesthetists;

(vi) the Primary Examination of the Australian and New Zealand College of Anaesthetists;

(vii) the Primary Examination for the degree of Master of Medicine in Anaesthesia of the National University of Singapore;

(viii) the Part II Examination of the Royal College of Anaesthetists;

(v) the Final Examination of the College of Anaesthetists Ireland; or

(vi) any other examination as may be approved from time to time by the Senate on the recommendation of the Faculty.

(b) submitted his/her log book and posting reports not later than one month before the Final Examination; and

(c) completed and submitted his/her research report six months prior to the Final Examination.

(3) The Part I Examination shall be held at the end of the first year of the programme of study. The Final Examination shall be held at the end of the fourth year of the programme of study.

(b) The theory examination will be held within six weeks before the VIVA examination.

(c) Only candidates who passed the theory examination will be invited for the VIVA examination.

(4) Examination Subjects and Allocation of Marks

(a) Part I Examination

The subjects of the Part I examination and the marks to be allocated to each subject shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
</table>

POSTGRADUATE HANDBOOK 2019/2020 | FACULTY OF MEDICINE , UNIVERSITY OF MALAYA | http://medicine.um.edu.my
Subject: Pharmacology

A. Written Section
   MBGE6101 Paper I  Multiple Choice Questions  30
   MBGE6102 Paper 2  Essay and Short Answer Questions 30

B. Oral Section
   MBGE6121 Viva Voce  40
   Total  100

Subject: Physiology and Clinical Measurements

A. Written Section
   MBGE6104 Paper I  Multiple Choice Questions  30
   MBGE6105 Paper 2  Essay and Short Answer Questions 30

B. Oral Section
   MBGE6122 Viva Voce  40
   Total  100

(b) Final Examination

The sections of the Final examination and the marks to be allocated to each section shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MBGE6236 Paper 1  Multiple Choice Questions</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>MBGE6237 Paper 2  Essay Questions</td>
<td>20</td>
</tr>
<tr>
<td>B. Clinical</td>
<td>MBGE6243 - Long Case</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>MBGE6250 - Viva-Voce</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has:

(a) Part I Examination
   (i) On his/her first attempt, sat for both subjects; and
   (ii) Obtained 50% or more of the marks for each subject of the examination; and
   (iii) Passed both sections (written and oral) for each subject of the examination.

(b) Final Examination
    Obtained 50% or more of the marks for each component of the Examination.
The written Examination will be held within six (6) weeks prior to the clinical Examination. Only candidate that passes the written Examination (component A), will be allowed to sit the Clinical Examination (Component B). A candidate who fails the clinical Examination will have to Re-Sit the written Examination before attempting the Clinical Examination again.

(6) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a Re-examination on three separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same subjects and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A Candidate who has failed the Part I Examination/Re-Examination but whose marks on one of the two subjects has equaled or exceeded 50% shall be permitted to count the marks of that subject towards the marks for that subject in a subsequent Part I Re-Examination, subject to the approval of Faculty. The candidate is required to sit only for the subject in a subsequent Re-Examination in which he has failed.

(iv) A candidate who fails the Re-examination on the third occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a Re-examination on separate occasions at six monthly intervals until the maximum period of study is reached.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.

Candidates that have passed the written examination but failed the clinical examination are only required to sit/repeat the clinical examination. The results of the written examination are valid only for one year.

(iii) A candidate who fails the Re-examination on the final occasion i.e at maximum period of study shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) A candidate who has passed the Re-examination for the Examinations above shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Anaesthesiology unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.
(1) **Award of Pass with Distinction for the Examination**

A candidate may be awarded a Pass with Distinction in the Part I Examination and the Final Examination if he/she –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) **Award of the Degree with Distinction**

A candidate may be awarded the degree of Master of Anaesthesiology with Distinction if he/she –

(a) has passed with Distinction in the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
### Master of Anaesthesiology Programme Schedule

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>Year 1</td>
<td>Basic Anaesthesiology</td>
</tr>
<tr>
<td>Stage II</td>
<td>Year 2</td>
<td>Clinical Anaesthesiology and Non-Anaesthesiology Posting in rotation</td>
</tr>
<tr>
<td>Stage II</td>
<td>Year 3</td>
<td>Clinical Anaesthesiology</td>
</tr>
<tr>
<td>Stage III</td>
<td>Year 4</td>
<td>Clinical training in specialized fields of Anaesthesiology and/or intensive Care</td>
</tr>
</tbody>
</table>

- **Registration (Entrance Evaluation)**
- **Part I Examination**
- **Final Examination**

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POSTGRADUATE HANDBOOK 2019/2020 | FACULTY OF MEDICINE , UNIVERSITY OF MALAYA | [http://medicine.um.edu.my](http://medicine.um.edu.my)
Name of Programme: Master of Clinical Oncology
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Clinical Oncology is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(b) At least two years of post-full registration clinical experience approved by the Senate including one year in one or more of the following disciplines:

   - Internal medicine
   - Any Surgical Specialty
   - Obstetrics and Gynaecology
   - Paediatrics

   *This one year (minimum) must have been undertaken within the last 5 years from the point of entry into the programme.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme

The programme of study comprises two stages as follows:

(1) Stage I in the first year of study comprising:

   (a) teaching in basic oncological sciences, cancer pathology, radiotherapy physics and medical statistics;

   (b) clinical training with continuous assessment and log book

(2) Stage II in the second, third and fourth years of study comprising:
(a) clinical training with continuous assessment to cover all aspects of “non-surgical” cancer treatment for different tumour sites with emphasis on radiation oncology and use of systemic therapy;
(b) research; and
(c) documentation in a log book of procedures and clinical skills undertaken.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the session.

6. Attendance

During his programme of study -

(1) A candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty.
(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for the candidate shall be appointed not later than two months after the registration of the candidate.
(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his/her log book not later than two months before the Final Examination.
(2) A candidate is required to submit his/her research report not later than two months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:
(a) the Part I Examination;
(b) the Part II Examination; and
(c) the Final Examination
(2) No candidate shall be admitted to the Part II Examination unless he/she has passed the Part I Examination at least six months before the Part II Examination.
(3) No candidate shall proceed to the Final Examination unless he/she has

(a) passed the Part II Examination;

(b) submitted his/her log book not later than two months before the Final Examination; and

(c) completed and submitted the research report not later than two months before the Final Examination.

(4) The Part I Examination shall be held at the end of Stage I of the programme of study. The Part II Examination shall be held at the end of twenty four months of Stage II of the programme of study. The Final Examination shall be held at the end of the thirty six months of Stage II of the programme of study.

(5) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Subject Description</th>
<th>Component/Description/Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Short Answer Questions</td>
</tr>
<tr>
<td>1.</td>
<td>MAGT6107 Radiotherapy Physics</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>MAGT6108 Medical Statistics</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>MAGT6109 Molecular Biology</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>MAGT6110 Pathology</td>
<td>100</td>
</tr>
<tr>
<td>5.</td>
<td>MAGT6111 Pharmacology</td>
<td>100</td>
</tr>
<tr>
<td>6.</td>
<td>MAGT6112 Radiobiology</td>
<td>100</td>
</tr>
</tbody>
</table>

**Grand Total** 1800

(b) Part II Examination

The components of the Part II Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject Description</th>
<th>Allocation of Mark (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written MAGT6236 Paper 1 Multiple Choice Questions</td>
<td>100</td>
</tr>
<tr>
<td>MAGT6237 Paper 2 Case Orientated Questions</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
</tr>
<tr>
<td>B. MAGT6243 Clinical Cases</td>
<td>100</td>
</tr>
<tr>
<td>C. MAGT6250 Viva Voce</td>
<td>100</td>
</tr>
</tbody>
</table>

**Grand Total** 400

(c) Final Examination
The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>MAGT6371 Research report</td>
<td>100</td>
</tr>
<tr>
<td>B.</td>
<td>MAGT6386 Log Book continuous assessment</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>

(6) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribe below if he/she has obtained:

(a) Part I Examination

50% or more of the aggregate combined marks for the components in each Subject of the Examination and not less than 45% of the marks for each component in the Subject.

A candidate who does not fulfill the above requirement for a Subject shall be deemed to have failed the Subject concerned but shall be credited with the Subject or Subjects he/she has passed and be required to repeat only the Subject that he/she has failed.

(b) Part II Examination

50% or more of the marks for each component of the Examination.

(c) Final Examination

50% or more of the marks for each component of the Final Examination.

(7) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of all previously failed subjects and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed the Part II Examination may be permitted a re-examination on two separate occasions at yearly intervals.

(ii) The Part II Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part II Examination.
(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part II Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) Final Re-Examination

(i) A candidate shall be re-examined in only the component that he/she has failed.

(ii) A candidate who has failed in the research report and or log book continuous assessment component may be referred for further work in the component that he/she has failed, over a period of time to be determined by the Committee of Examiners except that such periods of time as determined shall not exceed six months on any one occasion. At the end of the prescribed period the candidate shall be required to submit the research report and/or relevant document for re-examination. A candidate who fails to submit the research report and/or the relevant document by the end of the prescribed period for re-examination shall be deemed to have failed the Examination.

(iii) A candidate shall be permitted to re-submit the research report and/or the relevant document for re-examination on not more than one occasion.

(iv) A candidate who fails the component(s) after the re-submission shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with approval of Senate.

(d) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Clinical Oncology unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Part II Examination if he/she –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examinations at the first attempt;

(b) has not repeated any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Clinical Oncology with Distinction if he/she has passed with Distinction in both the Part I and Part II Examinations.
## Master of Clinical Oncology
### Programme Schedule

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teaching in basic oncological sciences, cancer pathology, radiotherapy physics and medical statistics, and ongoing clinical training with continuous assessment.</td>
<td>Documentation in a log book of procedures and clinical skills undertaken will be done throughout the whole duration of the programme.</td>
<td>Clinical training with continuous assessment to cover all aspects of non-surgical cancer treatment for different tumour sites with emphasis on radiation oncology and use of systemic therapy.</td>
<td>Clinical training as per year 2 and 3, and in addition, the undertaking of a research project.</td>
</tr>
<tr>
<td>Part I Examination</td>
<td>Part II Examination</td>
<td>Final Examination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Registration (Entrance Evaluation)**
Name of Programme: Master of Emergency Medicine
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Emergency Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four (4) years.

(2) The maximum duration of study shall be seven (7) years.

4. Structure of Programme

(1) The programme of study comprises three stages which are stage I in the first year, stage II in the second year and the third year and stage III in year the fourth year. These three stages are as follows:

(a) Stage I is to be carried out at University of Malaya. It comprises:

(i) The study of basic sciences relevant to the practice of Emergency Medicine.

(ii) Clinical postings under supervision with the emphasis on emergency situations in the specialties of Anaesthesia and Emergency Medicine.

(b) Stage II is to be carried out at University of Malaya or other centres recognised by Master of Medicine Conjoint Committee (Specialty). It comprises clinical postings in second year and third year:
(i) Clinical postings in second year comprises of postings in internal medicine, general surgery, emergency medicine and paediatric.

(ii) Clinical postings in third year comprise postings in emergency medicine, obstetric and gynaecology, radiology, otorhinolaryngology, ophthalmology, elective, orthopaedic surgery and neurosurgery.

(iii) A Research Project must be started during the early phase of Stage II.

(iv) Must passed the Advanced Cardiac Life Support Course (ACLS), Advanced Trauma Life Support Course (ATLS), Paediatric Advanced Life Support Course (PALS) and/or equivalent courses recognized by Faculty.

(c) Stage III comprise of posting in Emergency Medicine in University of Malaya.

(2) A candidate is required to keep a log book throughout his period of study to document tasks undertaken.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his/her programme of study -

(1) A candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty.

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the total period of training does not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for the candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his/her programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit one case report for each posting not later than one month before the Final Examination.
(2) A candidate is required to submit his/her log book and posting reports every six months for assessment by the Department responsible for the candidate’s programme of study.

(3) A candidate is required to submit his research report not later than six months before the Final Examination.

10. Examinations for the Degree

(1) The examinations leading to the Degree shall be as follows:

(a) the Part I Examination; and

(b) the Final Examination.

(2) No candidate shall be permitted to sit for the Final Examination unless he/she has:

(a) passed the Part I Examination.

(b) completed and submitted his/her research report six months prior to the Final Examination.

(c) passed the ‘Advanced Cardiac Life Support Course (ACLS)’, ‘Advanced Trauma Life Support Course (ATLS)’, ‘Paediatric Advanced Life Support Course (PALS)’ and/or other courses recognized by the Faculty.

(d) submitted two (2) case reports for every postings not later than one month before the Final Examination.

(e) submitted his/her log book not later than one month before the Final Examination.

(f) achieved satisfactory report in each continuous assessment.

(3) The Part I Examination shall be held at the end of Stage I. The Final Examination shall be held at the end of Stage III of the programme of study.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Supervisors’ reports</td>
<td>Satisfactory reports</td>
</tr>
<tr>
<td></td>
<td>Continuous Assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case write-ups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log book assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participation in the Continuous Medical Education (CME)</td>
<td></td>
</tr>
<tr>
<td>B.</td>
<td>Written</td>
<td></td>
</tr>
<tr>
<td>MEGV6101</td>
<td>Paper 1 Multiple Choice Questions</td>
<td>400</td>
</tr>
<tr>
<td>MEGV6102</td>
<td>Paper 2 Multiple Essay Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>600</td>
</tr>
<tr>
<td>C.</td>
<td>Clinical</td>
<td>Objective Structured Clinical Examination 200</td>
</tr>
</tbody>
</table>
MEGV6121 Viva Voce 200
Total 400

Grand Total 1000

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Continuous</td>
<td>Supervisors’ reports Satisfactory reports</td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>Case write-up Satisfactory reports Log book assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participation in the Continuous Medical Education (CME)</td>
<td></td>
</tr>
<tr>
<td>B. Written</td>
<td>MEGV6236 Paper 1 Multiple Choice Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>MEGV6237 Paper 2 Multiple Essay Questions</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>MEGV6238 Paper 3 Short Answer Type Questions</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
</tr>
<tr>
<td>C. Clinical</td>
<td>MEGV6243 Objective Structured Clinical Examination</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>MEGV6244 Short Cases</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>MEGV6250 Viva Voce</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>600</td>
</tr>
</tbody>
</table>

Grand Total 1000

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the examination prescribed below if he/she has obtained:

(a) Part I Examination

50% or more for each of the components in the examination.

(b) Final Examination

(i) 50% or more for each of the components in the examination.

(ii) The candidate must pass the research project.

(6) Repeating an Examination

(a) Part I Re-examination

(ii) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six (6) monthly intervals.

(ii) A candidate is required to pass the written component before being allowed to sit for the clinical component.
(iii) A candidate who has failed the Part I Examination written component is required to re-sit the written and clinical components for two separate occasions at six (6) months intervals.

(iv) A candidate who has failed the Part I Examination Clinical component but has passed the written component is allowed to sit the clinical component only for two separate occasions at six (6) months interval.

(v) A candidate who has failed the Part I Examination written component for three occasion shall be deemed to have failed the Part I Examination and shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty and with the approval of Senate.

(vi) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the re-examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty and with the approval of Senate.

(b) Final Re-examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six (6) monthly intervals.

(ii) The Final Re-examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the course except in special circumstances and on the recommendation of the Faculty and with the approval of the Senate.

(c) A candidate who has passed the re-examination for the examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Emergency Medicine unless he has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination and the Final Examination if he has obtained 75% or more of the aggregate marks in each of the prescribed examinations. No candidate shall be eligible for the award of a Pass with Distinction based on the performance at a re-examination.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree with Distinction if he/she:

(a) has passed with Distinction in the Part I Examination and the Final Examination;

(b) has not failed or repeated any portion of the course or Examination.
<table>
<thead>
<tr>
<th>STAGE</th>
<th>Year</th>
<th>Schedule</th>
</tr>
</thead>
</table>
| III   | 4    | - comprise of posting in Emergency Medicine in University of Malaya  
- A research report to be submitted at least 6 months before Final Examination |
| IIb   | 3    | - Clinical postings in  
  - Emergency Medicine;  
  - Obstetrics and Gynaecology;  
  - Radiology;  
  - Otorhinolaryngology;  
  - Ophthalmology;  
  - Elective;  
  - Orthopaedic surgery;  
  - Neurosurgery.  
  - Must passed the Paediatric Advanced Life Support Course (PALS), Advanced Cardiac Life Support Course (ACLS), Advanced Trauma Life Support Course (ATLS) and/or equivalent courses recognized by Faculty |
| IIa   | 2    | - clinical postings in:  
  - internal medicine,  
  - general surgery  
  - emergency medicine  
  - paediatrics.  
  - A Research Project must be started during the early phase in this stage |
| I     | 1    | - The study of basic sciences relevant to the practice of Emergency medicine  
- Clinical postings under supervision with the emphasis on emergency situations in the specialties of Anaesthesia and Emergency Medicine |
1. **Classification of Programme**

The Master of Family Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. **Entry Requirements**

   (1) **Entry qualifications**

      (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

      (b) At least one year of post-full registration clinical experience approved by the Senate.

   (2) **Other requirements**

      (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

      (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation conducted by the Faculty of Medicine.

3. **Duration of Study**

   (1) The minimum duration of study shall be four years.

   (2) The maximum duration of study shall be seven years.

4. **Structure of Programme**

   (1) The programme of study comprises three stages as follows:

      (a) **Stage I:**

         Clinical rotation in the first year of study in a hospital formally recognized by the Faculty in the following disciplines:

         General Medicine;
         Paediatrics; and
         Obstetrics & Gynaecology

      (b) **Stage II:**

         (i) Six months of speciality posting, one month each in the following discipline:

         Psychological medicine
         Surgery
Orthopaedic Surgery
Ophthalmology
Otorhinolaryngology
Elective (e.g. dermatology)

(ii) Eighteen (18) months of clinical training in Family Medicine in the second and third year of study in centres formally recognized by the Faculty.

(c) Stage III:
(i) One year of advanced training in Family Medicine in the fourth year of study at a primary care setting, either in a health clinic or university-based primary care clinic.
(ii) family case studies;
(iii) keeping of a Practice Diary of selected cases from his clinical training; and
(iv) research

(2) A candidate is required to maintain a log book throughout his/her period of study to document tasks undertaken.

(3) (a) No candidate shall be permitted to proceed to Stage II of the programme of study unless he/she has passed or been exempted from the Part I Examination.
(b) No candidate shall be permitted to proceed to Stage III of the programme of study unless he/she has passed the Part II Examination.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of the programme of study if he/she possesses a postgraduate qualification in Family Medicine or any other such qualification recognised by the Senate.

6. Attendance

During his programme of study -

(1) a candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty;

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.
(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his/her log book and posting reports for the respective period of study not later than 4 weeks prior to the Part I Examination. A candidate is also required to submit a family case study not later than 4 week prior to the Part I Theory Examination.

(2) A candidate is required to submit his log book and posting reports for the respective period of study before the Part II Examination.

(3) A candidate is required to submit his posting reports, family case studies a practice diary and research report for the respective period of study not later than one month before the Final Examination.

10 Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination;
(b) the Part II Examination; and
(c) the Part III Examination

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has satisfactorily completed and submitted his log book, family case study and posting reports for the respective period of study not later than 4 weeks before the Part I Examination.

(3) No candidate shall be permitted to sit for the Part II Examination unless he/she has -

(a) passed or has been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he/she possesses a postgraduate qualification in Family Medicine or any qualifications of equivalent standard recognised by the Senate; and

(b) satisfactorily completed and submitted his/her posting reports of the respective period of study before the Part II Examination.

(4) No candidate shall be permitted to sit for the Part III Examination unless he/she has -

(a) passed the Part II Examination; and

(b) satisfactorily completed and submitted his prerequisite documents not later than one (1) month before the Part III Examination.

(i) A candidate whose prerequisite documents are deemed unsatisfactory may be referred for further work over a period of time to be determined by the Department except that such period of time as determined shall
not exceed one year on any one occasion. At the end of the prescribed period the candidate shall be required to submit the prerequisite documents for re-examination.

(ii) A candidate who fails to submit satisfactory prerequisite documents by the end of the prescribed period shall be deemed to have failed the prerequisite component.

(iii) A candidate is permitted to re-submit the prerequisite documents on not more than two occasions. Practice diary must be submitted not later than one (1) month before the Part III Examination.

(iv) After the maximum number of prerequisite submissions is over, the candidate is considered to have failed the final exam and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(5) The Part I Examination shall be held at the end of the first year of the programme of study. The Part II Examination shall be held at the end of the third year of the programme of study. The Part III Examination shall be held at the end of the fourth year of the programme of study.

(6) The Component A for Part I Examination will be held not later than four (4) weeks before the examination for Component B. Those who fail the Component A will not be allowed to take the Component B.

The Component A for Part II Examination will be held not later than four (4) weeks before the examination for Component B. Those who fail the Component A will not be allowed to take the Component B.

(7) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks and percentage values to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written MMGK6101</td>
<td>Multiple Choice Questions Paper (MCQ)</td>
<td>60%</td>
</tr>
<tr>
<td>B. Clinical MMGK6126</td>
<td>Objective Structured Clinical Examination (OSCE)</td>
<td>40%</td>
</tr>
</tbody>
</table>

(b) Part II Examination

The components of the Part II Examination and the marks and percentage values to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. Clinical

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMGK6239</td>
<td>Multiple Choice Questions Paper (MCQ)</td>
<td>16%</td>
</tr>
<tr>
<td>MMGK6239</td>
<td>Patient Management Problems (PMP)</td>
<td>24%</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>40%</td>
</tr>
</tbody>
</table>

(c) Part III Examination

The components of the Part III Examination and the marks and percentage values to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMGK6255</td>
<td>Objective Structured Clinical Examination (OSCE)</td>
<td>60%</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>60%</td>
</tr>
</tbody>
</table>

(8) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination
50% or more of the marks for each component of the Examination.

(b) Part II Examination
50% or more of the marks for each component of the Examination.

(c) Part III Examination
50% or more of the marks for each component of the Examination.

(9) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Component A of the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) A candidate who has passed the Component A of the Part I Examination but failed Component B may be permitted a re-examination of Component B at six monthly intervals.

(iii) The total number of attempts for all components of Part I Examination shall not exceed three (3) times. A candidate who fails the examination on the third attempt shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed Component A of the Part II Examination may be permitted a re-examination on two separate occasions at six monthly intervals.
A candidate who has passed Component A of the Part II Examination but failed Component B may be permitted a re-examination of Component B on two separate occasions at six monthly intervals.

A candidate who fails the re-examination for Component A of the Part II Examination on the third attempt shall be deemed to have failed the Part II Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

A candidate who passes the re-examination for Component A of the Part II Examination on the third attempt is allowed to sit the Component B for three times. A candidate who fails Component B of the Part II Examination on the third attempt shall be deemed to have failed the Part II Examination and shall not be permitted to repeat programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) Part III Re-Examination

A candidate who has failed the Part III Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

The Part III Re-Examination shall consist of the components that the candidate had failed in and shall be assessed and graded in the same manner as prescribed for the Part III Examination.

A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part III Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(d) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Family Medicine unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Part III Examination if he -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examinations;  
(b) has not failed in any component of the prescribed Examination; and  
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Family Medicine with Distinction if he/she -
(a) has passed with Distinction in the Part II Examination and the Part III Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

## Master of Family Medicine

### Programme Schedule

<table>
<thead>
<tr>
<th>STAGE</th>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
</table>
| STAGE I | Year 1 | Clinical Training by rotation in:-
| | | General Medicine
| | | Paediatrics
| | | Obstetrics and Gynaecology |
| STAGE II | Year 2 | Clinical Training in Family Medicine – 18 months
| | | Six months of speciality posting, one month each in the following discipline:
| | | Psychological medicine
| | | Surgery
| | | Orthopaedic Surgery
| | | Ophthalmology
| | | Otorhinolaryngology
| | | Elective (e.g. dermatology) |
| STAGE II | Year 3 | Clinical Training in Family Medicine
| STAGE III | Year 4 | Advanced Training in Family Medicine |

Part I Examination

Part II Examination

Part III Examination

Registration (Entrance Evaluation)
Name of Programme : Master of Internal Medicine  
Faculty : Faculty of Medicine  

1. Classification of Programme  
The Master of Internal Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.  

2. Entry Requirements  
(1) Entry qualifications  
(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and  
(b) At least one year of post-full registration clinical experience approved by the Senate.  
(2) Other requirements  
(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and  
(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.  

3. Duration of Study  
(1) The minimum duration of study shall be four years.  
(2) The maximum duration of study shall be seven years.  

4. Structure of Programme  
(1) The programme of study comprises three stages as follows:  
(a) Stage I in the first year comprising:  
(i) the study of basic sciences relevant to the practice of internal medicine; and  
(ii) clinical clerkship under supervision with emphasis on emergency medicine.  
(b) Stage II in the second and third year comprising:  
(i) rotational postings of three months duration each in the following eight disciplines of clinical medicine:  

Cardiology  
Nephrology  
Neurology
Respiratory Medicine
Gastroenterology and Hepatology
Haematology and Oncology
Endocrinology
Rheumatology and Infectious Diseases and Dermatology

and

(ii) a research project

(c) Stage III in the fourth year comprising posting in an approved subspeciality or in general medicine in the Faculty or a recognised centre outside the Faculty

(2) No candidate shall be permitted to proceed to Stage II of the programme of study unless he/she has passed the Part I Examination.

(3) No candidate shall be permitted to proceed to Stage III of the programme of study unless he/she has passed the Part II Examination.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his programme of study -

(1) A candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty;

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for the candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate's programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit four (4) case report one month before the Part II Examination.

(2) A candidate is required to submit his research report not later than one month before the Final Examination.
10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:
   (a) the Part I Examination;
   (b) the Part II Examination; and
   (c) the Final Examination.

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has completed, submitted and performed satisfactorily in the continuous assessment prescribed by the Department.

(3) No candidate shall be permitted to sit for the Part II Examination unless he/she has -
   (a) passed the Part I Examination; and
   (b) performed satisfactorily in the Stage II of the programme of study consisting of evaluations by the supervisors and obtaining satisfactory grades on four case reports in publishable format. Submission of all 4 case reports before sitting Part II Examination.

(4) No candidate shall be permitted to proceed to the Final Examination unless he/she has submitted his Research Report not later than one month before the Final Examination.

(5) The Part I Examination shall be held at the end of Stage I of the programme of study. The Part II Examination shall be held at the end of the third year of the programme of study. The Final Examination shall be held at the end of the fourth year of the programme of study.

(6) The theory examination will be held 6 weeks before the clinical examination. The Theory examination is usually held in March/April and September/October. The Clinical examination will be held after the theory paper which is in May/June and November/December.

(7) Examination Components and Allocation of Marks

   (a) Part I Examination

       The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

       | Subject   | Description               | Allocation of Marks (Maximum) |
       |-----------|---------------------------|-------------------------------|
       | A. Written|                           |                               |
       | MPG6104   | Paper 1 One Best Answer   | 35%                           |
       | MPG6105   | Paper 2 Problem Solving Questions | 25%                     |
       |           | Total                     | 60%                           |
       | B. MPG6111| Objective Structured Clinical Examination | 40%                     |
       |           | Total                     | 40%                           |
       |           | Grand Total               | 100%                          |
(b) Part II Examination

The components of the Part II Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPGF6239 Paper 1</td>
<td>One Best Answer</td>
<td>20%</td>
</tr>
<tr>
<td>MPGF6240 Paper 2</td>
<td>Multiple Essay Question</td>
<td>10%</td>
</tr>
<tr>
<td>MPGF6238 Paper 3</td>
<td>Objective Structured Practical Examination</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>40%</td>
</tr>
<tr>
<td>B. MPGF6243</td>
<td>Clinical and Viva Voce</td>
<td></td>
</tr>
<tr>
<td>MPGF6244 Clinical 1</td>
<td>Long Case</td>
<td>25%</td>
</tr>
<tr>
<td>MPGF6245 Clinical 2</td>
<td>Short Cases</td>
<td>25%</td>
</tr>
<tr>
<td>MPGF6250 Viva Voce</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

(c) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. MPGF6371</td>
<td>Research Report</td>
<td>100</td>
</tr>
<tr>
<td>B. MPGF6381</td>
<td>Viva Voce</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>200</td>
</tr>
</tbody>
</table>

(8) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations mentioned below if he/she has obtained:

(a) Part I Examination:

(i) 50% or more of the marks for each component of the Examination.

(ii) Must pass at least 2 OSCE cases from Component B (MPGF6111).

The theory examination will be held 6 weeks before the clinical examination. Only candidates that passes the theory examination, Component A, will be allowed to sit the clinical examination, i.e. Component B. A candidate who fails the clinical examination will not have to re-sit the theory examination before attempting the clinical examination again.

(b) Part II Examination:

(i) 50% or more of the marks for each component of the Examination; and

(ii) Must pass at least 2 short cases from Component B (MPGF6245); and
(iii) 2 or more short cases should not have a score of less than 3/10; and

(iv) obtain at least 45% in the long case (MPGF6244)

The theory examination will be held 6 weeks before the clinical examination. Only candidates that passes the theory examination, Component A, will be allowed to sit the clinical examination, i.e. Component B. A candidate who fails the clinical examination will not have to re-sit the theory examination before attempting the clinical examination again.

(c) Final Examination:

50% or more of the marks of the Final Examination.

(9) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed Component A (written) of the Part I Examination may be permitted a re-examination for Component A (written) on two separate occasions at six monthly intervals.

(ii) A candidate who has pass Component A (written) of the Part I Examination but failed Component B (clinical and viva) of the Part I Examination may be permitted a re-examination on two separate occasions within two years of passing the theory, at six monthly intervals without having to re-sit Component A (written) of the Part I Examination.

(iii) A candidate who has pass Component A (written) of the Part I Examination but attempts for Component B (clinical and viva) of the Part I Examination after two years of passing component A, he/she will have to re-sit Component A (written) of the part I Examination.

(iv) A candidate who fails the re-examination for Component A (written) of the Part I Examination on the third trial shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(v) A candidate who pass the re-examination for Component A (written) of the Part I Examination on the third trial is allowed to sit for Component B (clinical and viva) of the Part I Examination for three times. If candidate fails Component B (clinical and viva)of the Part I Examination on the third trial shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed Component A of the Part II Examination (written) may be permitted a re-examination for Component A on two separate occasions at six monthly intervals.
(ii) A candidate who has pass Component A of the Part II Examination (written) but failed Component B of the part II examination (clinical and viva) may be permitted a reexamination on two separate occasions within two years of passing the theory, at six monthly intervals without having to re-sit Component A (written) of the Part II Examination.

(iii) A candidate who has pass Component A (written) of the Part II Examination but attempts for Component B (clinical and viva) of the Part II Examination after two years of passing Component A, he/she will have to re-sit component A (written) of the Part II Examination.

(iv) A candidate who fails the re-examination for Component A (written) of the Part II Examination on the third trial shall be deemed to have failed the Part II Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(v) A candidate who pass the re-examination for Component A (written) of the Part II Examination on the third trial is allowed to sit for Component B (clinical and viva) of the Part II Examination for three times. If candidate fails Component B (clinical and viva) of the Part II Examination on the third trial shall be deemed to have failed the Part II Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) Final Re-Examination

(i) A candidate whose research report is deemed unsatisfactory by the Committee of Examiners may be referred for further work over a period of time to be determined by the Committee of Examiners except that such periods of time as determined shall not exceed six months on any one occasion. At the end of the prescribed period the candidate shall be required to submit the research report for re-examination. A candidate who fails to submit his research report by the end of the prescribed period for re-examination shall be deemed to have failed the research report.

(ii) A candidate shall be permitted to submit the research report for re-examination on not more than two occasions.

(iii) A candidate who fails in the research report on the second resubmission shall be deemed to have failed the Final Re-Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(d) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Internal Medicine unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations and the Final Assessment.

(1) Award of Pass with Distinction for the Examination
A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Final Examination if he –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) not less than 70% of the marks in the respective clinical examination for the Part I and the Part II Examination;

(c) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Internal Medicine with Distinction if he/she –

(a) has passed with Distinction in the Part I Examination, Part II Examination and the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(d) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
<table>
<thead>
<tr>
<th>Stage</th>
<th>Year</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>Year 4</td>
<td>- Speciality training in one of the small speciality fields with at least 6 months in General Medicine</td>
</tr>
<tr>
<td>II</td>
<td>Year 3</td>
<td>- Rotational posting in small specialities</td>
</tr>
<tr>
<td></td>
<td>Year 2</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Year 1</td>
<td>- Applied Basic Medical Sciences and General Medicine and Emergency Medicine</td>
</tr>
</tbody>
</table>

**Registration (Entrance Evaluation)**

**Part I Examination** (theory examination will be held 6 weeks before the clinical examination)

**Part II Examination** (theory examination will be held 6 weeks before the clinical examination)

**Final Examination**
Name of Programme : Master of Medical Science in Clinical Pathology  
Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)

Faculty : Faculty of Medicine

1. Classification of Programme

Master of Medical Science in Clinical Pathology; or Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) programme is a clinical coursework program in which the research component is less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications

(a) Master of Medical Science in Clinical Pathology

(i) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(ii) At least one year of supervised training after full medical registration, in a medical pathology laboratory approved by the Faculty, or at least one year of such alternative experience as recommended by the Faculty and approved by the Senate.

(b) Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)

(i) Possesses a Master's degree in Clinical Pathology or an equivalent qualification approved by Senate; and

(ii) Candidate in the preceding academic session, passed Examination for the degree Master of Medical Science in Clinical Pathology; or

(iii) Has in the preceding year, at least six month of practical experience in the chosen specialty.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study
4. **Structure of Programme**

(1) **Master of Medical Science in Clinical Pathology**

The programme of study extends over two years and consists of:

(a) Studies and rotational practical work in the following disciplines of Clinical Pathology:

(i) Anatomical pathology including Autopsy;
(ii) Haematology including Transfusion Medicine;
(iii) Chemical Pathology;
(iv) Medical Microbiology (including Bacteriology, Mycology, Immunology and Virology) with Parasitology; and

(b) tasks as stipulated in the log book including posting reports.

(2) **Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)**

The programme of study is over a period of one year and consisting of advanced studies and practical work in any one of the following areas:

Chemical Pathology  
Forensic Pathology  
Haematology  
Histopathology  
Medical Microbiology

5. **Registration**

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate who had passed in the Examination for the degree of Master of Medical Science in Clinical Pathology in the preceding academic session, may be permitted to register directly for the programme of study for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) if he/she:

(a) (i) possesses a Master’s degree in Clinical Pathology or an equivalent qualification approved by the Senate; and
(ii) has, in the preceding year, at least six months of practical experience in the speciality subject he/she has chosen to
pursue in Stage II of the programme of study.

Or

(b) in the preceding academic session, passed the Examination for the degree of Master of Medical Science in Clinical Pathology.

6. **Attendance**

During his programme of study -

(1) a candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty.

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. **Supervision**

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. **Submission**

A candidate is required to submit his log book and posting reports at the end of training, no later than one month before the Examination for the degree of Master of Medical Science in Clinical Pathology.

9. **Examinations for the Degree**

(1) The Examinations leading to the degrees shall be as follows:

   (a) the Examination for the degree of Master of Medical Science in Clinical Pathology;

   (b) the Examination for the degree Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)

(2) No candidate shall be permitted to sit for the Examination for the degree of Master of Medical Science in Clinical Pathology unless he has satisfactorily completed all the postings in Stage I of the programme of study, completed all the required tasks as set out in the log book and has submitted the log book and posting reports to the Department of Pathology not later than one month before the Examination.

(3) No candidate shall be permitted to sit for the Examination for the degree of Master of Medical Science in Clinical Pathology and Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) unless he has passed or been exempted from the Examination for the degree of Master of Medical Science in Clinical Pathology. A candidate may be exempted from the Examination for the degree of Master of Medical Science in Clinical Pathology if he possesses the degree of Master of Medical Science
in Clinical Pathology of the University or an equivalent qualification approved by the Senate.

(4) The examination for the degree of Master of Medical Science in Clinical Pathology; or the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) shall be held at the end the programme of study.

(5) Examination Components and Allocation of Marks

(a) Examination of the degree of Master of Medical Science in Clinical Pathology.

The components of the Examination and the marks to be allocated to each component of the Examination shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MKGS6101 Paper 1 Multiple Choice/Essay Questions</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MKGS6102 Paper 2 Multiple Choice/Essay Questions</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>200</td>
</tr>
<tr>
<td>B. Practical</td>
<td>MKGS6111 Practical 1 Objective Structured Tests</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MKGS6112 Practical 2 Objective Structured Tests</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>200</td>
</tr>
<tr>
<td>C.</td>
<td>MKGS6121 Viva Voce</td>
<td>100</td>
</tr>
<tr>
<td>D.</td>
<td>MKGS6131 Coursework Posting Assessment</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>600</td>
</tr>
</tbody>
</table>

(b) Examination for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)

The components of the Examination and the marks to be allocated to each component shall be as follows:

*MMA Master of Medical Science in Clinical Pathology (Haematology)
*MMB Master of Medical Science in Clinical Pathology (Medical Microbiology)
*MMC Master of Medical Science in Clinical Pathology (Forensic Pathology)
*MMD Master of Medical Science in Clinical Pathology (Chemical Pathology)
*MME Master of Medical Science in Clinical Pathology (Histopathology)

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MKGS6236 Paper 1 Essays and/or Short Answers Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>MKGS6237 Paper 2 Essays and/or Short Answers Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
</tr>
<tr>
<td>B.</td>
<td>MKGS6243 Practical</td>
<td>400</td>
</tr>
</tbody>
</table>
(6) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he has obtained:

(a) Examination for the degree of Master of Medical Science in Clinical Pathology
   (i) 50% or more of the aggregate combined marks for all the components of the Examination; and
   (ii) not less than 50% of the marks for the practical component of the Examination.

(b) Examination for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)
   (i) 50% or more of the aggregate combined marks for all the components of the Examination; and
   (ii) not less than 50% of the marks for the practical component of the Examination.

(7) Repeating an Examination

(a) Re-Examination for the degree of Master of Medical Science in Clinical Pathology
   (i) A candidate who has failed the Examination for the degree of Master of Medical Science in Clinical Pathology may be permitted a re-examination after a period of one (1) year.
   (ii) The Re-Examination for the degree of Master of Medical Science in Clinical Pathology shall consist of the components as mentioned below and shall be graded in the same manner as prescribed for the Examination for the degree of Master of Medical Science in Clinical Pathology.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MKGS6101 Paper 1</td>
<td>Multiple Choice/Essay Questions</td>
</tr>
<tr>
<td></td>
<td>MKGS6102 Paper 2</td>
<td>Multiple Choice/Essay Questions</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>B. Practical</td>
<td>MKGS6111 Practical 1</td>
<td>Objective Structured Tests</td>
</tr>
<tr>
<td></td>
<td>MKGS6112 Practical 2</td>
<td>Objective Structured Tests</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>C. MKGS6121</td>
<td>Viva Voce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td></td>
</tr>
</tbody>
</table>
(iii) Notwithstanding paragraph 9(7)(a) above, a candidate who has only failed in the practical component of the Examination may be permitted a re-examination on two separate occasions at six monthly intervals. Under the circumstances, the re-examination shall comprise the practical component and the viva-voce only.

(iv) A candidate who fails the re-examination for the degree of Master of Medical Science in Clinical Pathology on the second occasion shall not be permitted to repeat the program of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(v) A candidate who passed the Re-Examination shall be deemed to have passed the Examination for the degree of Master of Medical Science in Clinical Pathology.

(b) Re-Examination for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology)

(i) A candidate who has failed the Examination for the degree of of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) may be permitted a re-examination after a period of one (1) year.

(ii) The Re-Examination for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) shall consist of the components and allocation of marks as mentioned below and shall be assessed and graded in the same manner as prescribed for the Examination for the degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology).

\[\begin{array}{|c|c|c|c|c|}
\hline
\text{Component} & \text{Description} & \text{Allocation of Marks (Maximum)} \\
\hline
A. & Written & & \\
*MKGS6236 & Paper 1 & Essays and/or Short Answers & 200 \\
*MKGS6237 & Paper 2 & Questions & \\
& & Essays and/or Short Answers & 200 \\
& & Questions & \\
& & Total & 400 \\
B. & *MKGS6243 & Practical & 400 \\
C. & *MKGS6250 & Viva & 100 \\
& & Voce & \\
\hline
\text{Grand Total} & & & 900 \\
\hline
\end{array}\]

*MMA Master of Medical Science in Clinical Pathology (Haematology)
*MMB Master of Medical Science in Clinical Pathology (Medical Microbiology)
*MMC Master of Medical Science in Clinical Pathology (Forensic Pathology)
*MMD Master of Medical Science in Clinical Pathology (Chemical Pathology)
*MME Master of Medical Science in Clinical Pathology (Histopathology)
(iii) A candidate who fails the re-examination for the degree of of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) on the second occasion shall not be permitted to repeat the program of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(iv) A candidate who passed the re-examination shall be deemed to have passed the Examination for the degree of of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology).

10. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Medical Science in Clinical Pathology; or of the Degree of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) unless he/she has successfully completed all parts of the course, complete the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Examination for the degree of Master of Medical Science in Clinical Pathology; or the Examination for the degree of of Master of Medical Science in Clinical Pathology (Haematology / Histopathology / Chemical Pathology / Forensic Pathology / Medical Microbiology) if he –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examinations;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

(a) A candidate may be awarded the degree of Master of Medical Science in Clinical Pathology with Distinction if he/she -

(i) has passed with Distinction in the Examination for the degree of Master of Medical Science in Clinical Pathology;

(ii) has not failed in any component of the prescribed Examination; and

(iii) has not repeated the prescribed examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(b) A candidate may be awarded the degree of Master of Medical Science in Clinical Pathology or the Examination for the degree of of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology) with Distinction if he/she -

(i) has passed with Distinction in the Examination for the degree of Master of Medical Science in Clinical Pathology or the Examination for the
degree of of Master of Medical Science in Clinical Pathology (Haematology) / (Histopathology) / (Chemical Pathology) / (Forensic Pathology) / (Medical Microbiology);

(ii) has not failed in any component of the prescribed Examination; and

(iii) has not repeated the prescribed examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

**Master of Medical Science in Clinical Pathology Programme Schedule**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Year 1</th>
<th>Posting for 10 weeks in each of these disciplines.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Histopathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Haematology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chemical Pathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medical Microbiology/Parasitology</td>
</tr>
<tr>
<td></td>
<td>Year 2</td>
<td>Posting for 14 weeks in each of these disciplines.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Histopathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Haematology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chemical Pathology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medical Microbiology</td>
</tr>
</tbody>
</table>

Final Examination (At the end the programme of study)

Registration (Entrance Evaluation)
### Master of Medical Science in Clinical Pathology (Haematology/Histopathology/Chemical Pathology/Forensic Pathology/Medical Microbiology)

#### Programme Schedule

<table>
<thead>
<tr>
<th>YEAR</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>• Extending over a period of one year and consisting of advanced studies and practical work in any one of the following specialised areas in the field of clinical pathology:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Chemical Pathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Forensic Pathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Haematology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Histopathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Medical Microbiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final Examination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(At the end of the programme of study)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Registration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Entrance Evaluation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Name of Programme: Master of Obstetrics and Gynaecology  
Faculty: Faculty of Medicine  

1. Classification of Programme

The Master of Obstetrics and Gynaecology Programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry Qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or equivalent medical qualifications approved by the Senate; and

(b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.

(2) The maximum duration of study shall be seven years.

4. Structure of Programme

(1) The programme of study comprises of two stages as follows:

(a) Stage I comprising:

(i) twelve (12) months of training in basic Clinical Obstetrics and Gynaecology.

(ii) plan and commence research project(s).

(b) Stage II comprising advanced clinical training in Obstetrics and Gynaecology for a period of thirty six (36) months during which the candidate shall:

(i) achieve satisfactory progress in the continuous assessment process from the department and supervisor;
(ii) keep a log book of cases managed under supervision and practical procedures performed and certified satisfactory by the supervisor; and

(iii) submit research report(s) or published article duly certified as satisfactory by the assessor(s) not later than six (6) months before the Final Examination.

(2) A candidate is required to pass Part I Master of Obstetrics and Gynaecology Degree prior to Advancement to Stage II of the programme.

(3) Candidate may undertake a maximum of six (6) months of elective training in a relevant discipline within/ outside department as approved by the Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his programme of study -

(1) a candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty.

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project(s) must be approved by the Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya and the ethics committee (where project is undertaken) prior to its commencement.

9. Submission

(1) A candidate is required to submit his research report(s) or published article duly certified as satisfactory by the assessor(s) not later than six (6) months before the Final Examination.

(2) A candidate is required to submit a log book of cases managed under supervision and practical procedures performed and certified satisfactory by the supervisor at least three (3) months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:
(2) No candidate shall be permitted to sit for the Final Examination unless he/she has:

(a) pass the Part I Examination;
(b) achieve satisfactory progress in the continuous assessment process from the department and supervisor;
(c) submit a log book of cases managed under supervision and practical procedures performed and certified satisfactory by the supervisor at least three (3) months before the Final Examination; and
(d) submit research report(s) or published article duly certified as satisfactory by the assessor(s) not later than six (6) months before the Final Examination.

(3) The Part I Examination shall be held at about of twelve (12) months into Stage I of the programme of study. The Final Examination shall be held at the end of the final year of the Stage II programme of study.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>Multiple Choice Questions</td>
<td>60%</td>
</tr>
<tr>
<td>MGGG6103</td>
<td>Essay</td>
<td></td>
</tr>
<tr>
<td>MGGG6104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Clinical</td>
<td>Objective Structured Clinical Evaluation</td>
<td>40%</td>
</tr>
<tr>
<td>MGGG6105</td>
<td>Viva</td>
<td></td>
</tr>
<tr>
<td>MGGG6106</td>
<td></td>
<td>Total 100%</td>
</tr>
</tbody>
</table>

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows (using the close marking system):

<table>
<thead>
<tr>
<th>Subject</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>Multiple Choice Questions</td>
<td>40%</td>
</tr>
<tr>
<td>MGGG6236</td>
<td>Modified Essay Questions</td>
<td></td>
</tr>
<tr>
<td>MGGG6237</td>
<td>Short Answer Questions</td>
<td></td>
</tr>
<tr>
<td>(Obstetrics)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Gynaecology)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Written</td>
<td>Multiple Choice Questions</td>
<td>40%</td>
</tr>
<tr>
<td>MGGG6236</td>
<td>Modified Essay Questions</td>
<td></td>
</tr>
<tr>
<td>MGGG6237</td>
<td>Short Answer Questions</td>
<td></td>
</tr>
</tbody>
</table>
(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained -

(a) Part I Examination

(i) 50% or more of the aggregate marks of the written components (Component A); and

(ii) 50% or more of the aggregate marks of the clinical components (Component B).

(b) Final Examination

(i) 50% or more of the aggregate marks of the written components (Component A); and

(ii) 50% or more of the aggregate marks of the clinical components (Component B); and

(iii) 50% or more of the aggregate marks of the clinical components (Component C).

Candidate must pass the written components (Component A) before being allowed to sit the clinical components.

Candidate must pass both the Long Case and Short Case sections separately (Component B).

Candidates also fail the Component B if they fail three or more cases in any of the six clinical cases regardless of the aggregate marks obtained.

The candidate shall be informed of the results of written components (Component A) at least two weeks before commencement of the clinical components.

(6) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a reexamination on two separate occasions after a period of six months.
(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the manner as prescribed for in the Part I Examination.

(iii) A candidate who fails the Part I Re-Examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) Candidate who has passed the written components (Component A) but failed the clinical components (Component B and/ or Component C), is allowed to have TWO (2) more attempts in the subsequent clinical components, without having to repeat the written components (Component A).

Failing this third attempt of clinical components (Component B and/ or Component C) or failed to appear for the examination for any reason, the candidate will have to resit the whole Final Examination Master of Obstetrics and Gynaecology (Component A, B and C).

(ii) There is no limit on the total attempts in Final Examination, as long as the candidate is still within the maximum duration of study which shall be seven years from the first date of registration.

(iii) After the maximum duration study is over the candidate is considered to have failed the Final Examination and shall not be permitted to repeat the programme of study.

(c) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the respective prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Obstetrics and Gynaecology unless he/she has successfully completed all parts of the course, fulfilled the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Obstetrics and Gynaecology with Distinction if he/she -
(a) has passed with Distinction in the Final Examination;  
(b) has not failed in any component of the prescribed Examination; and  
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

### Master of Obstetrics and Gynaecology  
Programme Schedule

<table>
<thead>
<tr>
<th>STAGE II</th>
<th>Year 4</th>
<th>Year 3</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAGE I</td>
<td>Year 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Advanced Clinical training in Obstetrics and Gynaecology for a period of thirty six (36) months
- Twelve (12) months of training in basic Clinical Obstetrics and Gynaecology which may include a maximum six (6) months of elective training in a relevant discipline.

Final Examination  
Part I Examination  
Registration (Entrance Evaluation)
Name of Programme: Master of Ophthalmology
Faculty: Faculty of Medicine

1. Classification of Programme
The Master of Ophthalmology programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements
(1) Entry qualifications
   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and
   (b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements
   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study
(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme
(1) The programme comprises three stages as follows:
   (a) Stage I, in the first year of study, comprising training in the basic medical sciences, basic ocular sciences, basic ophthalmology and related medical and surgical disciplines;
   (b) Stage II, in the second and third year of study, comprising clinical ophthalmology training, medical postings and preparation of a case study report for the number of cases which shall be as determined by the Department from time to time; and
   (c) Stage III, in the fourth year of study comprising advanced clinical training in Ophthalmology and a research project.

(2) A candidate shall keep a log book throughout his/her period of study to document tasks undertaken.

(3) No candidate shall be permitted to proceed to Stage II of the programme of study unless he/she has passed or been exempted from the Part I Examination.
(4) No candidate shall be permitted to proceed to Stage III of the programme of study unless he/she has passed the Part II Examination.

5. **Registration**

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) All candidates must complete the minimum 4 years of training for the programme of the study.

6. **Attendance**

During his programme of study –

(1) a candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty;

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. **Supervision**

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. **Title of Research**

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. **Submission**

A candidate is required to submit his/her -

(1) case studies report not later than two months before the Final Examination and research report not later than six months before the Final Examination; and

(2) log book one month before the Final Examination.

10. **Examinations for the Degree**

(1) The Examinations leading to the degree shall be as follows:

   (a) the Part I Examination;
   (b) the Part II Examination; and
   (c) the Final Examination.

(2) No candidate shall be permitted to sit for the Part II Examination unless –
(a) he/she has passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he/she –

(i) has passed Part III Examination for the membership of the Royal College of Ophthalmologists (London); or

(ii) has passed Part III Examination of Royal College of Surgeons of Edinburgh; or

(iii) holds a degree or diploma of equivalent standard acceptable to the Senate.

(b) his/her protocol for the research report presented and accepted by the department 6 months before the Part II Examination.

(c) he/she has submitted the first draft of the case report 3 months before the Part II Examination.

(3) No candidate shall be permitted to appear for the Final Examination unless he/she has-

(a) passed the Part II Examination;

(b) submitted the research report not later than six months and the case studies report not later than two months before the Final Examination; and

(c) submitted the log book that has been certified as satisfactory by the Department one month before the Final Examination.

(4) The Part I Examination shall be held at the end of Stage I of the programme of study. The Part II Examination shall be held at the end of the second year of Stage II of the programme of study. The Final Examination shall be held at the end of the fourth year of the programme of study.

(5) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>% contribution to total marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6101</td>
<td>Paper 1 Multiple Choice Questions</td>
<td>30</td>
</tr>
<tr>
<td>MHGM6102</td>
<td>Paper 2 Multiple Choice Questions</td>
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<tr>
<td>MHGM6103</td>
<td>Paper 3 Essay Questions</td>
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<td></td>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td>B. Practical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6122</td>
<td>Viva Voce</td>
<td>15</td>
</tr>
<tr>
<td>MHGM6126</td>
<td>OSPE Objective Structured Practical Examination</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
<tr>
<td>C. Refraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6111</td>
<td>Clinical Refraction</td>
<td>10</td>
</tr>
<tr>
<td>MHGM6127</td>
<td>OSPE Objective Structured Practical Examination (Optics and Refraction)</td>
<td>20</td>
</tr>
</tbody>
</table>
(b) Part II Examination

The components of the Part II Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>% contribution to total marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6236</td>
<td>Paper 1 Multiple Choice Questions</td>
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</tr>
<tr>
<td>MHGM6237</td>
<td>Paper 2 Essay Questions</td>
<td>20</td>
</tr>
<tr>
<td>MHGM6238</td>
<td>Paper 3 Essay Questions</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>B. Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6243</td>
<td>Long Case Ophthalmology</td>
<td>15</td>
</tr>
<tr>
<td>MHGM6244</td>
<td>Short Cases1 Ophthalmology</td>
<td>15</td>
</tr>
<tr>
<td>MHGM6245</td>
<td>Short Cases2 General Medicine in relation to Ophthalmology</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>C. Viva Voce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHGM6251</td>
<td>Viva 1 Ophthalmology</td>
<td>10</td>
</tr>
<tr>
<td>MRGM6252</td>
<td>Viva 2 General Medicine in relation to Ophthalmology</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Grand Total 100

(c) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. MHGM6371 Case Studies</td>
<td>Based on Case Studies, Report the number to be determined by the Department</td>
<td>100</td>
</tr>
<tr>
<td>B. MHGM6372 Research Report</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 200</td>
</tr>
</tbody>
</table>

(6). Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribe below if he/she has obtained:

(a) Part I Examination
   (i) 50% or more of the marks for each component of the Examination.

b) Part II Examination
   (i) 50% or more of the marks for each component of the Examination;
(ii) The theory examination (Component A) will be held 1 month before the clinical and viva examination (Component B & C). Only candidates who pass the Component A will be allowed to sit for Component B & C.

(iii) A candidate who fails the Component B and/or C will not have to re-sit the Component A. Both components B and C have to be repeated.

(c) Final Examination

50% or more of the marks for each component for the Examination.

(7) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed the Component A (theory) of the Part II Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) A candidate who passes the Component A but failed Component B (Clinical) and/or C (Viva) may be permitted for re-examination on two separate occasions within two years of passing Component A, at six months intervals without having to re-sit Component A of the Part II Examination.

(iii) A candidate who fails Component B only or Component C only, will have to re-sit both components of the re-examination.

(iv) A candidate who passes Component A but attempts for Component B & C after two years of passing Component A, will have to re-sit Component A of the re-examination.

(v) A candidate who fails the re-examination for Component A on the third trial shall be deemed to have failed the Part II Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Senate.

(vi) A candidate who passes the re-examination for Component A on the 3nd trial is allowed to sit for Component B & C for three times. A candidate who fails Component B & C for the third trial shall be deemed to have failed the Part II examination and shall not be permitted to
repeat the programme of study except in special circumstances on the recommendation of the Senate.

(vii) A candidate must pass the Part II examination before/on the sixth year of the study to enable one year of study before the Final Assessment.

(c) Final Re-Examination

(i) A candidate whose research report or case studies report is deemed unsatisfactory by the Committee of Examiners may be referred for further work in his research report or case studies report over a period of time to be determined by the Committee of Examiners except that such period of time as determined shall not exceed six months on any occasion. At the end of the prescribed period the candidate shall be required to submit his research report or case studies report for re-examination. A candidate who fails to submit his research report or case studies report by the end of the prescribed period for re-examination shall be deemed to have failed the research report or case studies report.

(ii) A candidate shall be permitted to submit research report or case studies report either separately or combined for re-examination on not more than two occasions.

(iii) A candidate who fails the research report or case studies report taken separately or combined after the second re-examination shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(d) A candidate who has passed the re-examination for the examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Ophthalmology unless he/she has successfully completed all parts of the course and has passed the prescribed Examinations, and the Final Assessment.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Final Examination if he/she -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examinations;

(b) has not failed in any component of the prescribed examination; and

(c) has not repeated the prescribed examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Ophthalmology with Distinction if he/she -
(a) has passed with Distinction in the Part II Examination and the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

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### Master of Ophthalmology Programme Schedule

<table>
<thead>
<tr>
<th>STAGE III</th>
<th>Year 4</th>
<th>Advanced clinical Ophthalmology</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGE II</td>
<td>Year 3</td>
<td>Clinical Ophthalmology</td>
</tr>
<tr>
<td></td>
<td>Year 2</td>
<td>Clinical Ophthalmology</td>
</tr>
<tr>
<td>STAGE I</td>
<td>Year 1</td>
<td>Basic Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic Ocular Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic Ophthalmology</td>
</tr>
</tbody>
</table>

**Final Examination**

**Part II Examination**

**Part I Examination**

**Registration**

(Entrance Evaluation)
Name of Programme: Master of Orthopaedic Surgery
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Orthopaedic Surgery programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications
   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and
   (b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements
   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme

(1) The programme of study comprises two stages as follows:
   (a) Stage I comprising twenty four (24) months in Orthopaedic Surgery providing teaching/training in basic and applied medical sciences, principles of surgery, basic orthopaedic surgery and orthopaedic traumatology.
   (b) Stage II comprising twenty four (24) months in Orthopaedic Surgery including rotation through the following sub-specialities:
       - Spinal Surgery
       - Orthopaedic Oncology
       - Paediatric Orthopaedics
       - Upperlimb and reconstructive and micro surgery
       - Arthroscopy sports and joint reconstructive surgery
       - Arthroplasty
       - Orthopaedic Traumatology
Limb Lengthening and reconstructive surgery

(2) A candidate is required to keep a log book throughout his period of study to document tasks undertaken.

(3) No candidate shall be permitted to proceed to Stage II of the programme of study unless he has passed the Part I Examination.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his/her programme of study -

(1) a candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty;

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his log book not later than two months prior to the Final Examination.

(2) A candidate is required to submit his research report not later than six months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination; and
(b) the Final Examination

A candidate may be exempted from the Part I examination if he or she has passed:

(i) Part I Fellowship Examination of The Royal Australasian College of Surgeons;

(2) No candidate shall be permitted to sit for the Final Examination unless he/she has submitted-

(a) his/her log book consisting of surgery observed, assisted and performed for the duration of the course and ten reports on cases managed under supervision in various subspecialities, to be certified by his supervisor and deemed satisfactory by a panel of assessors to be appointed by Head of Department responsible for the candidate's programme of study, not later than two months before the Final Examination; and

(b) His/her research report not later than six months before the Final Examination. The research report must be certified as satisfactory by a panel of assessors to be appointed by Head of Department responsible for the candidate's programme of study before the candidate is permitted to sit the Final Examination.

(c) no candidate should be permitted to sit for the Final Examination unless candidate has:

(i) Attended and complete the “Orthopaedic Clinical Master Research Program” from session 2015/2016 onward
(ii) Completed log book
(iii) Submitted acceptable case report for each subspeciality
(iv) Passed 4 end of posting subspecialty test
(v) Passed operative skill assessment

(3) The Part I Examination shall be held at the end of the first six (6) months of Stage I of the programme of study. The Final Examination shall be held at the end of Stage II of the programme of study.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MRGJ6104</td>
<td>Multiple Choice Questions 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 100</td>
</tr>
<tr>
<td>B. MGRJ6124</td>
<td>OSCE</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6125</td>
<td>Viva Voce 1 - Anatomy</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6126</td>
<td>Viva Voce 2 - Physiology</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6127</td>
<td>Viva Voce 3 - Pathology</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Principles of Surgery, Biomaterials and Biomechanics</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>500</td>
</tr>
</tbody>
</table>
A candidate who obtains less than 50% or 50 marks in the Section A (written) of the Part 1 Examination will not be permitted to sit for the Section B (OSCE and Viva Voce).

(b) **Final Examination**

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Written</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRGJ6236 Paper 1</td>
<td>Essay</td>
<td>50</td>
</tr>
<tr>
<td>MRGJ6237 Paper 2</td>
<td>Essay</td>
<td>50</td>
</tr>
<tr>
<td>MRGJ6238 Paper 3</td>
<td>Best Answer Question (BAQ)</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td><strong>B. Clinical</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRGJ6243</td>
<td>Long Cases</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6244</td>
<td>Short Cases</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td><strong>C. Viva Voce and OSCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRGJ6251 OSCE</td>
<td>Pathology, Biomechanics and implants, Orthotics and prosthetics, Imaging</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6252 Viva Voce 1</td>
<td>Principles of Orthopaedic Surgery</td>
<td>100</td>
</tr>
<tr>
<td>MRGJ6253 Viva Voce 2</td>
<td>Operative Orthopaedics</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
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<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td>700</td>
</tr>
</tbody>
</table>

(5) **Requirements for Passing an Examination**

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) **Part I Examination**

(1) **Section A**

(i) The total marks for this Component A examination is 100 marks. The passing mark for this Component is 50 marks or 50%.

(ii) Only those candidates who passed Component A will be allowed to proceed to Component B.

(2) **Section B**

(i) The total marks for this OSCE examination is 100 marks. The passing mark for this OSCE examination will be 70 marks or 70%.

(ii) The total marks for all the three viva voces is 300 marks (100 marks each).

(iii) The passing mark for each viva voce will be 50 marks or 50%.

(iv) The overall passing marks for the three viva voces will be 150 marks or 50%.
Special Rules:
(i) 40 or less in any section is an unredeemable fail
(ii) 41 – 49 in 2 sections is an unredeemable fail

(b) Final Examination

50% or more of the marks for each component of the Examination

A minimum mark of 40% for both long cases and short cases in the clinical component

(6) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) A candidate who has passed the re-examinations for the shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Orthopaedic Surgery unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she –
(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Orthopaedic Surgery with Distinction if he/she -

(a) has passed with Distinction in the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

Master of Orthopaedic Surgery
Programme Schedule

<table>
<thead>
<tr>
<th>STAGE I</th>
<th>Year 1</th>
<th>• Orthopaedic Surgery (Basic and Applied Medical Sciences, Principles of Surgery, Basic Orthopaedic Surgery and traumatology)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGE II</td>
<td>Year 2</td>
<td>• Training in Orthopaedic Surgery including rotation through the following subspecialties and a research report:</td>
</tr>
</tbody>
</table>
|         | Year 3 |   Spinal Surgery  
|         |       |   Orthopaedic Oncology  
|         |       |   Paediatric Orthopaedics  
|         |       |   Upperlimb and reconstructive and micro surgery  
|         |       |   Arthroscopy sports and joint reconstructive surgery  
|         |       |   Arthroplasty  
|         |       |   Orthopaedic Traumatology  
|         |       |   Limb Lengthening and reconstructive surgery |

Final Examination

Part I Examination (At the end of the first six months of Stage I)

Registration (Entrance Evaluation)
1. Classification of Programme

The Master of Otorhinolaryngology – Head & Neck Surgery programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications
(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and
(b) At least one year of post-full registration clinical experience approved by the Senate.
(Priority to candidate’s who has completed six (6) months in General Surgery as a Medical Officer after the internship training in any government hospitals).

(2) Other requirements
(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme

(1) The programme of study comprises two stages as follows –

(a) Stage I comprising –
(i) eighteen months of study (for foreign candidates and Malaysians who have not done six (6) months of surgical posting prior to the entry of this programme); or
(ii) twelve (12) months of study (for Malaysian candidates who have completed the six (6) months of surgical posting prior to the entry of this programme) in Basic Otorhinolaryngology including:
(A) six (6) months in Basic and Applied Medical Sciences and Principles of Surgery; and
(B) six (6) months in General Surgery (for foreign candidates and Malaysians who have not done six months (6) of surgical posting prior to the entry of this programme); and

(C) the keeping of a log book of the candidate’s surgical procedures.

(b) Stage II comprising –

(i) thirty (30) months of study (for foreign candidates and Malaysians who have not done six (6) months of surgical posting prior to the entry of this programme); or

(ii) thirty six (36) months of study (for Malaysian candidates who have completed the six (6) months of surgical posting prior to the entry of this programme) in Advanced Otorhinolaryngology including rotational postings in Oral and Maxillo-facial Surgery, Neuro-surgery and Plastic and Reconstructive Surgery and a research project in the field of Otorhinolaryngology.

(2) No candidate shall be permitted to proceed to Stage II of the programme of study unless he has passed or been exempted from the Part I Examination.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his/her programme of study -

(1) A candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty.

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.
9. Submission

A candidate is required to submit his/her research report and log book not later than three months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination; and
(b) the Final Examination

(2) No candidate shall be permitted to sit for the Final Examination unless he/she has -

(a) submitted his/her research report and log book not later than three months before the Final Examination; and
(b) passed the Part I examination. In the event of the candidate taking the third attempt for the Part I examination, a minimum of 3 years is required, to sit for the final examination after this attempt; or
(c) been exempted from the Part I Examination.

A candidate may be exempted from the Part I Examination if he/she has passed –

(A) Final Examination for the Membership of any one of the following Royal Colleges:

The Royal College of Surgeons of Edinburgh
The Royal College of Surgeons of England
The Royal College of Physicians and Surgeons of Glasgow
The Royal College of Surgeons in Ireland
or

(B) Sections B and C or Part II Examinations for Fellowship of any one of the following Royal Colleges:

The Royal College of Surgeons of Edinburgh
The Royal College of Surgeons of England
The Royal College of Physicians and Surgeons of Glasgow
The Royal College of Surgeons in Ireland
or

(C) Part I Examination of the Royal Australasian College of Surgeons.

(3) The Part I Examination shall be held at the end of the first six months of Stage I of the programme of study. The Final Examination shall be held at the end of Stage II of the programme of study.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:
<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6101  Paper 1  Essay</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>MIGL6102  Paper 2  Multiple Choice Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>MIGL6103  Paper 3  Multiple Choice Questions</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>700</strong></td>
</tr>
<tr>
<td>B.</td>
<td>MIGL6121  Viva Voce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6122  Anatomy</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6123  Physiology and Principles of Surgery</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6124  Pathology (including Medical Microbiology)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

A candidate who obtains less than 50% in the theory component of the Part I Examination will not be permitted to sit for the viva voce.

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6236  Paper 1  Essay and Short Answer Type Questions</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6237  Paper 2  Multiple Choice Questions</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td>B.</td>
<td>MIGL6243  Clinical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6244  Long Case</td>
<td>100</td>
</tr>
<tr>
<td>C.</td>
<td>MIGL6245  Short Cases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6246  Otology</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6247  Rhinology</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6248  Laryngology</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6249  Head &amp; Neck Surgery</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
</tr>
<tr>
<td>D.</td>
<td>MIGL6250  Viva Voce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIGL6251  Otology including Audiology and Otoneurology</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MIGL6252  Rhinolaryngology and Head &amp; Neck Surgery</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>900</strong></td>
</tr>
</tbody>
</table>

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

(i) 50% or more of the aggregate combined marks of all the components for the examination; and
(ii) 50% or more of the marks for each component of the Examination; and

(iii) A minimum mark of 45% in each viva; and

(iv) At least two vivas with a mark of 50% or more

(b) Final Examination

(i) 50% or more of the marks for each component of the Examination; and

(ii) Not less than 50% marks in three short cases; and

(iii) Not less than 40% marks in any short cases; and

(iv) 40.00% and above marks in Multiple Choice Questions (MIGL6237); and

(v) Not less than 40% marks in each viva component.

(6) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination. However, a candidate who has passed the written components previously will not be required to resit these components at the subsequent Part I Re-Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances and on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination within seven (7) academic years at six monthly intervals.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination. However, a candidate who passed Component A in the previous Final Examination, is allowed not to resit Component A, only twice in the next semester (six monthly) exam.

(iii) A candidate who fails the re-examination beyond seven (7) academic years shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.
A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Otorhinolaryngology – Head & Neck Surgery unless he has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Otorhinolaryngology - Head & Neck Surgery with Distinction if he/she -

(a) has passed with Distinction in the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
# Master of Otorhinolaryngology – Head & Neck Surgery
## Programme Schedule

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ Basic Otorhinolaryngology (18 months) including:</td>
<td>▪ Training comprising thirty (30) months of study in Advance Otorhinolaryngology including rotational posting in Oral and Maxillo-facial Surgery, Neuro-surgery and Plastic and Reconstructive Surgery and a research project in the field of Otorhinolaryngology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage I</td>
<td>▪ (i) Basic and Applied Medical Sciences and Principles of Surgery (6 months)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ (ii) General Surgery (6 months)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Final Examination

### Part I Examination
(At the end of the first six months of Stage I)

### Registration
(Entrance Evaluation)
Name of Programme : Master of Paediatrics
Faculty : Faculty of Medicine

1. Classification of Programme

The Master of Paediatrics programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in Entrance Evaluation recognised by the Faculty.

(c) A pass in the Entrance Evaluation is valid for two years to enrol into the program.

3. Duration of Study

(1) The minimum duration of study shall be four years.

(2) The maximum duration of study shall be seven years except in special circumstances.

4. Structure of Programme

(1) The programme of study comprises three stages as follows:

(a) Stage I comprising basic clinical training in Basic Medical Sciences and General and Emergency Paediatrics;

(b) Stage II in the second and third year comprising of

(i) advanced training in the field of Paediatrics; and

(ii) a research project;

and

(c) Stage III comprising further advanced training in the field of Paediatrics and completion of the research project.
(2) A candidate is required to keep a log book throughout his period of study to document tasks undertaken.

(3) No candidate shall be permitted to proceed to Stage II of the programme of study unless he/she has passed or has been exempted from the Part I Examination.

(4) No candidate shall be permitted to proceed to Stage III of the programme of study unless he/she has passed the Part II Examination.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for the second year of Stage II of the programme of study if he/she has passed the Part II (theory-a&b) Examination for the Membership of –

   (a) the Royal College of Paediatrics and Child Health;
   (b) the Royal College of Physicians of the United Kingdom;
   (c) the Royal College of Physicians of Ireland; or
   (d) the equivalent of qualifications listed in (a), (b) or (c) above as approved by the Senate.

6. Attendance

During his/her programme of study -

(1) a candidate may be permitted to undertake part of his/her training in other hospitals or centres recognised by the Faculty.

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his/her log book for the respective period of study not later than one month before the Part I and Part II Examinations and the Final Examination.
(2) A candidate is required to submit his/her research report not later than two (2) weeks before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) Part I Examination;
(b) Part II Examination; and
(c) Final Examination.

(2) No candidate shall be permitted to take the Part I Examination unless he/she has –

(a) satisfactorily completed Stage 1 of the programme of study;
(b) obtained written certification from the Head of Department responsible for his programme of study to confirm that he has satisfactorily completed the prescribed training under supervision; and
(c) submitted his log book not later than one month before the Part I Examination.
(d) completed one year of enrolment into the program (first attempt), but not later than two years after enrolment into the program.

(3) Part II Examination

(a) Candidate shall be permitted to take the Part II Examination after: –

(i) satisfactorily completed Stage II of the programme of study;
(ii) obtaining written certification from the Head of Department responsible for his programme of study to confirm that he has satisfactorily completed the prescribed training under supervision; and
(iii) submitting his log book not later than one month before the Part II Examination; and

(b) The first attempt of the Part II Examination can be taken six weeks after passing the Part I Examination but not later than three years after the enrolment into the program.

(4) No candidate shall be permitted to proceed to the Final Examination unless he/she has –

(a) satisfactorily completed Stage III of the programme of study;
(b) obtained written certification from the Head of Department responsible for his/her programme of study to confirm that he has satisfactorily completed the prescribed training under supervision;
(c) submitted his/her research report not later than two months before the Final Examination;
(d) submitted his/her log book not later than one month before the Final Examination; and
(e) passed the Part II Examination.
Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated for each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLGH6101 Paper 1</td>
<td>Multiple Choice Questions</td>
<td>300</td>
</tr>
<tr>
<td>MLGH6102 Paper 2</td>
<td>Modified Essay Questions/ (Long MEQ &amp; Short MEQ)</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>Slides</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>600</td>
</tr>
</tbody>
</table>

(b) Part II Examination

Part II Examination consists of the following components:

1. Classical Long Case
2. Observed Long Case
5. Short Cases
1. Communication station
1. Emergency station

(c) Final Examination

The component of the Final Examination and the marks to be allocated for the component shall be as follows:

| MLGH6371 Research report | 100 |

Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

50% or more of the aggregate combined marks for all the components of the Part I Examination.

(b) Part II Examination

(i) total marks ≥ 100 and
(ii) Passes in either classical long case or observe long case

Allocation of Marks

<table>
<thead>
<tr>
<th>Allocation of Marks</th>
<th>Clear pass</th>
<th>Pass</th>
<th>Bare fail</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

(c) Final Examination

50% or more of the marks in the research report.
Repeating an Examination

(a) Part I Re-Examination

(i) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(ii) There is no restriction to the total number of attempts, but the candidate must pass Part I Examination within three years upon enrolment into the programme.

(iii) A candidate who fail the Part I examination within three years upon enrolment into the program shall be deemed to have failed the Part I examination and shall not be permitted to continue the program except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed the Part II examination may be permitted to sit for the examination at six monthly interval.

(ii) The candidate has to resit the whole examination (1 Long Case, 1 Long observed case, 5 Short Cases, 1 Communication Station and 1 Emergency Station).

(iii) There is no limit to the number of attempts for Part II examination, but the total duration of the course must not exceed seven years inclusive of the final year for the research project.

(iv) Part II Examination should be completed within two years after passing Part I. If the trainess failed to pass Part II more than two years after passing Part I, they have to re-sit the Part I, provided they do not exceed the overall training duration of seven years.

(c) Final Re-Examination

(i) A candidate whose research report is deemed unsatisfactory by the Committee of Examiners may be referred for further work in his research report over a period of time to be determined by the Committee of Examiners except that such period of time as determined shall not exceed six months on any one occasion. At the end of the prescribed period the candidate shall be required to submit his research report for re-examination. A candidate who fails to submit his research report by the end of the prescribed period for reexamination shall be deemed to have failed the research report.

(ii) A candidate shall be permitted to submit his research report for re-examination on not more than two occasions.

(iii) A candidate who fails the research report after the second re-examination shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.
(d) A candidate who has passed the Re-Examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. **Award of Degree**

No candidate shall be recommended for the award of the Degree of Master of Paediatrics unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations and the Final Assessment.

(1) **Award of Pass with Distinction for the Examination**

A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Final Examination if he/she -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(d) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) **Award of the Degree with Distinction**

A candidate may be awarded the degree of Master of Paediatrics with Distinction if he/she -

(a) has passed with Distinction in the Part II Examination and the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
<table>
<thead>
<tr>
<th>STAGE</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td>Advanced training in Paediatrics and preparation of research project</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td>Advanced training in Paediatrics and completion of research project</td>
<td>Final Examination</td>
</tr>
</tbody>
</table>

Part I Examination

Part II Examination

Registration (Entrance Evaluation)
1. Classification of Programme

The Master of Paediatric Surgery programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(b) At least two years of post-full registration clinical experience in surgery (inclusive of subspecialties) approved by the Senate.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation.

3. Duration of Study

(1) The minimum duration of study shall be four years.

(2) The maximum duration of study shall be seven years.

4. Structure of the Programme

The programme of study comprises of two stages as follows:

(1) Stage I in the first year of study comprising Applied Basic Sciences and General Principles of Surgery and/or subspecialties in Surgery.

(2) Stage II in the second, third and fourth years of study comprising:

(a) Six (6) months in Paediatric Medicine, with rotation postings in Neonatology, Paediatric Intensive Care and Paediatric Oncology. This part of the programme should be completed in the second year of the programme.

(b) Subsequent 2½ years (30 months): Training in Applied Basic Sciences relevant to Paediatric Surgery, including Embryology, Principles and Practice of Paediatric Surgery, and clinical problems in Paediatric Surgery with rotation postings in the University or other accredited Paediatric Surgery Unit. The last six months should be spent in the University.

(c) Research project report or case book:
At the beginning of Stage II, a candidate should either

(i) undertake a research project and submit a research report not later than three months before the Final Examination; or

(ii) submit a case book of 12 interesting cases in detail with review of the literature not later than three months before the Final Examination.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of this programme provided he has:

(a) a Master’s degree in Surgery or a Fellowship of one of the Royal Colleges of Surgeons or an equivalent qualification approved by Senate; or

(b) three (3) years of supervised training as a Medical Officer in Surgery, a log book certified by the consultant and passed the Part I Examination of Master of Surgery or FRCS or MRCS Part II.

6. Attendance

During his programme of study –

(1) A candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty.

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided that the total extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two (2) months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two (2) months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his log book and posting reports every six months for assessment by the Department responsible for the candidate’s programme of study.

(2) A candidate is required to submit his research report not later than six (6) months before the Final Examination.
10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination; and
(b) the Final Examination.

(2) No candidate shall be permitted to sit for the Final Examination unless he has passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he has passed:

(a) Section A or the Primary Fellowship of the following Royal Colleges:
   (i) The Royal College of Surgeons of Edinburgh
   (ii) The Royal College of Surgeons of England
   (iii) The Royal College of Physicians and Surgeons of Glasgow
   (iv) The Royal College of Surgeons in Ireland
   (v) The Royal Australasian College of Surgeons
   or

(b) Final Examination for the Membership of any one of the following Royal Colleges:
   (i) The Royal College of Surgeons of Edinburgh
   (ii) The Royal College of Surgeons of England
   (iii) The Royal College of Physicians and Surgeons of Glasgow
   (iv) The Royal College of Surgeons in Ireland
   (v) The Royal Australasian College of Surgeons
   (vi) Master of Surgery (University of Malaya) or its equivalent approved by the Senate
   or

(c) Section B and C of the Primary Fellowship of any one of the following Royal Colleges:
   (i) The Royal College of Surgeons of Edinburgh
   (ii) The Royal College of Surgeons of England
   (iii) The Royal College of Physicians and Surgeons of Glasgow
   (iv) The Royal College of Surgeons in Ireland

(3) The Part I Examination shall be held at the end of stage I of the programme of study. The Final Examination shall be held at the end of Stage II of the programme of study.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated for each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MSGU6101 Paper 1 Multiple Choice Questions</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>MSGU6102 Paper 2 Short Answer Type Questions</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>300</td>
</tr>
<tr>
<td>B. MSGU6121 Viva Voce Applied Anatomy</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Applied Physiology & Principles of Surgery 100
Applied Pathology (including Microbiology) 100
Total 300

C. Continuous Assessment
Grand Total 400

(b) Final Examination

The components of the Final Examination and the marks to be allocated to the various components of the Final Examination shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MSGU6236 Paper 1 Short Answer Type Questions &amp; Essays (Applied Basic Sciences in Paediatric Surgery)</td>
<td>100</td>
</tr>
<tr>
<td>MSGU6237 Paper 2 Short Answer Type Questions &amp; Essays (Principles and Practice of Paediatric Surgery)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>MSGU6238 Paper 3 Short Answer Type Questions &amp; Essays (Problems in Paediatric Surgery)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>B. MSGU6243 Clinical Long Case</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>MSGU6244 Short Cases</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>MSGU6245 Ward Rounds</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>550</td>
</tr>
<tr>
<td>C. MSGU6250 Viva Voce</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>D. Continuous Assessment</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>1500</td>
</tr>
</tbody>
</table>

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he has obtained:

(a) Part I Examination

(i) 50% or more of the aggregate combined marks of all the components for the examination; and

(ii) 50% or more of the marks for each component for the examination.

(b) Final Examination

(i) 50% or more of the aggregate combined marks of all the components for the examination; and

(ii) 50% or more of the marks for each component for the examination.

(iii) Sufficient standard in his research report or case book.
(6) Repeating an Examination

(a) Part I Re-examination
   (i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six months intervals.
   (ii) The Part I Re-examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.
   (iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty and with the approval of Senate.

(b) Final Re-examination
   (i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six months intervals.
   (ii) The Final Re-examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.
   (iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty and with the approval of Senate.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Paediatric Surgery unless he has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he-
(a) has obtained 75% or more of the aggregate combined marks in each of the prescribed Examinations;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Paediatric Surgery with Distinction if he -
(a) has passed with Distinction in the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of
study except on medical or compassionate grounds acceptable to the Faculty.

Master of Paediatric Surgery
Programme Schedule

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>12 months of Applied Basic Sciences &amp; General Principles of Surgery and/or subspecialties in Surgery.</td>
</tr>
<tr>
<td>II</td>
<td>1</td>
<td>6 months in Paediatric Medicine with rotation posting in Neonatology; Paediatric Intensive Care and Pediatric Oncology. This part of the programme should be completed in the second year of the programme.</td>
</tr>
<tr>
<td>II</td>
<td>2</td>
<td>To conduct a research project / keep a case book. To submit a report six months before the Final Examination.</td>
</tr>
<tr>
<td>II</td>
<td>3 &amp; 4 (24 months)</td>
<td>Applied Basic Sciences in Paediatric Surgery including Embryology, Principles &amp; Practice of Paediatric Surgery, and clinical problems in Paediatric Surgery with rotation in the University or other accredited Paediatrics Surgery Unit. The last six months should be spent in the University.</td>
</tr>
</tbody>
</table>

Final Examination

Part I Examination
(12 months after registration)

Registration
(Entrance Evaluation)
Name of Programme : Master of Pathology (Anatomical Pathology) / (Haematology) / (Chemical Pathology) / (Medical Microbiology) / (Forensic Pathology)

Faculty : Faculty of Medicine

1. Classification of Programme

The Master of Pathology (Anatomical Pathology) / (Haematology) / (Chemical Pathology) / (Medical Microbiology) / (Forensic Pathology) programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study. After completion of the relevant programme of study specified in this schedule, a candidate shall be eligible for the award of the Master of Pathology in a speciality of the candidate’s choice, as the case may be.

2. Entry Requirements

(1) Entry qualifications

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements

(a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

(b) Satisfies the Department responsible for the candidate's programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.

(2) The maximum duration of study shall be seven years.

4. Structure of Programme

(1) The programme of study comprises two stages as follows:

(a) Stage I encompassing:

(i) clinical training in the first year of study by rotational posting in each of the following four disciplines of Pathology:

(A) Anatomical Pathology including Autopsy

(B) Haematology including Transfusion Medicine;

(C) Chemical Pathology including Immunology; and

(D) Medical Microbiology (Bacteriology, Mycology, Immunology, Virology) with Parasitology.

and
(ii) tasks as stipulated in the log book including posting reports.

(b) Stage II encompassing three years of study comprising:
   (i) advanced training in one of the following disciplines of Pathology:

   (A) Anatomical Pathology,
   (B) Haematology;
   (C) Chemical Pathology,
   (D) Medical Microbiology;
   (E) Forensic Pathology;

   and

   (ii) a research project

(2) No candidate shall be permitted to proceed to Stage II of the programme of study unless he/she has passed or has been exempted from the Part I Examination.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of the programme of study if he/she has

   (a) the Master of Medical Science in Clinical Pathology Degree of the University or an equivalent qualification approved by the Senate.

   (b) passed the Part I Examination for the Membership of the Royal College of Pathologists, United Kingdom; or

   (c) passed the Part I Examination for the Fellowship of the Royal College of Pathologists of Australasia.

6. Attendance

During his programme of study:

(1) a candidate may be permitted to undertake part of his/she training in other hospitals or centres recognised by the Faculty.

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research
The research project for a candidate shall be determined by the Department in the Faculty responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his log book and posting reports not later than one month before the Part I Examination.

(2) A candidate is required to submit his research report not later than three months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination; and
(b) the Final Examination.

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has satisfactorily completed all the postings prescribed for the first year of the programme of study, completed all the required tasks as set out in the log book and has submitted the log book and posting reports to the Department of Pathology not later than one month before the Part I Examination.

(3) No candidate shall be permitted to sit for the Final Examination unless he/she has –

(a) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he possesses one of the following qualifications:

(i) The degree of Master of Medical Science in Clinical Pathology of the University or an equivalent qualification approved by Senate;

(ii) The Part I Examination for the Membership of the Royal College of Pathologists, United Kingdom; or

(iii) The Part I Examination for the Fellowship of the Royal College of Pathologists of Australasia.

(b) submitted his/her Research Report not later than three months before the Final Examination.

(4) The Part I Examination shall be held at the end of the Stage I of the programme of study. The Final Examination shall be held at the end of the final year of the Stage II programme of study.

(5) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

*MMH Master of Pathology (Haematology)
*MMK Master of Pathology (Medical Microbiology)
*MMJ Master of Pathology (Anatomical Pathology)
*MMG  Master of Pathology (Forensic Pathology)
*MMI  Master of Pathology (Chemical Pathology)

Component  Description  Allocation of Marks (Maximum)

A. Written
*MKGA6104 Paper 1  Multiple Choice & Essay Questions  150
*MKGA6105 Paper 2  Multiple Choice & Essay Questions  150
  Total  300

B. *MKGA6111 Practical
*MKGA6112 Paper 1  Objective Structured Examination  150
*MKGA6113 Paper 2  Objective Structured Examination  150
  Total  300
  Grand Total  600

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

Component  Description  Allocation of Marks (Maximum)

A. Written
*MKGA6238 Paper 1  Essay or Short Answer Questions  225
*MKGA6237 Paper 2  Essay or Short Answer Questions  225
  Total  450

B. *MKGA6243 Practical  Objective Structured Questions,  450
    Speciality Practicals and Others
C. *MKGA6250 Viva Voce  100
  Grand Total  1000

(6) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

(i) 50% or more of the aggregate combined marks of the written and practical components of the Examination;

(ii) at least 50% of the marks for the written component and not less than 40% of the marks in the written component for each discipline of Pathology; and

(iii) at least 50% of the marks for the practical component and not less than 40% of the marks in the practical component for each discipline of Pathology.

(b) Final Examination
50% or more of the aggregate combined marks for all the components of the Examination and not less than 50% of the marks for the written and practical components of the Examination.

(7) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted only one re-examination after a period of one year.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination after a period of one year.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the Final Re-Examination on the second occasion shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(iv) Notwithstanding regulations 10(7)(b) above, a candidate who has failed because of either the written or practical component of the Final Examination may be permitted a re-examination on four separate occasions at six monthly intervals. Under the circumstances, the re-examination shall comprise the written or practical component that the candidate has failed in the main Examination or the first re-examination and the viva voce. The examination shall be in the discipline of Pathology initially chosen by the candidate for the main Examination.

(c) A candidate who has passed the re-examination for the Examinations above shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Pathology (Anatomical Pathology/ Haematology/ Chemical Pathology/ Medical Microbiology/ Forensic Pathology) unless he has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a pass with Distinction in the Part I Examination and the Final Examination if he/she –
(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Pathology (Anatomical Pathology/ Haematology/ Chemical Pathology/ Medical Microbiology/ Forensic Pathology) with Distinction if he/she –

(a) has passed with Distinction in the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

```
<table>
<thead>
<tr>
<th>Master of Pathology (Anatomical Pathology) / (Haematology) / (Chemical Pathology) / (Medical Microbiology) / (Forensic Pathology)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme Schedule</td>
</tr>
<tr>
<td>STAGE I</td>
</tr>
</tbody>
</table>
| Year 1 | Intensive Course (3 weeks) Post for 10 weeks in each of these disciplines | • Anatomic Pathology  
• Haematology  
• Chemical Pathology  
• Medical Microbiology/ Parasitology |
| STAGE II | Year 2 | Specialisation in any one Pathology discipline, including Anatomic Pathology, Haematology, Chemical Pathology, Medical Microbiology, Forensic Pathology, Immunology, and  
• Research Project in the chosen discipline |
| STAGE III | Year 3 | Part I Examination                                                                 |
| Final Examination                                                                                                           |
```

Registration (Entrance Evaluation)
1. **Classification of Programme**

The Master of Psychological Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. **Entry Requirements**

(1) **Entry qualifications**

   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

   (b) At least one year of post-full registration clinical experience approved by the Senate.

(2) **Other requirements**

   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. **Duration of Study**

   (1) The minimum duration of study shall be four years.

   (2) The maximum duration of study shall be seven years.

4. **Structure of Programme**

   (1) The programme of study comprises three stages as follows:

   (a) **Stage I**, in the first year of study comprising:

      (i) clinical training in basic attitudes;

      (ii) training in clinical skills and management in psychiatry;

      (iii) training in basic sciences relevant to psychiatry and training in psychiatric management and

      (iv) preparation of two case protocols in general psychiatry.

   (b) **Stage II**, in the second and third year of study comprising:

      (i) training in clinical psychiatry and rotational postings in psychiatric subspecialties;

      (ii) preparation of case protocols for the number of cases which shall be determined by the department from time to time.
Stage III, in the fourth year of study comprising advanced training in psychiatry and completion of research project.

No candidate shall be permitted to proceed to Stage II of the programme study unless he/she has passed the Part I Examination.

No candidate shall be permitted to proceed to Stage III of the programme study unless he/she has passed the Part II Examination.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his programme of study –

(1) a candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty;

(2) a candidate who has been absent for a period exceeding forty-two days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate's programme of study. The research proposal shall be submitted to the ethics committee not later than four months before the Part II Examination.

9. Submission

(1) A candidate is required to submit two case protocols for Stage I of the programme of study not later than three months before the Part I Examination.

(2) A candidate is required to submit case protocols for Stage II of the programme study not later than three months before the Part II Examination.

(3) A candidate is required to submit a research report not later than three months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination
(b) the Part II Examination
(c) the Final Examination

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has satisfactorily completed and submitted case protocols for Stage I of the programme not later than three months before the Part I Examination.

(3) No candidate shall be permitted to sit for the Part II Examination unless he/she has:

(a) passed the Part I Examination; and

(b) satisfactorily completed and submitted case protocols for Stage II not later than three months before the Part II Examination and obtained 50% or more of the average marks of these case protocols.

(4) No candidate shall be permitted to sit for the Final Examination unless he/she has:

(a) passed the Part II Examination; and

(b) satisfactorily completed and submitted research report not later than three months before the Final Examination.

(5) The Part I examination shall be held at the end of the first year of the programme study. The Part II examination shall be held at the end of the third year of the programme study and the Final examination shall be held at the end of the fourth year of the programme study.

(6) The written component For Part I & II examination will be held before the clinical examination. Those who fail the written component will not be allowed to take the clinical examination. They shall be considered as have failed the examination.

(7) Examination Components and Allocation of Marks:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNGC6101</td>
<td>Paper 1</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td>MNGC6102</td>
<td>Paper 2</td>
<td>Multiple Choice Questions</td>
</tr>
<tr>
<td>MNGC6103</td>
<td>Paper 3</td>
<td>Short Essay Questions</td>
</tr>
<tr>
<td>B. Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNGC6111</td>
<td>Short Case</td>
<td>Psychiatry</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Grand Total</strong></td>
</tr>
</tbody>
</table>

(b) Part II Examination

The components of the Part II Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
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<tr>
<td>MNGC6236</td>
<td>Paper 1</td>
<td>Essay Questions and Critical</td>
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<tr>
<td>MNGC6237</td>
<td>Paper 2</td>
<td>Review Paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td>B. Clinical</td>
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<td></td>
</tr>
<tr>
<td>MNGC6244</td>
<td>Long Case</td>
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<tr>
<td>MNGC6245</td>
<td>Short Case</td>
<td>Psychiatry</td>
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<tr>
<td>MNGC6246</td>
<td>Short Case</td>
<td>Medicine/Neurology</td>
</tr>
</tbody>
</table>
(c) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

(i) MNGC6261 Research report 70
(ii) MNGC6250 Dissertation Viva 30
Total 100

OR If the candidate’s research work has been accepted for publication in an indexed scientific journal (at least SCOPUS) he/she shall be exempted from submission of research report and dissertation viva 100.

(ii) MNGC6247 Consultation Viva 100
Grand Total 200

(8) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

(i) 50% or more of the written component
(ii) 50% or more of the average marks from the clinical component; and
(iii) not less than 45% of the marks in any of the clinical case of the clinical component.

(b) Part II Examination

(i) 50% or more of the written component
(ii) 50% or more of the clinical long case Psychiatry
(iii) 50% or more of the average marks from the clinical short cases: and
(iv) not less than 45% of the marks in any of the clinical shortcases

(c) Final Examination

50% or more of the marks in all component of the examination.

(9) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination. However if a candidate had achieved at least 50% (100/200) of the total marks of the “Written” component during the prior examination, he/she shall be exempted from sitting for the written component during the Re-examination.

(iii) A candidate who has passed written component but fail clinical component may be permitted a re-examination of clinical component only.
(iv) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed the Part II Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Part II Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part II Examination.

(iii) A candidate who has passed written components but fail clinical component may be permitted a re-examination of clinical component only.

(c) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six monthly intervals.

(ii) The Final Re-Examination shall consist of only the failed component(s) and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(d) A candidate who has passed the re-examination for the Examinations above shall be deemed to have passed the prescribed Examinations.

(10) Supervisory Report

In the event that a candidate get an unsatisfactory report, the Department concerned may set up a special committee to deliberate and recommend the candidate to be terminated from the course, to repeat the year, to defer for 6 months or to be permitted for sitting in the examination.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Psychological Medicine unless he/she has successfully completed all parts of the course, fulfilled the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Final Examination if he –

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;
(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree with Distinction if he/she –

(a) has passed with Distinction in the Part I Examination, Part II Examination and Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

---

**Master of Psychological Medicine Programme Schedule**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| Stage I | Year 1 | - Clinical training in basic attitudes  
- Training in clinical skills and management in psychiatry  
- Training in basic sciences relevant to psychiatry and training in psychiatric management  
- Preparation of two cases protocols in general psychiatry |
| Stage II | Year 2 | - Training in clinical psychiatry and rotational postings in psychiatric sub-specialities  
- Preparation of case protocols for the number of cases which shall be determined by the department from time to time |
| Stage II | Year 3 | - Advanced training in psychiatry and completion of research project |
| Final Examination | | |
| Part II Examination | | |
| Part I Examination | | |
| Registration (Entrance Evaluation) | | |
Name of Programme: Master of Radiology  
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Radiology programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications
   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and
   (b) At least one year of post-full registration clinical experience approved by the Senate.

(2) Other requirements
   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme

The programme of study comprises three stages as follows:

(1) Stage I in the first year of study comprising:
   (a) basic training in Radiological Medical Physics, Radiological Anatomy and Radiography, Radiological Technique, Contrast Media and Drugs, Basic Trauma Radiology and any other disciplines of Radiology that may be determined by the Department from time to time;
   (b) training in cognate subjects of radiology that may be determined by the department from time to time; and
   (c) the keeping of a log book by the candidate to document radiological procedures performed by him.

(2) Stage II in the second and third year of study comprising:
   (a) training in all aspects of diagnostic radiology, imaging techniques and interventional radiology;
(b) training in cognate subjects as may be determined by the Department from time to time;

(c) the keeping of a log book by the candidate to document radiological procedures performed by him; and

(d) the commencement of a research project.

(3) Stage III in the fourth year of study comprising:

(a) advanced training in all aspects of diagnostic radiology, imaging techniques and interventional radiology;

(b) advanced training in cognate subjects as may be determined by the Department from time to time;

(c) case studies; and

(d) a research project.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of the programme of study if he possesses qualification an equivalent to Part I Master of Radiology recommended by Faculty and acceptable to the Senate.

6. Attendance

During his/her programme of study -

(1) A candidate may be permitted to undertake part or all of his training in other hospitals or centres recognised by the Faculty;

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part or all of his/her programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.
9. Submission

(1) A candidate is required to submit a log book of radiological procedures performed, certified by his supervisor for the respective period of study one month before the Part I Examination.

(2) A candidate is required to submit a log book consisting of special radiological procedures observed and performed, certified by his supervisor for the respective period of study two months before the Part II Examination.

(3) A candidate is required to submit a research report and a case studies report for the respective period of study three months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination;
(b) the Part II Examination; and
(c) the Final Examination

(2) No candidate shall be permitted to sit for the Part I Examination unless he has submitted a log book of radiological procedures performed, certified by his supervisor for the respective period of study one month before the Part I examination.

(3) No candidate shall be permitted to sit for the Part II Examination unless he/she has -

(a) submitted a log book of special radiological procedures, observed and performed, certified by his supervisor for the respective period of study one month before the Part II Examination; and

(b) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he possesses qualification an equivalent to Part I Master of Radiology recommended by Faculty and acceptable to the Senate.

(4) No candidate shall be permitted to sit for the Final Examination, unless he/she has -

(a) passed the Part II Examination; and

(b) submitted the case studies report and the research report three months before the Final Examination;

(5) The Part I Examination shall be held at the end of Stage I of the programme of study. The Part II Examination shall be held at the end of stage II of the programme of study. The Final Examination shall be held at the end of stage III of the programme of study.

(6) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Components</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. MQGN6102</td>
<td>MCQ Multiple Choice Questions</td>
<td></td>
</tr>
</tbody>
</table>
The components of the Part II Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Components</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Written MQGN6236 Paper 1 SBA</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>MQGN6237 Paper 2 SBA</td>
<td>100</td>
</tr>
<tr>
<td>B.</td>
<td>MQGN6266 Film Reporting</td>
<td>100</td>
</tr>
<tr>
<td>C.</td>
<td>MQGN6250 Viva Voce</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
</tr>
</tbody>
</table>

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Components</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>MQGN6371 Case Studies Report</td>
<td>100</td>
</tr>
<tr>
<td>B.</td>
<td>MQGN6372 Research report</td>
<td>100</td>
</tr>
<tr>
<td>C.</td>
<td>MQGN6374 Viva Voce</td>
<td>100</td>
</tr>
<tr>
<td>D.</td>
<td>MQGN6373 Rapid Film reporting</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>400</td>
</tr>
</tbody>
</table>

Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

50 % or more of the marks for each component of the Examination.

A candidate who does not fulfill the above requirement for a component shall be deemed to have failed the component concerned but shall be credited with the component or components he has passed and be required to repeat only the component that he has failed.

(b) Part II Examination

60% or more of the marks of component A.
50% or more of the marks for components B, C of the Examination

A candidate who does not fulfill the above requirement for a component shall be deemed to have failed the component concerned but shall be credited with
the component or components he has passed and be required to repeat only
the component that he has failed.

(c) Final Examination

50 % or more of the marks for each component of the Examination.

A candidate who does not fulfill the above requirement for a component shall
be deemed to have failed the component concerned but shall be credited with
the component or components he has passed and be required to repeat only
the component that he has failed.

(8) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a
re-examination on two separate occasions at six monthly intervals.

(ii) The Part I Re-Examination shall consist of the same component and
shall be assessed and graded in the same manner as prescribed for
the Part I Examination.

(iii) A candidate who has passed one or more of the component of the Part
I Examination shall be deemed to have passed those component and
shall not be required to repeat those component.

(iv) A candidate shall be required to repeat those component that he/she
has failed in the Part I Examination.

(v) A candidate who fails the re-examination on the second occasion shall
be deemed to have failed the Part I Examination and shall not be
permitted to repeat the programme of study except in special
circumstances and on the recommendation of the Faculty of Medicine
and with the approval of Senate.

(b) Part II Re-Examination

(i) A candidate who has failed the Part II Examination may be permitted a
re-examination on two separate occasions at six monthly intervals.

(ii) The Part II Re-Examination shall consist of the same components and
shall be assessed and graded in the same manner as prescribed for
the Part II Examination.

(iii) A candidate who has passed one or more of the components of the
Part II Examination shall be deemed to have passed those components
and shall not be required to repeat those components.

(iv) A candidate shall be required to repeat those components that he/she
has failed in the Part II Examination.

(v) A candidate who fails the re-examination on the second occasion
shall be deemed to have failed the Part II Examination and shall not
be permitted to repeat the programme of study except in special
circumstances and on the recommendation of the Faculty of Medicine
and with the approval of Senate.
11. **Award of Degree**

No candidate shall be recommended for the award of the Degree of Master of Radiology unless he/she has successfully completed all parts of the course, fulfilled the minimum duration of study and has passed the prescribed Examinations and the Final Assessment.

(1) **Award of Pass with Distinction for the Examination**

A candidate may be awarded a Pass with Distinction in the Part I Examination, the Part II Examination or the Final Examination if he/she -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examinations;

(b) has not failed in any module of the Part I Examination, or component of the Part II Examination or the Final Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) **Award of the Degree with Distinction**
A candidate may be awarded the degree of Master of Radiology with Distinction if he/she -

(a) has passed with Distinction in the Part II Examination and the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

### Master of Radiology Programme Schedule

<table>
<thead>
<tr>
<th><strong>Stage</strong></th>
<th><strong>Year</strong></th>
<th><strong>Programme</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage I</strong></td>
<td>Year 1</td>
<td>Basic training in Radiological Medical Physics, Radiological Anatomy and Radiography, Radiological Technique, Contrast Media and Drugs, Basic Trauma Radiology and any other disciplines of Radiology.</td>
</tr>
<tr>
<td><strong>Stage II</strong></td>
<td>Year 2, Year 3</td>
<td>Training in all aspects of Diagnostic Radiology, Imaging Technique and Interventional Radiology</td>
</tr>
<tr>
<td><strong>Stage III</strong></td>
<td>Year 4</td>
<td>Advanced training in all aspects of Diagnostic Radiology, Imaging Technique and Interventional Radiology</td>
</tr>
</tbody>
</table>

**Final Examination**

**Part II Examination**

**Part I Examination**

**Registration**

(Entrance Evaluation)
Name of Programme: Master of Rehabilitation Medicine
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Rehabilitation Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) Entry qualifications
   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and
   (b) At least two years of post-full registration clinical experience approved by the Senate of which at least one year is spent in in-patient care.

(2) Other requirements
   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be four years.
(2) The maximum duration of study shall be seven years.

4. Structure of Programme

The programme of study comprises two stages as follows:

(1) Stage I in the first year of study covering:
   (a) Basic and Applied Sciences of Rehabilitation Medicine;
   (b) Principles, Concepts and Practice of Rehabilitation Medicine;
   (c) Rotational postings in disciplines related to Rehabilitation Medicine;
   (d) The keeping of a log book by the candidate to document tasks undertaken
   (e) Continuous assessments as prescribed by the Department

(2) Stage II of study covering:
   (a) Rotational postings in specialised Rehabilitation Medicine disciplines and disciplines related to Rehabilitation Medicine;
(b) research report;
(c) assignments;
(d) the keeping of a log book by the candidate to document tasks undertaken;
and
(e) continuous assessments as prescribed by the Department.

(3) No candidate shall be permitted to proceed to Stage II of the programme of study unless he has passed or been exempted from the Part I Examination.

5. Registration

(1) Registration for the programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of the programme of study if he/she has passed the Part I Examination for any one of the following degrees of the University or has obtained an equivalent qualification recognised by the Senate:

- Master of Internal Medicine
- Master of Family Medicine
- Master of Orthopaedic Surgery
- Master of Paediatrics
- Master of Surgery

6. Attendance

During his/her programme of study -

(1) A candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty;

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate

(2) A consultant shall be appointed a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.

9. Submission

(1) A candidate is required to submit his log book and assignments for the respective period of study not later than one month before the Part I Examination

(2) A candidate is required to submit his log book and assignments for the respective period of study not later than one month before the Final Examination
(3) A candidate is required to submit his research report not later than three months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination;
(b) the Final Examination.

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has –

(a) satisfactorily completed the continuous assessments prescribed by the Department; and
(b) submitted his/her log book and assignments deemed satisfactory by the Department not later than one month before the Part I Examination.

(3) No candidate shall be permitted to sit for the Final Examination unless he/she has –

(a) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he has passed the Part I Examination for any one of the following degrees of the University or has obtained an equivalent qualification recognised by the Senate:

- Master of Internal Medicine
- Master of Family Medicine
- Master of Orthopaedic Surgery
- Master of Paediatrics
- Master of Surgery

(b) Satisfactorily completed the components of the continuous assessments as specified by the Department;
(c) Submitted his/her log book and assignments deemed satisfactory by the Department not later than one month before the Final Examination; and
(d) Submitted a research report on an aspect of Rehabilitation Medicine not later than three months before the Final Examination. A candidate must obtain a pass grade in the research report before he/she is permitted to sit for the Final Examination.

(4) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGP6101</td>
<td>Paper 1 Multiple Choice Questions</td>
<td>150</td>
</tr>
<tr>
<td>MTGP6102</td>
<td>Paper 2 Short Answer Type Questions</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>300</td>
</tr>
</tbody>
</table>
B. Practical
MTGP6126  Paper 3  Objective Structural Practical Examination 200

C. Clinical
MTGP6121  Clinical  500

Grand Total  1000

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGP6236 Paper 1 Essay</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>MTGP6237 Paper 2 Short Answer Type Questions</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>MTGP6238 Paper 3 Multiple Choice Questions</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>B. Practical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGP6286 Paper 4 Objective Structured Practical Examination</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>C. Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGP6243 Clinical</td>
<td></td>
<td>350</td>
</tr>
<tr>
<td>D. Viva Voce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGP6250 Viva Voce</td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>1000</td>
</tr>
</tbody>
</table>

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

50% or more of the marks for each component.

The theory examination (Written and Practical) will be held before the Clinical Examination. Only candidates that passes the Theory Examination will be allowed to sit the Clinical Examination.

Theory Examination consist of two component which are:

(i) Component A (Written) : Paper MCQ and SAT
   (A) 50% or more of the total marks
   (B) Compulsory to pass

(ii) Component B (Practical) : Paper OSPE
    (A) 50% or more of the marks
    (B) Compulsory to pass
Clinical Examination is:

(i) Component C (Clinical): Short Case & Long Case
   (A) 50% or more of the total marks
   (B) Compulsory to pass all the clinical cases

A candidate who fails the clinical exam will not have to re-sit the theory examination before attempting the clinical examination again.

(b) Final Examination

50% or more of the marks for each component of the Final Examination.

The theory examination (Written and Practical) will be held before the Clinical Examination (Clinical and Viva Voce). Only candidates that passes the Theory Examination will be allowed to sit the Clinical Examination.

Theory Examination consist of two component which are:

(i) Component A (Written): Paper Essay, MCQ & SAT
   (A) 50% or more of the total marks
   (B) Pass 2 out of 3 of the papers

(ii) Component B (Practical): Paper OSPE
   (A) 50% or more of the marks
   (B) Compulsory to pass

Clinical Examination consist of two component which are:

(i) Component C (Clinical): Short Case & Long Case
   Short Case
   (A) 50% or more of the total marks
   (B) Pass 2 out of 3 of the cases

   Long Case
   (A) 50% or more of the total marks
   (B) Compulsory to pass

(ii) Component D (Viva Voce):
   (A) 50% or more of the total marks
   (B) Compulsory to pass

A candidate who fails the clinical exam will not have to re-sit the theory examination before attempting the clinical examination again.

(6) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six months intervals.
(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six months intervals.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Rehabilitation Medicine unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Rehabilitation Medicine with Distinction if he/she –

(a) has passed with Distinction in the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
### Master of Rehabilitation Medicine Programme Schedule

<table>
<thead>
<tr>
<th>Stage I</th>
<th>Year 1 (12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) Basic and Applied Sciences of Rehabilitation Medicine.</td>
</tr>
<tr>
<td></td>
<td>(b) Principles, Concepts and Practice of Rehabilitation Medicine.</td>
</tr>
<tr>
<td></td>
<td>(c) Rotational postings in disciplines related to Rehabilitation Medicine.</td>
</tr>
<tr>
<td></td>
<td>(d) The keeping of a log book by the candidate to document tasks undertaken.</td>
</tr>
<tr>
<td></td>
<td>(e) Continuous assessments as prescribed by the Department.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage II</th>
<th>Year 2 (36 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) Rotational postings in specialised Rehabilitation Medicine disciplines and disciplines related to Rehabilitation Medicine.</td>
</tr>
<tr>
<td></td>
<td>(b) Research report.</td>
</tr>
<tr>
<td></td>
<td>(c) Assignments.</td>
</tr>
<tr>
<td></td>
<td>(d) The keeping of log book by the candidate to document tasks undertaken.</td>
</tr>
<tr>
<td></td>
<td>(e) Continuous assessments as prescribed by the Department.</td>
</tr>
</tbody>
</table>

**Final Examination**

**Part I Examination**

**Registration (Entrance Evaluation)**
1. **Classification of Programme**

The Master of Sports Medicine programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. **Entry Requirements**

   (1) **Entry qualifications**

   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

   (b) At least one year of post-full registration clinical experience approved by the Senate.

   (2) **Other requirements**

   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

   (b) Satisfies the Department responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. **Duration of Study**

   (1) The minimum duration of study shall be four years.

   (2) The maximum duration of study shall be seven years.

4. **Structure of Programme**

   The programme of study comprises two stages as follows:

   (1) **Stage I in the first year of study comprising:**

   (a) Basic Sciences related to Sports Medicine and any other clinical discipline in relation to Sports Medicine;

   (b) assignments;

   (c) The keeping of a log book by the candidate to document tasks undertaken; and

   (d) Continuous assessments as prescribed by the Department.

   (2) **Stage II in the second, third and fourth years of study comprising:**

   (a) advanced training and clinical postings in areas related to Sports Medicine including an elective posting or postings of the candidate’s choice subject to
the approval of the Department responsible for the candidate’s programme of study;

(b) advanced training in areas of Sports Medicine Management, Ethics and Special Population;

(c) assignments;

(d) the keeping of a log book by the candidate to document tasks undertaken;

(e) research report; and

(f) continuous assessments as prescribed by the Department.

5. Registration

(1) Registration for this programme of study shall commence the week prior to the start of the academic session.

(2) A candidate may be permitted to register directly for Stage II of the programme of study if he has passed the Part I Examination for any one of the following degrees of the University or has obtained an equivalent qualification recognised by the Senate -

- Master of Internal Medicine
- Master of Orthopaedic Surgery
- Master of Family Medicine
- Master of Rehabilitation Medicine
- Master of Paediatrics
- Master of Psychological Medicine
- Master of Surgery
- Master of Radiology

6. Attendance

During his/her programme of study -

(1) a candidate may be permitted to undertake part of his training in other hospitals or centres recognised by the Faculty;

(2) a candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The supervisor for a candidate shall be appointed not later than two months after the registration of the candidate.

(2) A consultant shall be appointed for a candidate who undertakes part of his training outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The research project for a candidate shall be determined by the Department responsible for the candidate’s programme of study not later than one month prior to the commencement of the research.
9. Submission

(1) A candidate is required to submit his/her log book and assignments one month before the Part I Examination.

(2) A candidate is required to submit a published research paper or research report six months before the Final Examination. The candidate also needs to submit the supervisor appraisal reports from the rotational and elective posting, assignments and log book not later than two months before the Final Examination.

10. Examinations for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination;
(b) the Final Examination.

(2) No candidate shall be permitted to sit for the Part I Examination unless he/she has –

(a) satisfactorily completed the continuous assessments prescribed by the Department; and
(b) submitted his log book and assignments deemed satisfactory by the Department one month before the Part I Examination.

(3) No candidate shall be permitted to sit for the Final Examination unless he/she has –

(a) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he has passed the Part I Examination for any one of the following degrees of the University or has obtained an equivalent qualification recognised by the Senate:

   - Master of Family Medicine
   - Master of Internal Medicine
   - Master of Orthopaedic Surgery
   - Master of Paediatrics
   - Master of Psychological Medicine
   - Master of Rehabilitation Medicine
   - Master of Surgery
   - Master of Radiology

(b) satisfactorily completed the components of the continuous assessments as specified by the Department

(c) submitted his/her supervisor appraisal reports from the rotational and elective posting, log book and assignments deemed satisfactory by the Department not later than two months before the Final Examination; and

(d) submitted a satisfactory published research paper or research report six months before the Final Examination.

(4) The Part I Examination shall be held at the end of the first year of the programme of study. The Final Examination shall be held at the end of the fourth year of the programme of study.

(5) Examination Components and Allocation of Marks
(a) Part I Examination

The components of the Part I Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Written</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6104</td>
<td>One Best Answer</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>200</td>
</tr>
<tr>
<td><strong>B. Written</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6105</td>
<td>Short answer Type Questions 1</td>
<td>100</td>
</tr>
<tr>
<td>MTGO6106</td>
<td>Short Answer Type Questions 2</td>
<td>100</td>
</tr>
<tr>
<td><strong>Clinical</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6107</td>
<td>Objective Structured Clinical Examination</td>
<td>200</td>
</tr>
<tr>
<td>MTGO6125</td>
<td>Short Cases</td>
<td>200</td>
</tr>
<tr>
<td><strong>Viva Voce</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6121</td>
<td>Anatomy</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6122</td>
<td>Physiology</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6123</td>
<td>Pathology, Microbiology and Pharmacology</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6124</td>
<td>Principles of Surgery and General Medicine</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>800</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

(b) Final Examination

The components of the Final Examination and the marks to be allocated to each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Written</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6236</td>
<td>Essay Questions</td>
<td>100</td>
</tr>
<tr>
<td>MTGO6237</td>
<td>Short Answer Type Questions</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>300</td>
</tr>
<tr>
<td><strong>B. Clinical</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6243</td>
<td>Long Case</td>
<td>100</td>
</tr>
<tr>
<td>MTGO6244</td>
<td>Short Cases</td>
<td>200</td>
</tr>
<tr>
<td>MTGO6245</td>
<td>Objective Structured Clinical Examination</td>
<td>200</td>
</tr>
<tr>
<td><strong>Viva Voce</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTGO6254</td>
<td>Clinical Sports Medicine</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6255</td>
<td>Sports Rehabilitation</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6256</td>
<td>Exercise Testing and Exercise Prescription</td>
<td>50</td>
</tr>
<tr>
<td>MTGO6257</td>
<td>Sports Emergency</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>700</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

(6) Requirements for Passing an Examination
A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

50% or more of the marks for each sub component of the Part I Examination.

Only candidates that passed the Component A examination, will be allowed to sit for the Component B examination.

(b) Final Examination

50 % or more of the marks for each sub component of the Final Examination.

Only candidates that passed the Component A examination, will be allowed to sit for the Component B examination.

For the clinical long case and short case examination, the passing criteria for this part is determined by the majority of the examiner’s votes and not by the marks. But in case of even votes encountered, then the average marks will be considered as the passing criteria.

(7) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six months intervals.

(ii) The Part I Re-Examination shall consist of the components that has failed and shall be assessed and graded in the same manner as prescribed for the Part I Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) A candidate who has failed the Final Examination may be permitted a re-examination on two separate occasions at six months intervals.

(ii) The Final Re-Examination shall consist of the components that has failed and shall be assessed and graded in the same manner as prescribed for the Final Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Final Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(c) A candidate who has passed the re-examination for the Examinations shall be deemed to have passed the prescribed Examinations.
11. **Award of Degree**

No candidate shall be recommended for the award of the Degree of Master of Sport Medicine unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) **Award of Pass with Distinction for the Examination**

A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she -

(a) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) **Award of the Degree with Distinction**

A candidate may be awarded the degree of Master of Sports Medicine with Distinction if he/she -

(a) has passed with Distinction in both the Part I and the Final Examination;

(b) has not failed in any component of the prescribed Examination; and

(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
### Master of Sports Medicine Programme Schedule

<table>
<thead>
<tr>
<th>Stage</th>
<th>Year 1 (12 months)</th>
<th>Year 2 (36 months)</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic Sciences related to Sports Medicine and any other clinical discipline in relation to Sports Medicine</td>
<td>(a) advanced training and clinical postings in areas related to Sports Medicine including an elective posting or postings of the candidate’s choice subject to the approval of the Department responsible for the candidate’s programme of study;</td>
<td>(b) advanced training in areas of Sports Management, Ethics and Special Population;</td>
<td>(c) assignments;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(d) the keeping of a log book by the candidate to document tasks undertaken;</td>
<td>and</td>
<td>(e) research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part I Examination</td>
<td></td>
<td>Final Examination</td>
</tr>
</tbody>
</table>

**Registration (Entrance Evaluation)**
1. **Classification of Programme**

The Master of Surgery programme is a clinical coursework programme in which the research component comprises less than thirty (30) percent of the whole programme of study.

2. **Entry Requirements**

   (1) **Entry qualifications**

   (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

   (b) At least one year of post-full registration clinical experience approved by the Senate.

   (2) **Other requirements**

   (a) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and

   (b) Satisfies the Department in the Faculty responsible for the candidate’s programme of study in an Entrance Evaluation recognised by the Faculty.

3. **Duration of Study**

   (1) The minimum duration of study shall be four years.

   (2) The maximum duration of study shall be seven years.

4. **Structure of Programme**

The programme of study comprises three stages as follows:

   (1) **Stage I**, comprising:

   (a) six (6) months of General Surgery posting including courses in Applied Basic Sciences and Principles of Surgery;

   (b) the option of a further six (6) months of General Surgery OR two posting of three (3) months each in Accident and Emergency, Orthopaedic Surgery, Intensive Care, Anaesthesiology, Obstetrics and Gynaecology, Radiology or any other surgical specialty not covered in Stage II, subject to approval by the Department of Surgery and Faculty of Medicine.

   (c) initiation of a research project

   (2) **Stage II**, comprising:

   (a) twelve (12) months of rotation in surgical specialties comprising four (4) postings of three (3) months each: two compulsory postings in Urology and
Neurosurgery, and a further two postings in any of the following: Cardiothoracic Surgery or Critical Care Medicine, Plastic and Reconstructive Surgery, Paediatric Surgery.

(b) continuation of a research project

(3) Stage III, comprising:

(a) Twenty four (24) months in General Surgery including rotating through which may include Colorectal, Upper Gastrointestinal, Hepatobiliary, Breast, Endocrine, Vascular and Trauma Surgery general surgical sub-specialities;

(b) submission of a research report.

(4) A candidate is required to keep a log book throughout his period of study to document tasks undertaken.

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During his/her programme of study -

(1) A candidate may be permitted to undertake part of his programme of study in other hospitals or centres recognised by the Faculty;

(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The clinical supervisor for a candidate shall be appointed not later than two months after the registration of the candidate. The research supervisor shall be appointed subsequent to the candidate passing the Part I examination.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Research Report

The research project for a candidate shall be proposed by the candidate in discussion with their supervisor not later than six months after passing the Part I Examination. Research proposals must be vetted by the Department in the Faculty responsible for the candidate’s programme of study.

9. Submission

(1) A candidate is required to submit his log book and end-of-posting reports every six months for assessment by the Department in the Faculty responsible for the candidate’s programme of study.
(2) A candidate is required to submit his research report not later than three months before the Final Examination.

10. Examination for the Degree

(1) The Examinations leading to the degree shall be as follows:

(a) the Part I Examination; and

(b) the Final Examination.

(2) No candidate shall only be permitted to sit for the Final Examination if he/she has:

(a) Passed or been exempted from the Part I Examination

(b) Passed the annual clinical evaluation

(c) Submitted three satisfactory case write-ups, and

(d) Submitted a research report that has been assessed as of sufficient standard not later than three months before the Final Examination.

(3) A candidate may be exempted from the Part I Examination if he/she has passed:

UK Intercollegiate MRCS Examination (Part A and B)

(4) The Part I Examination shall be held at the end of the first six months of the Phase I of the programme of study. The Final Examination shall be held at the end of the Phase III of the programme of study.

(5) Examination Components and Allocation of Marks

(a) Part I Examination

The components of the Part I Examination and the marks to be allocated for each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSGD6104 Paper 1</td>
<td>Applied Basic Sciences (Single Best Answer)</td>
<td>135</td>
</tr>
<tr>
<td>MSGD6105 Paper 2</td>
<td>Principle of Surgery (Single Best Answer and Extended Matching Question)</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>270</td>
</tr>
<tr>
<td>B. Clinical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSGD6124 OSCE</td>
<td></td>
<td>360</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>630</td>
</tr>
</tbody>
</table>

A candidate who does not pass the written component of the Part I Examination will not be permitted to sit for the clinical examination.

(b) Final Examination

The components of the Final Examination and the marks to be allocated to the various components of the Final Examination shall be as follows:

Component A is marked using an open system on a continuous scale, where the maximum combined mark of Paper 1 and Paper 2 is 360.
### Component Description Allocation of Marks (Maximum)

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>MSGD6236 Paper 1</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>MSGD6237 Paper 2</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>360</strong></td>
</tr>
</tbody>
</table>

Components B and C are marked using a closed system, in which the category of marks is as follows:

12 : Distinction  
11 : Good Pass  
10 : Pass  
9 : Borderline  
8 : Fail

Number of marks awarded for the Viva voce = 16  
Maximum mark for Viva voce = 16 x 12 = 192  
Pass mark for Viva voce = 16 x 10 = 160

Number of marks awarded for Clinical Long Cases = 6  
Maximum mark for Clinical Long Cases = 6 x 12 = 72  
Pass mark for Clinical Long Cases = 6 x 10 = 60

Number of marks awarded for Clinical Short Cases = 9  
Maximum mark for Clinical Short Cases = 9 x 12 = 108  
Pass mark for Clinical Short Cases = 9 x 10 = 90

| B. Viva Voce | MSGD6250 Principles of Surgery (including critical care) 1 | 40 |
|             | MSGD6251 Surgical Pathology | 40 |
|             | MSGD6252 Operative Surgery | 40 |
|             | **Total required to pass component** | **160** |

| C. Clinical | MSGD6243 Long case 1 | 30 |
|            | MSGD6243 Long case 2 | 30 |
|            | **Total required passing component:** | **60** |
|            | MSGD6244 Short cases | 90 |
|            | **Total required to pass component:** | **90** |

### Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

(i) 50% or more of the aggregate combined marks of all the components; and

(ii) 50% or more of the marks for each component for the Examination.
(b) Final Examination

(i) 50% or more of the aggregate combined marks for Component A; and

(ii) The pass mark for Component B; and

(iii) The pass marks for component C.

Note: A candidate who obtains less than 50% of the aggregate marks in component A is not eligible to sit for component B and C.

(7) Repeating an Examination

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six (6) monthly intervals.

(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination. However, a candidate who has passed the written components previously will not be required to re-sit these components at the subsequent Part I Re-Examination.

(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination

(i) There is no limit on the total attempts in the Final Examination, as long as the candidate is still within the maximum duration of study which shall be seven years from the first date of registration.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination. However, a candidate who has passed Component A previously will not be required to re-sit this component for two subsequent Final Re-Examinations. Should the candidate fail the two subsequent Final Re-Examinations, he will be required to re-sit Component A at the third subsequent Final Re-Examination.

(iii) After the maximum duration of study is over the candidate is considered to have failed the Final Examination and shall not be permitted to repeat the programmes of study.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Surgery unless he/she has successfully completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination
A candidate may be awarded a Pass with Distinction in the Part I Examination or the Final Examination if he/she

(a) has obtained 75% or more of the aggregate combined marks in each of the prescribed Examinations;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Surgery with Distinction if he/she

(a) has passed with Distinction in the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
<table>
<thead>
<tr>
<th>STAGE</th>
<th>Year 4</th>
<th>Year 3</th>
<th>Year 2</th>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(24) months in General Surgery including rotating through general surgical subspecialties, namely Colorectal, Upper GI, Hepatobiliary, Breast, Endocrine and Vascular;</td>
<td></td>
<td>(12) months of rotation in surgical specialties;</td>
<td>General Surgery (6 months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>four (4) postings of three (3) months each: two compulsory postings in Urology and Neurosurgery, and a further two postings in any of the following: Cardiothoracic Surgery or Critical Care Medicine, Plastic and Reconstructive Surgery, Paediatric Surgery.</td>
<td>Accident and Emergency (3 months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Part I Examination (At the end of the first six months of Stage I)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Registration (Entrance Evaluation)</td>
</tr>
</tbody>
</table>

Final Examination
1. **Classification of Programme**

The Master of Neurosurgery programme is a clinical coursework programme in which the research component comprises less than thirty (30) per cent of the whole programme of study.

2. **Entry Requirements**

(a) The degree of Bachelor of Medicine and Bachelor of Surgery or an equivalent medical qualification approved by the Senate; and
(b) At least one year of post-full registration clinical experience approved by the Senate.
(c) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
(d) Pass the entrance assessment set by the Department

3. **Language Requirement**

A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not in English language shall be required to:

(a) Obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an Internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or
(b) Obtain a band of 6 for the International English Language Testing System (IELTS) (Academic).

4. **Duration of Study**

(1) The minimum duration of study shall be four (4) years.
(2) The maximum duration of study shall be seven (7) years.

5. **Structure of Programme**

The programme of study comprises three phases as follows:

(1) Phase I:
   (a) twelve (12) months of four (4) core subjects; and
   (b) one (1) elective subject

(2) Phase II:
   (a) twenty four (24) months of two (2) core subjects; and
   (b) initiation of a research project

(3) Phase III:
   (a) twelve (12) months of one (1) core subjects; and
   (b) submission of a research report.

(4) A candidate is required to keep a log book throughout his period of study to document tasks undertaken
List of programme core courses and programme elective courses are as below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Component</th>
<th>Code</th>
<th>Course</th>
<th>SLT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Core Programme</td>
<td>MSA7001</td>
<td>Research Methodology</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSA7004</td>
<td>Basic Neuroscience</td>
<td>256</td>
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<td>MSA7005</td>
<td>Principles of Surgery</td>
<td>190</td>
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<td>MSA7006</td>
<td>Basic Neurosurgery</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>MSA7009</td>
<td>Neurology</td>
<td>157*</td>
</tr>
<tr>
<td></td>
<td>Programme</td>
<td>MSA7010</td>
<td>Neurocritical care</td>
<td>157*</td>
</tr>
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<thead>
<tr>
<th>Year</th>
<th>Component</th>
<th>Code</th>
<th>Course</th>
<th>SLT</th>
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<tbody>
<tr>
<td>2</td>
<td>Core Programme</td>
<td>MSA7003</td>
<td>Ethics and Professionalism</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSA7007</td>
<td>Intermediate Neurosurgery</td>
<td>522</td>
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<tr>
<td></td>
<td>Research Project</td>
<td>MSA7002</td>
<td>Research Project</td>
<td>60</td>
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<td><strong>Jumlah SLT</strong></td>
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<th>Year</th>
<th>Component</th>
<th>Code</th>
<th>Course</th>
<th>SLT</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>Core Programme</td>
<td>MSA7007</td>
<td>Intermediate Neurosurgery</td>
<td>522</td>
</tr>
<tr>
<td></td>
<td>Research project</td>
<td>MSA7002</td>
<td>Research Project</td>
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<thead>
<tr>
<th>Year</th>
<th>Component</th>
<th>Code</th>
<th>Course</th>
<th>SLT</th>
</tr>
</thead>
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<tr>
<td>4</td>
<td>Core Programme</td>
<td>MSA7008</td>
<td>Advanced Neurosurgery</td>
<td>575</td>
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<tr>
<td></td>
<td>Research project</td>
<td>MSA7002</td>
<td>Research Project</td>
<td>30</td>
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<tr>
<td></td>
<td><strong>Jumlah SLT</strong></td>
<td></td>
<td></td>
<td>605</td>
</tr>
</tbody>
</table>

5. Registration

Registration for the programme of study shall commence the week prior to the start of the academic session.

6. Attendance

During the programme of study -

(1) A candidate may be permitted to undertake part of his programme of study in other hospitals or centres recognised by the Faculty;
(2) A candidate who has been absent for a period exceeding forty-two (42) days in any academic year shall be required to undertake an extended period of training to be determined by the Faculty; provided always that the extended period of training shall not exceed the maximum period of candidature.

7. Supervision

(1) The clinical supervisor for a candidate shall be appointed not later than two months
after the registration of the candidate. The research supervisor shall be appointed subsequent to the candidate passing the Part I examination.

(2) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Research Project
The research project for a candidate shall be proposed by the candidate in discussion with their supervisor not later than six (6) months after passing the Part I Examination. Research proposals must be vetted by the Department in the Faculty responsible for the candidate’s programme of study.

9. Submission
(1) A candidate is required to submit his log book and end-of-posting reports every six (6) months for assessment by the Department in the Faculty responsible for the candidate’s programme of study.
(2) A candidate is required to submit his research report not later than three (3) months before the Final Examination.

10. Examination for the Degree
(1) The Examinations leading to the degree shall be as follows:
(a) the Part I Examination; and
(b) the Final Examination.

(2) A candidate shall only be permitted to sit for the Final Examination if the candidate has:
(a) Passed the Part I Examination
(b) Passed the clinical evaluation
(c) Submitted a research report that has been assessed as of sufficient standard not later than three (3) months before the Final Examination.

(3) The Part I Examination shall be held at the end of Phase I of the programme of study. The Final Examination shall be held at the end of Phase III of the programme of study.

(4) Examination Components and Allocation of Marks:
(a) Part I Examination

The components of the Part I Examination and the marks to be allocated for each component shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper 1</td>
<td>Single Best Answer (SBA)</td>
<td>40%</td>
</tr>
<tr>
<td>Paper 2</td>
<td>Extended Matching Question (EMQ)</td>
<td>20%</td>
</tr>
<tr>
<td>B. Clinical</td>
<td>OSCE</td>
<td>40%</td>
</tr>
</tbody>
</table>

Grand Total 100%
(b) Final Examination

The components of the Final Examination and the marks to be allocated to the various components of the Final Examination shall be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Written</td>
<td>Single Best Answer (SBA)</td>
<td>30%</td>
</tr>
<tr>
<td>B. Clinical</td>
<td>Long Case</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>One (1) case</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short Case</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Six (6) cases</td>
<td></td>
</tr>
<tr>
<td>C. Viva-voce</td>
<td>Four (4) tables</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Grand Total 100%**

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribed below if he/she has obtained:

(a) Part I Examination

(i) 50% or more of the marks for each component of the Examination; and
(ii) 50% or more of the aggregate combined marks of all the components.

Note: A candidate who does not pass the Component A will not be permitted to sit for the Component B of the Part I Examination.

(b) Final Examination

(i) 50% or more of the marks for Component A; and
(ii) 50% or more of the aggregate combined marks for Component B; (Candidate must pass 4 from the total of 6 short cases); and
(iii) 50% or more of the aggregate combined marks for Component C.

Note: A candidate who obtains less than 50% of the marks in component A is not eligible to sit for component B and C.

(6) Repeating an Examination:

(a) Part I Re-Examination

(i) A candidate who has failed the Part I Examination may be permitted a re-examination on two separate occasions at six (6) monthly intervals.
(ii) The Part I Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Part I Examination.
(iii) A candidate who fails the re-examination on the second occasion shall be deemed to have failed the Part I Examination and shall not be permitted to repeat the programme of study except in special circumstances on the recommendation of the Faculty of Medicine and with the approval of Senate.

(b) Final Re-Examination
(i) The Final Re-examination will be held every six (6) monthly. There is no limit on the total attempts, as long as the candidate is still within the maximum duration of study which shall be seven (7) years from the first date of registration.

(ii) The Final Re-Examination shall consist of the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination. Candidates will be required to re-sit all components.

(iii) After the maximum duration of study is over, the candidate is considered to have failed the Final Examination and shall not be permitted to repeat the programmes of study.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Neurosurgery unless he has successfully completed all parts of the course, completed the minimum duration of the study and has passed the prescribed Examinations.

(1) Award of Pass with Distinction for the Examination

A candidate may be awarded a Pass with Distinction in the Part I Examination and the Final Examination if he/she –

(b) has obtained 75% or more of the aggregate marks in each of the prescribed Examination;
(c) has not failed in any component of the prescribed Examination; and
(d) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.

(2) Award of the Degree with Distinction

A candidate may be awarded the degree of Master of Neurosurgery with Distinction if he/she –

(a) has passed with Distinction in the Final Examination;
(b) has not failed in any component of the prescribed Examination; and
(c) has not repeated the prescribed Examination or any part of the programme of study except on medical or compassionate grounds acceptable to the Faculty.
### Master of Neurosurgery Programme Schedule

<table>
<thead>
<tr>
<th>PHASE I</th>
<th>Year 1</th>
<th></th>
<th>Part I Examination</th>
<th>(At the end of the Year 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic neurosurgery</td>
<td>Basic neuroscience</td>
<td>Registration</td>
<td>(Entrance Evaluation)</td>
</tr>
<tr>
<td></td>
<td>Research methodology</td>
<td>Neurology or Neurocritical care</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Principles of surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Basic neuroscience</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE II</th>
<th>Year 3</th>
<th>Year 2</th>
<th>Intermediate neurosurgery</th>
<th>Ethics and professionalism</th>
<th>Initiation of a research project</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PHASE III</th>
<th>Year 4</th>
<th>▪ Advanced neurosurgery</th>
<th>Submission of a research project</th>
</tr>
</thead>
</table>

Final Examination  
(At the end of Year 4)
1. Classification of Programme

The Master of Medical Education is a programme by coursework in which the credits for the research component comprises less than thirty (30) percent of the total credits for the whole programme of study. After completion of the relevant courses of study specified in this Schedule, a candidate shall be eligible for the award of the Master of Medical Education degree.

2. Entry Requirements

(1) Entry qualifications

(a) The degree of Bachelor of Medicine and Bachelor of Surgery or an equivalent medical qualification approved by the Senate; or

(b) Bachelor degree in Allied Health or an equivalent medical qualification approved by the Senate; or

(c) Bachelor degree with a CGPA not less than 3.00 and presents evidence of working experience in related field for a minimum period of 1 year; or

(d) An equivalent qualification approved by the Senate from time to time.

(e) A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme shall be required:

(i) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

(ii) To obtain a band of 6 for the International English Language Testing System (IELTS).

(2) Other requirements

Satisfies the Entrance Evaluation of the Department responsible for the candidate’s programme of study which is recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be two (2) semesters and one (1) special semester

(2) The maximum duration of study shall be eight (8) semesters

4. Structure of Programme

(1) The Master of Medical Education programme by coursework comprises forty two (42) credits as follow:
(a) six (6) core courses, each of three (3) credits, totalling eighteen (18) credits;

(b) four (4) out of a total choices of six (6) elective courses, each of three (3) credits, totaling twelve (12) credits; and

(c) a research project of twelve (12) credits.

(2) Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty and candidates shall be informed of such details at the beginning of each session.

(3) The lists of courses for the programme of Master of Medical Education are provided in List 1.

5. Registration

(1) Registration for the courses shall commence on the week prior to the start of the relevant semester.

(2) A candidate is required to register for at least six (6) credit hours in any semester except;

(a) in the final semester of his/her programme of study where he may register for less than the number of credits stated above; or

(b) where the candidate has been permitted to withdraw from the semester concerned.

6. Supervision

(1) The supervisor for a candidate shall be appointed when the area of research is approved.

(2) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research

The area of research shall be determined before the candidate commences the research part of his programme of study.

8. Submission

A candidate is required to submit his/her project report before the end of his maximum period of candidature.

9. Examination for the Degree

(1) The Examination leading to the degree of Master of Medical Education by coursework shall consist of an examination or examinations in each of the courses prescribed for the Master of Medical Education degree programme as follows:

(a) six (6) core courses, each of three (3) credits, totalling eighteen (18) credits;

(b) four (4) out of a total choices of six (6) elective courses, each of three (3) credits, totaling twelve (12) credits; and

(c) a research project of twelve (12) credits.
(2) Examination Components and Allocation of Marks

(a) Taught Courses

(i) The components of the courses and the marks to be allocated to the components of the courses prescribed for the Examination shall be as follow unless stated otherwise:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
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<tbody>
<tr>
<td>(A)</td>
<td>Continuous Assessment</td>
<td>70%</td>
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<tr>
<td>(B)</td>
<td>End of Semester Examination</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

This apply to the following courses:
- MQE7001 Research Methodology in Medical Education
- MQE7003 Curriculum Development
- MQE7004 Teaching Methods in Medical Education
- MQE7005 Concepts of Learning
- MQE7006 Assessment and Evaluation
- MQE7007 Management and Leadership in Medical Education
- MQE7008 Clinical Teachers
- MQE7009 Professionalism in Medical Education
- MQE7010 Instructional Design and Educational Technology

(ii) Research Project, Qualitative Research in Medical Education, Quantitative Research in Medical Education and Workplace-Based Learning

Continuous Assessment. 100%

This apply to the following courses:
- MQE7002 Research Project (P)
- MQE7011 Qualitative Research in Medical Education
- MQE7012 Quantitative Research in Medical Education
- MQE7013 Workplace-Based Learning

(b) The Senate may on the recommendation of the Faculty, amend the allocation of marks for the components of a course for the Examination.

(3) Course Grade Requirements

Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.

10. Award of Degree

No candidate shall be recommended for the award of the degree of Master of Medical Education unless he/she has successfully completed all parts of the courses (six core courses, four elective courses and a research project) and passed all the prescribed Examination.
List 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Core Courses</td>
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<tr>
<td>MQE 7001</td>
<td>Research Methodology in Medical Education</td>
<td>3</td>
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<tr>
<td>MQE 7002</td>
<td>Research Project (P)</td>
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</tr>
<tr>
<td>MQE 7003</td>
<td>Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7004</td>
<td>Teaching Methods in Medical Education</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7005</td>
<td>Concepts of Learning</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7006</td>
<td>Assessment and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7007</td>
<td>Management and Leadership in Medical Education</td>
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</tr>
<tr>
<td>Elective Courses</td>
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<td></td>
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<tr>
<td>MQE 7008</td>
<td>Clinical Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7009</td>
<td>Professionalism in Medical Education</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7010</td>
<td>Instructional Design and Educational Technology</td>
<td>3</td>
</tr>
<tr>
<td>MQE 7011</td>
<td>Qualitative Research in Medical Education</td>
<td>3</td>
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<td>MQE 7012</td>
<td>Quantitative Research in Medical Education</td>
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</tr>
<tr>
<td>MQE 7013</td>
<td>Workplace-Based Learning</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>42</td>
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</table>

MQE7001
Research Methodology in Medical Education (3 credits)

Learning Outcomes

At the end of this course, students are able to have:
1. Compare strengths and limitations of qualitative, quantitative and mixed-method design research in a collective effort.
2. Demonstrate skills in reviewing literature.
3. Generate problem statement, research objectives and conceptual framework based on literature review.
4. Develop appropriate research design and methodology to achieve research objectives in an ethical manner.

Synopsis

Students will explore qualitative, quantitative and mixed-method research in medical education. At the beginning, students will be introduced to conceptual framework of an education research. Then, students learn to construct a researchable problem in health care training institutes which leads to the conceptions of research objectives and questions. Next, for qualitative paradigm, students will discuss the qualitative inquiry, data collection techniques, reliability and validity and data analysis. For quantitative paradigm, hypotheses, sampling, research designs, instruments, reliability and validity will be discussed. Students will be also introduced to mixed-method design research and its differences with quantitative and qualitative research. As the course progresses, students will in prepare and present a research proposal. Ethical issues on conducting a research will also be discussed.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%
MQE7002
Research Project (12 credits)

Learning Outcomes

At the end of this course, students are able to:
1. Compose a research report (not exceeding 30,000 words) which includes (at least) a chapter on the introduction of the study, a chapter on literature review, a chapter on theoretical framework and conceptual framework for a study, a chapter on methodology, a chapter on original findings and discussions and a chapter on conclusions and implications of the study.
2. Cite sources appropriately in the students’ research report.
3. Integrate latest research findings in the students’ research reports.

Synopsis

Students will practice as novice researchers and prepare themselves for future job prospects such as academicians, researchers and consultants in public, private, non-profit organisations or non-government organisations. Students will carry out steps in the process of research: identifying a research problem, reviewing the literature, specifying a purpose and research questions or hypotheses, collecting quantitative/qualitative data, analysing and interpreting quantitative/qualitative data, reporting and evaluating research. It requires commitments from both students and their supervisor.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQE7003
Curriculum Development (3 credits)

Learning Outcomes

At the end of this course, students are able to:
1. Explain the principles of curriculum development.
2. Analyse strengths and limitations in selected curriculum models.
3. Analyse existing curriculum structure in the students’ institution without guidance from the instructors.
5. Give examples of ethical activities which can be used to evaluate the academic programme at the students’ institution.

Synopsis

Students will explore fundamentals of an academic programme, which are the curriculum, assessment and evaluation. Firstly, students are exposed the principles of curriculum design. Subsequently, the course exposes students to curriculum theories and various models of curriculum development (e.g. Tyler model, Taba model, the product model; process model). Next, steps in developing a curriculum will be discussed (e.g. from need assessment to programme evaluation). Students are also exposed to the concept of spiral curriculum and integrated curriculum. Secondly, students are introduced to principles of assessment and various assessment tools in terms of (but not limited to) reliability and validity. Lastly, students are introduced to programme evaluation for medical schools including internal and external evaluation. As the course progresses, students will analyse current curriculum, assessments and evaluation activities in their own healthcare training institutes. As the course progresses, ethical issues will be discussed.
Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7004
Teaching Methods in Medical Education (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Present a micro teaching.
2. Apply effective teaching strategies to promote meaningful learning.
3. Discuss pedagogical content knowledge within workplace.

Synopsis
Students will explore pedagogical content knowledge in medical education. Students will be introduced to various teaching strategies (including simulative teaching aids). Focus will be upon issues such as to attract attentions from learners at the beginning of a teaching session (induction set), to promote meaningful learning (problem-based learning, inquiry-based learning and cooperative learning) during the teaching session, and to summary the learning outcomes at the end of the teaching session. Students learn to develop lesson plans by applying learning theories. As the course progresses, students will be involved hands-on activities such as microteaching. Students will receive recommendations from peers.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7005
Concepts of Learning (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Relate the findings with theoretical framework of the study.
2. Discuss the development in the theory of learning.
3. Develop a small scale study to investigate learners’ learning processes and/or outcomes by applying at least one learning theory as theoretical framework of the study.

Synopsis
Students will explore various theories of learning (including but not limited to behaviourism, cognitivism, constructivism, neuroscience, multiple intelligence). Through discussing the development of learning...
theories, students will recognise their importance and applications in teaching and learning practices. As theories are abstract ideas, students will identify the applications in medical schools. As the course progresses, students will design a small scale study on real learners. The concept of theoretical framework of a study will be discussed. Theoretical framework is an essential element in an education research. Any intervention for students should be based on learning theories as to avoid using intuition.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7006
Assessment and Evaluation (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Develop valid and reliable assessments.
2. Analyse validity and reliability of three selected assessment tools.
3. Evaluate an educational programme which has been published in a high impact journal.

Synopsis
Students will explore theories of educational measurement and assessment. Students will learn the development, administration and marking of assessments, as well as analysing the validity and reliability of the assessments. Students will be exposed to philosophy and rationales of the “assessment for learning”. Next, students will learn to conceptualise relationships between program development and its program evaluation. Students will apply previous learnt knowledge and skills in developing an evaluation tool in order to evaluate an actual educational programme.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7007
Management and Leadership in Medical Education (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Discuss principles of management and leadership in the context of medical education.
2. Apply existing and emerging research-informed knowledge of educational leadership within workplace.
3. Analyse future directions in terms of quality assurance of medical students.
4. Discuss educational management and leadership theories within workplace.
Synopsis
Students will explore the concept of educational management and leadership. Students will learn to develop critical understanding of organisation and approaches to promote changes in the organisation. Existing (for example but not limited to interprofessional education, community of practice) and emerging trends in medical curriculum will be discussed as to study how to decide on policies based on evidence. Lastly, students will analyse latest information in order to recommend quality assurance of healthcare training.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7008
Clinical Teachers (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Present a micro teaching in the clinical setting.
2. Differentiate learners’ needs in terms of acquisition of skills and knowledge between clinical and pre-clinical settings.
3. Discuss teaching strategies and aids for the clinical setting based on appropriate learning theories.
4. Discuss a learning-friendly environment including (but not limited to) learners-teachers’ dynamics to promote the acquisition of skills and knowledge in clinical setting.

Synopsis
The course is designed for physicians who envision a career of education. Students will learn to develop the skills required to become clinical teachers and mentors for younger generations of physicians. To be able to engage in the course effectively, students are exposed to the significant role of professional values of clinical teachers. Next, students learn to differentiate needs of learners in terms of acquisition of skills and knowledge between clinical and pre-clinical settings. Students will learn to apply teaching strategies and aids in clinical setting based on appropriate learning theories. Lastly, students learn to supervise learners’ acquisition of skills and knowledge in the clinical setting, as well as creating a learning-friendly environment.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQE7009
Professionalism in Medical Education (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Evaluate methods employed to instil medical professionalism.
2. Evaluate methods to assess professionalism in medical context.
3. Discuss the definitions and elements of medical professionalism.
4. Produce a reflection on learner’s own experiences of professionalism as a medical practitioner and educator.

Synopsis
Students will explore the concepts of medical professionalism. Students will learn the definitions and elements of medical professionalism. Students will learn to evaluate the methods employed to instill medical professionalism. Later, students will learn to evaluate the methods to assess professionalism in the medical context. Lastly, students will reflect on their own experiences of professionalism as a medical practitioner and educator.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

**MQE7010**
**Instructional Design and Educational Technology (3 credits)**

Learning Outcomes

At the end of this course, students are able to:
1. Describe instructional design theories.
2. Demonstrate latest educational technologies using instructional design theories.
3. Explain implications of instructional design and education technology in medical education.
4. Critique a lesson plan based on concepts of instructional design.

Synopsis
Students will learn concepts of instructional design and applications of latest educational technologies (for instance, but not limited to learning management system, e-learning, smart devices and social networks) in teaching and learning of medical education. As students have acquired the concepts, they apply and design instructional strategies and materials.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%
MQE7011
Qualitative Research in Medical Education (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Relate findings with theoretical framework and conceptual framework of the qualitative study.
2. Write qualitative findings and discussions for academic papers.
3. Demonstrate skills in analysing qualitative data.

Synopsis
Students will learn advanced research skills after they have acquired basic knowledge and skills in research. The course is recommended for students who wish to conduct qualitative research for their research projects. Students will collect authentic/actual data in the learning of analysing and interpreting qualitative data. Next, students will learn to relate findings of their studies with theoretical framework and conceptual framework. Lastly, students will practice to write findings and discussions for academic papers. As the course progresses, students will be encouraged to apply knowledge and skills learnt on their research projects.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQE7012
Quantitative Research in Medical Education (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Relate findings with theoretical framework and conceptual framework of the quantitative study.
2. Write quantitative findings and discussions for academic papers.
3. Demonstrate skills in analysing quantitative data.

Synopsis
Students will learn advanced research skills after they have acquired basic knowledge and skills in research. The course is recommended for students who wish to conduct quantitative research for their research projects. Authentic/actual data will be used in the teaching of analysing and interpreting quantitative data, both univariate and multivariate data and in terms of descriptive and inferential analyses. Parametric and non-parametric tests will be introduced, for example but not limited to, normality tests (e.g. Kolmogorov-Smirnov), correlations (e.g. Pearson, Spearman), comparing means (e.g. t-tests, ANOVA, Mann–Whitney U, Kruskal–Wallis), regression (e.g. linear regression, logistic regression) and categorical data (e.g. chi-square). Next, students will learn to relate findings of their studies with theoretical framework and conceptual framework. Lastly, students will practice to write findings and discussions for academic papers. As the course progresses, students will be encouraged to apply knowledge and skills learnt on their research projects.

Main Reference
Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQE7013
Workplace-Based Learning (3 credits)

Learning Outcomes

At the end of this course, students are able to:
4. Identify the tasks performed by medical educationists in the workplace.
5. Reproduce selected tasks performed by the medical educationists in the workplace.
6. Write report/s to reflect on the tasks performed, lessons learned and future plans.

Synopsis
All students are encouraged to take this course as to gain workplace experience. Students will be placed at a selected medical education office/centre/department/unit. In rotations, a student will be attached to an academic and/or administrative officer to observe the routine and specific tasks. Students are required to identify the tasks performed by medical educationists in the workplace and have opportunities to reproduce these tasks whenever applicable. Examples (but not limited to) include curriculum review meetings, blueprinting an assessment, analysing and reporting evaluation of teaching and learning sessions. Students will document their observations and reflections (i.e., tasks performed, lessons learned and future plans) for their continuing professional development.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -
## Master of Medical Education Programme Schedule

<table>
<thead>
<tr>
<th>Special Semester</th>
<th>Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester II</strong></td>
<td>(i) End of Semester II</td>
</tr>
<tr>
<td>- A research project of six (6) credits.</td>
<td></td>
</tr>
<tr>
<td>- Three (3) core courses, each of three (3) credit hours, totalling nine (9) credits; and</td>
<td></td>
</tr>
<tr>
<td>- Three (3) elective courses, each of three (3) credits, totalling nine (9) credits.</td>
<td></td>
</tr>
<tr>
<td><strong>Semester I</strong></td>
<td>(ii) End of Semester I</td>
</tr>
<tr>
<td>- Three (3) core courses, each of three (3) credit hours, totalling nine (9) credits and</td>
<td></td>
</tr>
<tr>
<td>- Three (3) elective courses, each of three (3) credits, totalling nine (9) credits.</td>
<td></td>
</tr>
</tbody>
</table>

Registration
(Admission Evaluation)
1. **Classification of Programme**

The Master of Medical Physics is a programme by coursework in which the credits for the research component comprises less than thirty (30) percent of the total credits for the whole programme of study. After completion of the relevant programme of study specified in this Schedule, a candidate shall be eligible for the award of the Master of Medical Physics degree.

2. **Entry Requirements**

   (1) Bachelor's Degree in physical or engineering sciences with a Cumulative Grade Average (CGPA) of at least 3.00 or its equivalent;

   or

   (2) Bachelor's Degree in physical or engineering sciences with a Cumulative Grade Average (CGPA) of at least 2.50 or its equivalent and at least five (5) years of relevant field experience;

   or

   (3) Equivalent qualification approved by the Senate from time to time.

**Language Requirement**

A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not in English language shall be required to:

   (1) Obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an Internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

   (2) Obtain a band of 6 for the International English Language Testing System (IELTS) (Academic).

**Other Requirements**

Satisfies the Department responsible for the candidate's program of study in an Entrance Assessment recognized by the Faculty.

3. **Duration of Study**

   (1) The minimum duration of study shall be two (2) semesters and one (1) special semester

   (2) The maximum duration of study shall be eight (8) semesters

4. **Structure of Programme**

   (1) The Master of Medical Physics programme by coursework comprises of forty-two (42) credits namely.

   (b) two (2) core courses, each of four (4) credits, totalling eight (8) credits;
(d) five (5) core courses, each of three (3) credits, totaling fifteen (15) credits; and;
(e) two (2) elective courses, each of two (2) credits, totaling four (4) credits; and
(f) a medical physics research project of fifteen (15) credits.

(2) Details of the courses offered are as approved by Senate from time to time on the
recommendation of the Faculty and candidates shall be informed of such details at the
beginning of each session.

(4) The lists of courses for the programme of Master of Medical Physics are provided in
List 1.

5. Registration

(1) Registration for the courses shall commence the week prior to the start of the relevant
semester.

(2) A candidate is required to register for at least six (6) credits in any semester except -

(a) in the final semester of his/her programme of study where he/she may register
for less than the number of credits stated above; or

(b) where the candidate has been permitted to withdraw from the semester
concerned.

(3) A candidate may only register for medical physics research project after he/she has
obtained at least ten (10) credits in the core courses.

6. Supervision

(1) The supervisor for a candidate shall be appointed when the area of research is
approved.

(2) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research

The area of research shall be determined before the candidate commences the research part
of his/her programme of study.

8. Submission

A candidate is required to submit his/her project report before the end of his/her maximum
period of candidature.

9. Examination for the Degree

(1) The Examination leading to the degree of Master of Medical Physics by coursework
shall consist of an examination or examinations in each of the courses prescribed for
the Master of Medical Physics degree programme as follows:

(a) two (2) core courses, each of four (4) credits, totalling eight (8) credits;

(b) five (5) core courses, each of three (3) credits, totaling fifteen (15) credits; and
(c) two (2) elective courses, each of two (2) credits, totaling four (4) credits; and

(d) a medical physics research project of fifteen (15) credits.

(2) Examination Components and Allocation of Marks

(a) Taught Courses

(iii) The components of the courses and the marks to be allocated to the components of the courses prescribed for the Examination shall be:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Maximum)</td>
</tr>
<tr>
<td>(A) End of Semester Exam</td>
<td></td>
<td>40%</td>
</tr>
<tr>
<td>(B) Continuous Assessment</td>
<td></td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 100%</td>
</tr>
</tbody>
</table>

This apply to the following courses:
MQA7003 Anatomy and Physiology
MQA7005 Applied Radiation Physics and Dosimetry
MQA7006 Radiobiology and Radiation Protection
MQA7007 Medical Imaging and Nuclear Medicine
MQA7008 Radiotherapy Physics

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Maximum)</td>
</tr>
<tr>
<td>(A) End of Semester Exam</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>(B) Continuous Assessment</td>
<td></td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 100%</td>
</tr>
</tbody>
</table>

This apply to the following course:
MQA 7002 Medical Physics Research Project

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Maximum)</td>
</tr>
<tr>
<td>(A) Continuous Assessment</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

100%

This apply to the following courses:
MQA7001 Research Methodology
MQA7004 Computing and Medical Informatics
MQA7009 Introduction to Practicum in Medical Imaging
MQA7010 Introduction to Practicum in Nuclear Medicine
MQA7011 Pengenalan kepada Practicum in Radiotherapy

(c) The Senate may on the recommendation of the Faculty, amend the allocation of marks for the components of a course for the Examination.

(4) Course Grade Requirements

Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.
(a) **Award of Degree**

No candidate shall be recommended for the award of the degree of Master of Medical Physics unless he/she has successfully completed all parts of the course and passed all the prescribed examination.

### List 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQA7001</td>
<td>Research Methodology</td>
<td>3</td>
</tr>
<tr>
<td>MQA7003</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>MQA7004</td>
<td>Computing and Medical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>MQA7005</td>
<td>Applied Radiation Physics and Dosimetry</td>
<td>3</td>
</tr>
<tr>
<td>MQA7006</td>
<td>Radiobiology and Radiation Protection</td>
<td>3</td>
</tr>
<tr>
<td>MQA7007</td>
<td>Medical Imaging and Nuclear Medicine</td>
<td>4</td>
</tr>
<tr>
<td>MQA7008</td>
<td>Radiotherapy Physics</td>
<td>3</td>
</tr>
<tr>
<td>MQA7009*</td>
<td>Introduction to Practicum in Medical Imaging</td>
<td>2</td>
</tr>
<tr>
<td>MQA7010*</td>
<td>Introduction to Practicum in Nuclear Medicine</td>
<td>2</td>
</tr>
<tr>
<td>MQA7011*</td>
<td>Pengenalan kepada Practicum in Radiotherapy</td>
<td>2</td>
</tr>
<tr>
<td>MQA7002</td>
<td>Medical Physics Research Project</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total** 42

* Select 2 of the 3 courses of 4 credits

**MQA7001**  
**Research Methodology (3 credits)**

**Learning Outcomes**

At the end of this course, students are able to have:

1. Defend a research proposal.
2. Develop a sound research methodology.
3. Identify the appropriate statistical analysis for different data scale

**Synopsis**

Knowledge of research planning related to medical physics as well as the necessary statistical methods.

**Main Reference**


**Assessment Weightage**

Continuous Assessment: 100%
Final Examination: -

**MQA7002**  
**Medical Physics Research Project (15 credits)**

**Learning Outcomes**

At the end of this course, students are able to:

1. Implement a substantial research-based project
2. Interpret data and research findings
3. Report research findings in written and verbal forms
Synopsis
A research project in the field of medical physics and related fields.

Main Reference
1. Peh WCG & Ng KH, Effective Medical Writing, University of Malaya Press, 2016.

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQA7003
Anatomy and Physiology (4 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Determine the anatomical structures in radiological images.
2. Combine the human anatomy and related physiology functions.
3. Form an effective communication with medical practitioners.

Synopsis
Anatomical and functional knowledge of the human body

Main Reference

Assessment Weightage
Continuous Assessment: 60%
Final Examination: 40%

MQA7004
Computing and Medical Informatics (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Identify terminology, organization, representation, and operations of a computer system
2. Identify terminology, organization, protocols and standards used in medical informatics
3. Solve biomedical related problems using computer programming, signal processing, image processing and artificial intelligence techniques...

Synopsis
Computer programming, signal and image processing, medical informatics.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQA7005
Applied Radiation Physics and Dosimetry (3 credits)

Learning Outcomes

At the end of this course, students are able to:
1. Interpret the principles of radiation physics, radioactivity, and interaction of radiation with matter.
2. Integrate the principles, quantities and units of radiation dosimetry.
3. Correlate radiation dose measurement findings to dose for staff or patients in hospitals.

Synopsis
Knowledge of the physical principle behind the use of radiation in the field of diagnostic and therapeutic medicine.

Main Reference

Assessment Weightage
Continuous Assessment: 60%
Final Examination: 40%

MQA7006
Radiobiology and Radiation Protection (3 credits)

Learning Outcomes

At the end of this course, students are able to:
1. To explain the radiobiological concepts and processes involved in the interaction of ionizing and non-ionizing radiation with living matter.
2. To identify the principles behind various radiation protection recommendations.
3. To practice radiation protection in hospitals.

Synopsis
Knowledge in biological changes and damage due to radiation, applications and practice of radiation protection.

Main Reference

Assessment Weightage
Continuous Assessment: 60%
Final Examination: 40%

MQA7007
Medical Imaging and Nuclear Medicine (4 credits)

Learning Outcomes

At the end of this course, students are able to:
1. Explain the concepts and principles of medical imaging and nuclear medicine.
2. Relate the theoretical basis with the clinical practice of medical imaging and nuclear medicine.
3. Interpret the results of basic quality assurance procedures for the general diagnostic and therapeutic modalities in medical imaging and nuclear medicine.

Synopsis
Provides understanding of radiation and its use in imaging and nuclear medicine related to medical physics.

Main Reference

Assessment Weightage
Continuous Assessment: 60%
Final Examination: 40%

MQA7008
Radiotherapy Physics (3 credits)

Learning Outcomes

At the end of this course, students are able to:
1. To apply the basic concepts and principles of radiotherapy physics.
2. To describe the theoretical basis needed for the clinical practice of medical physics in radiotherapy.
3. To discuss the need for and principles of quality control of equipment in radiotherapy.

Synopsis
Provides understanding of radiation and its use in radiotherapy related to medical physics.

Main Reference

Assessment Weightage
Continuous Assessment: 60%
Final Examination: 40%
MQA7009
Introduction to Practicum in Medical Imaging (2 credits)

Learning Outcomes

At the end of this course, students are able to:
1. To identify hazards in workplace that may pose a danger or threat to their safety of health, or that of others.
2. To apply theoretical principles of medical imaging physics into clinical practice.
3. Interpret the results of quality assurance procedures for the medical imaging modalities.

Synopsis
Applications in medical imaging physics, quality assurance for medical imaging and safety in workplace.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQA7010
Introduction to Practicum in Nuclear Medicine (2 credits)

Learning Outcomes

At the end of this course, students are able to:
1. To identify hazards in workplace that may pose a danger or threat to their safety of health, or that of others.
2. To apply theoretical principles of nuclear medicine physics into clinical practice.
3. Interpret the results of quality assurance procedures for the nuclear medicine modalities.

Synopsis
Applications in nuclear medicine physics, quality assurance for nuclear medicine and safety in workplace.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -
Pengenalan kepada Practicum in Radiotherapy (2 credits)

Learning Outcomes

At the end of this course, students are able to:
1. To identify hazards in workplace that may pose a danger or threat to their safety of health, or that of others.
2. To apply theoretical principles of radiotherapy physics into clinical practice.
3. Interpret the results of quality assurance procedures for the radiotherapy modalities.

Synopsis
Applications in radiotherapy physics, quality assurance for radiotherapy and safety in workplace.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

<table>
<thead>
<tr>
<th>Master of Medical Physics Programme Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special semester</td>
</tr>
<tr>
<td>Semester II</td>
</tr>
<tr>
<td>• A medical physics research project of eight (8) credits.</td>
</tr>
<tr>
<td>• One (1) core course, each of four (4) credits, totalling four (4) credits.</td>
</tr>
<tr>
<td>• One (1) core course, each of three (3) credits, totalling three (3) credits.</td>
</tr>
<tr>
<td>• A medical physics research project of seven (7) credits. A candidate may only register for medical physics research project after he has obtained at least ten (10) credits in the core courses; and</td>
</tr>
<tr>
<td>• Two (2) elective courses, each of two (2) credits, totaling four (4) credits.</td>
</tr>
<tr>
<td>• four (4) core courses, each of three (3) credits, totalling twelve (12) credits.</td>
</tr>
<tr>
<td>• One (1) core course, each of four (4) credits</td>
</tr>
<tr>
<td>Semester 1</td>
</tr>
<tr>
<td>Registration</td>
</tr>
<tr>
<td>(Admission Evaluation)</td>
</tr>
</tbody>
</table>

POSTGRADUATE HANDBOOK 2019/2020 | FACULTY OF MEDICINE, UNIVERSITY OF MALAYA | http://medicine.um.edu.my
Name of Programme: Master of Nursing Science
Mode: By Coursework
Faculty: Faculty of Medicine

1. Classification of Programme

The Master of Nursing Science programme is a coursework programme in which the credits for the research component comprises less than thirty (30) percent of the whole programme of study.

2. Entry Requirements

(1) A Bachelor’s degree in Nursing Science with a CGPA 3.0 and above or an equivalent qualification approved by the Senate; and

(2) Registered with the Malaysian Nursing Board and possess current practising license; and

(3) Possess a post basic course in clinical speciality which the duration of study should not be less than 6 months, or

(4) At least two years working experience in the relevant field.

Language Requirement

A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not in English language shall be required to:

(3) Obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an Internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

(4) Obtain a band of 6 for the International English Language Testing System (IELTS) (Academic).

3. Duration of Study

(1) The minimum duration of study shall be four (4) semesters.

(2) The maximum duration of study shall be eight (8) semesters.

4. Structure of Programme

(1) The Master of Nursing Science programme comprises of 42 credits.

(2) The core courses identified are as follows:

(a) Six (6) core courses each of three (3) credits, totalling eighteen (18) credits;
(b) One (1) core course of two (2) credits;
(c) Practicum in Nursing of ten (10) credits;
(d) Nursing Research Project I and II totalling nine (9) credits; and
(e) One (1) elective course each of three (3) credits.
(3) Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty and candidates shall be informed of such details at the beginning of each session.

(4) The list of courses for the programme of Master of Nursing Science is provided in List 1.

5. Registration

(1) Registration for the courses commence the week prior to the start of the relevant semester.

(2) A candidate is required to register for at least two (2) credits in any semester.

(3) A candidate may only register for Nursing Research Project I after he/she has passed MQD7001, MQD7004, MQD7005 and MQD7006.

(4) A candidate may only register for Nursing Research Project II after he/she has passed Nursing Research Project I.

6. Supervision

(1) The Faculty shall appoint at least one supervisor for each candidate for the research component. Supervisors for each candidate shall be appointed after the area of research is approved.

(2) The co-supervisor and/or consultant shall be appointed when required.

7. Title of Research

The area of research shall be determined before the candidate commences the research part of his/her programme of study.

8. Submission

A candidate is required to submit his/her Nursing Research Project II report before the end of his/her maximum period of candidature.

9. Examinations for the Degree

(1) The examination leading to the degree of Master of Nursing Science programme shall consist of an examination or examinations in each of the courses prescribed for the Master of Nursing Science degree programme as follows:

(a) six (6) core courses each of three (3) credits, totalling eighteen (18) credits;
(b) One (1) core course of two (2) credits;
(c) Practicum in Nursing of ten (10) credits;
(d) Nursing Research Project I and II totalling nine (9) credits; and
(e) One (1) elective course each of three (3) credits.

(2) Examination Components and Allocation of Marks

(a) Core courses and elective courses:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Continuous Assessment</td>
<td>30% - 40%</td>
</tr>
<tr>
<td>(ii) End of Semester Examination</td>
<td>60% - 70%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>
(b) Nursing Research Project I & II and Nursing Practicum

(i) Continuous assessment – 100%

(3) Course Grade Requirements

Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.

10. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Nursing Science unless he/she has completed all parts of the course, completed the minimum duration of study and has passed the prescribed Examinations.

**Master of Nursing Science Degree**

**List 1**

**Core Courses**

<table>
<thead>
<tr>
<th>CODE</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQD7001</td>
<td>Research Methodology in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>MQD7002</td>
<td>Nursing Research Project I</td>
<td>3</td>
</tr>
<tr>
<td>MQD7003</td>
<td>Nursing Research Project II</td>
<td>6</td>
</tr>
<tr>
<td>MQD7004</td>
<td>Qualitative Methods in Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>MQD7005</td>
<td>Medical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MQD7006</td>
<td>Statistical Computing</td>
<td>2</td>
</tr>
<tr>
<td>MQD7007</td>
<td>Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>MQD7008</td>
<td>Issues &amp; Trends in Nursing And Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MQD7009</td>
<td>Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>MQD7010</td>
<td>Nursing Practicum</td>
<td>10</td>
</tr>
<tr>
<td>MQD7011</td>
<td>Reflection in Nursing Practice*</td>
<td>3</td>
</tr>
<tr>
<td>MQD7012</td>
<td>Principle and Methods of Epidemiology*</td>
<td>3</td>
</tr>
</tbody>
</table>

*Choose only ONE

**TOTAL** | 42

Note:
1. The minimum passing grade is B.
2. A candidate must pass MQD7001, MQD7004, MQD7005 and MQD7006 before registering for MQD7002.
3. A candidate must also pass MQD7002 before registering for MQD7003.
MQD7001
Research Methodology in Nursing

Learning Outcomes

At the end of the course, students are able to:
1. Differentiate quantitative research process and the importance of quantitative research in nursing
2. Compare different quantitative research designs
3. Plan appropriate sampling, data collection and analyses methods according to research questions.
4. Critique research studies for evidence based practice.

Synopsis

In this course, the student will learn the definition of quantitative research, literature review, and research method, collection of data and analysis of quantitative research reports. This course will provide an overview on the quantitative research methodology in nursing. Practical reviews / critical analyses of quantitative research studies from international journals will be carried out by students.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%

MQD7002
Nursing Research Project I

Learning Outcomes

At the end of this course, the students are able to:
1. Critique literature
2. Develop one nursing research proposal in nursing specialty
3. Present the research proposal
4. Discuss the proposal during the presentation
5. Manage application process for ethical approval to ensure the research is undertaken ethically.

Synopsis

In this course, student is required to prepare one nursing research proposal. The research topics can be in any one of the nursing clinical specialty which will be beneficial to the nursing profession. The student has to present her research proposal and submit for ethical approval.

Main Reference


Assessment Method
Continuous Assessment: 100%

MQD7003
Nursing Research Project II

Learning Outcomes

At the end of the course, the students are able to:
1. Conduct one nursing research project in nursing education, management or clinical.
2. Analyse research data.
3. Produce a research project paper and a manuscript.
4. Disseminate the research findings.
5. Produce a manuscript for publication.

Synopsis

In this course, student is required to carry out one nursing research project. The research can be carried out in any one of the nursing specialties. The specialties can be on nursing education, management or clinical practice. The student is encouraged to carry out a research which will be beneficial to the nursing profession. The findings of the research must be written as a research report and manuscript.

Main Reference


Assessment Method
Continuous assessment: 100%

MQD7004
Qualitative Methods in Nursing Research

Learning Outcomes

At the end of this course, students are able to:
1. Differentiate qualitative and quantitative research
2. Compare different qualitative research design
3. Analyze ethical issues in qualitative research
4. Plan qualitative data collection and qualitative data analysis
5. Critique qualitative research study

Synopsis

This course will focus on several qualitative approaches in health/nursing research. Topics will include various methodologies of quality research approaches and strategies related to qualitative data collection and data analysis. Common and current qualitative research which is applicable to nursing such as social critical theory, ethnography, feminist theory, grounded theory, phenomenological
approaches and post-structuralism will be explored. Students will be expected to collect and analyse data qualitatively.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%

MQD7005
Medical Statistics

Learning Outcomes

At the end of this course, students are able to:
1. Explain the various statistical methods used in medical practice.
2. Determine the appropriate statistical method in medical practice.
3. Interpret the analysis of finding.

Synopsis

This course will cover basic statistical techniques that are important for analysing data arising from nursing research. Major topics include descriptive statistics, elements of probability, introduction to estimation and hypothesis testing, nonparametric methods, analysis of variance, and elements of study design. The concept and applications of statistical methods are stressed. At the end of the course, the students will also have the knowledge of the need for non-parametric statistical techniques as alternatives to parametric methods; acquired skills in their practical implementation and have an understanding of the underlying theory.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%
MQD7006
Statistical Computing

Learning Outcomes

At the end of this course, students will be able to:
1. Construct a data file using data sets.
2. Use appropriate statistical methods to analyse the distribution of data.
3. Apply appropriate statistical methods to present the research data.
4. Interpret the test results accurately.

Synopsis
This course is to expose students with the commonly uses statistical program and exercises of applying statistical procedures. It also provides students opportunity to interpret findings of statistical analysis.

Main Reference


Assessment Methods
Continuous Assessment: 40%
Final Examination: 60%

MQD7007
Health Assessment

Learning Outcomes

At the end of this course, student is able to:
1. Develop a conceptual framework for conducting nursing assessment.
2. Discuss the legal and ethical aspect in health assessment.
3. Explain the steps in performing health assessment holistically for patients at any stage of their life span.
4. Apply clinical decision making and critical reasoning skill in health assessment.
5. Identify patients’ problems based on history taking and physical examination findings scientifically.

Synopsis
This course will discuss functions of health framework and nursing diagnoses. The health assessment process presented will be based on nursing objectives which will focus on data collection and analysis related to the individual’s capabilities, physical status, actual and potential responses to the health problems. The student will also be exposed to the importance of critical thinking, clinical reasoning, decision making and clinical evaluation. The emphasis is on competency in assessing, recognising and managing multiple variables within patient care.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%

MQD7008
Issues and Trends in Nursing and Health Care

Learning Outcomes

At the end of this course, students are able to:

1. Examine current issues in nursing as they relate to health care trends.
2. Analyze critically current nursing educational and professional practice.
3. Discuss appropriate nursing measures toward current issues from an economic, legal and socio-political perspective.
4. Explain the nursing management, leadership and legal issues concerning advanced practice preparation.

Synopsis

This course will discuss on nursing issues / trends which are emergent in clinical practice. This course aims to focus on challenges in the current roles, functions and status of nursing in the context of changes in the health care system. Building upon the students’ knowledge and experiences, this course will discuss relevant sociological, ethical, political and economic issues as well as the nurses’ roles in this context. Reviews / critical analyses of relevant issues will be identified. Students will carry out individual / group work and written report / presentations as part of learning. The students will integrate critical thinking, clinical reasoning, decision making and evaluation skills in the learning process.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%
MQD7009

Health Promotion

Learning Outcomes

At the end of this course, students are able to:
1. Explain concepts, models and theories of health promotion and epidemiology.
2. Discuss strategies and policy related health promotion and epidemiology.
3. Analyze issues and factors influencing planning and development in health promotion.
4. Carry out health promotion activities.

Synopsis

Health promotion is now a central force in the new public health movement in Malaysia and it is considered as essential aspect of the work of all health care professionals. This course is intended to introduce the students to a wide range of concerns on the theory and practice of health promotion. Relevant sociology, ethical, political, psychological and economics issues will be discussed. It will give students the opportunity to consider broad issues in health promotion as well as nurses’ role.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%

MQD7010

Nursing Practicum

Learning Outcomes

At the end of this course, students are able to:
1. Discuss the advanced patient care and roles and responsibilities of an advanced practitioner according to the clinical specialty.
2. Demonstrate specialist nursing skills and competencies according to the clinical specialty.
3. Construct specific patient care protocols or guidelines based on problems or needs identified in the clinical area.
4. Critique the nursing practice/patient care system in the current health context through application of the principles of critical reflection and evidence-based nursing practice.
5. Practice the principles of team work, communication and leadership skill in patient care management.

Synopsis

This course is designed to enable nurse practitioners draw on and reflect from their clinical experience to critically explore nursing and healthcare practices in greater breadth and depth. Based on student’s clinical speciality, an individualised learning contract will be formulated to promote further development.
of the student's knowledge and competency. Fundamental to this course is the integration of clinical knowledge into practice and to further develop student's potential in advancing their field of practice.

Main Reference


Assessment Methods
Continuous Assessment: 100%

MQD7011
Reflection in Nursing Practice

Learning Outcomes

At the end of this course, students are able to:
1. Write professional journal regarding their latest learning experiences
2. Identify specific situation from the clinical area as a case for reflection
3. Apply reflection process in learning situation.
4. Identify main concept / theory related to reflection for application of each learning situation.

Synopsis

Student will acquire knowledge regarding the journaling concepts. They will be guided to keep professionals journal. Student will need to keep one study log and use the log to identify specific situation and the significant in basic reflection by group studying. The course content will involve the user of case study and reflection process.

Main Reference


Assessment Methods
Continuous Assessment: 40%
Final Examination: 60%

MQD7012
Principle and Methods of Epidemiology

Learning Outcomes

At the end of the course, students are able to:
1. Explain the principles and concepts of epidemiology.
2. Integrate the knowledge of methods in epidemiology in conducting nursing research.
3. Explain the use of epidemiology research design in clinical research.
4. Evaluate critically various clinical research designs.

Synopsis

This course gives the student opportunity to learn about the principle and method in epidemiology. The first part of the course introduces the principle and concepts that include principles of prevention and control, introduction to selected measures of health and disease occurrence, standardization, disease surveillance, epidemic management and screening test. Methods of epidemiology are taught in the second part of the course, students will learn about the study designs, measurements of risks, and errors in epidemiological studies, causation and association.

Main Reference


Assessment Methods

Continuous Assessment: 40%
Final Examination: 60%
Name of Programme : Master of Public Health  
Mode : Coursework  
Faculty : Faculty of Medicine 

1. Classification of Programme

The Master of Public Health programme is a coursework programme in which the credits for the research component comprises less than thirty (30) percent of the whole programme of study. After completion of the relevant programme of study specified in this Schedule, a candidate shall be eligible for the award of the Master of Public Health degree.

2. Entry Requirements

(1) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University or an equivalent medical qualification approved by the Senate; and

(2) At least one year of post-registration general medical experience approved by the Senate; OR

(3) The degree of Bachelor of Dental Surgery of the University;

(4) The degrees of Bachelor of Allied Health from University;

(5) A Bachelor's degree of the University with at least a second class honours in a relevant discipline; or

(6) An equivalent qualification approved by the Senate; and

(7) At least one year of relevant work experience in clinical or health

Language Requirement

A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not in English language shall be required to:

(1) Obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an Internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

(2) Obtain a band of 6 for the International English Language Testing System (IELTS) (Academic).

3. Duration of Study

(1) The minimum duration of study shall be two (2) semesters and one (1) special semester

(2) The maximum duration of study shall be eight (8) semesters.

4. Structure of Programme
The Master of Public Health programme comprises forty (42) credits namely:

1. Seven (7) core courses each of three (3) credits, totalling twenty-one (21) credits;
2. One (1) core course that leads to one (1) Research Project of nine (9) credits;
3. Six (6) elective courses each of two (2) credits, totalling twelve (12) credits.

Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty and candidates shall be informed of such details at the beginning of each session.

The list of courses for the programme of Master of Public Health is provided in List 1 & List 2.

5. Registration

1. Registration for the courses of study shall commence the week prior to the start of the relevant semester.
2. A candidate is required to register for at least three (3) credits in any semester except where the candidate has been permitted to withdraw from the semester concerned.

6. Attendance

During his programme of study a student may be permitted to undertake part of his training in other institutions or agencies recognised by the Faculty.

7. Supervision

1. The Faculty shall appoint at least one supervisor for each candidate not later than two months after the registration of the candidate.
2. The co-supervisor and/or consultant shall be appointed when required.
3. A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The title of the Research Project for a candidate shall be determined by the Department responsible for the candidate's programme of study not later than two months prior to the commencement of the research project.

9. Submission

A candidate is required to submit his research papers not later than one month before the end of the relevant semester for examination.

10. Examinations for the Degree

The Examination leading to the degree of Master of Public Health shall consist of an examination or examinations in each of the courses prescribed for the Master of Public Health degree programme as follows:

1. Seven (7) core courses each of three (3) credits, totalling twenty-one (21) credits;
(2) One (1) core course that leads to one (1) Research Project of nine (9) credits;

(3) Six (6) elective courses each of two (2) credits, totalling twelve (12) credits;

(4) Examination Components and Allocation of Marks

(a) Taught Courses
The components of the taught courses and the marks to be allocated to the components of the courses prescribed for the Examination shall be:

<table>
<thead>
<tr>
<th>Component</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Continuous Assessment</td>
<td>50-100%</td>
</tr>
<tr>
<td>(ii) End of Semester Examination</td>
<td>0-50%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

(b) Research Papers
The marks allocated to the components of the research papers shall be 100% on submission of the written report.

(c) The Senate may on the recommendation of the Faculty amend the allocation of marks for the components of a course for the Examination.

(6) Course Grade Requirements
Course grades are subjected to regulations prescribed in the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.

11. Award of Degree
No candidate shall be recommended for the award of the Degree of Master of Public Health unless he/she has completed all parts of the course and has passed the prescribed Examinations.

List 1: Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQB7001</td>
<td>Research Methodology</td>
<td>3</td>
</tr>
<tr>
<td>MQB7002</td>
<td>Research Project</td>
<td>9</td>
</tr>
<tr>
<td>MQB7003</td>
<td>Principles of Family Health</td>
<td>3</td>
</tr>
<tr>
<td>MQB7004</td>
<td>Society, Behaviour and Health</td>
<td>3</td>
</tr>
<tr>
<td>MQB7005</td>
<td>Principles and Methods of Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>MQB7006</td>
<td>Principles of Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>MQB7029</td>
<td>Management in Health</td>
<td>3</td>
</tr>
<tr>
<td>MQB7034</td>
<td>Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

List 2: Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQB7010</td>
<td>Epidemiology of Diseases in Malaysia</td>
<td>2</td>
</tr>
<tr>
<td>MQB7012</td>
<td>Producing Better Evidence</td>
<td>2</td>
</tr>
</tbody>
</table>
MQB7001  
Research Methodology (3 Credits)

Learning Outcomes  
At the end of the course, the candidate is able to:  
1. Formulate good research questions.  
2. Apply appropriate study designs and methodology for a selected research question.  
3. Produce a research proposal in a scientific manner.

Synopsis  
The students will be introduced to the steps involved in the research process. Critical appraisal of scientific articles produced by other researchers will provide 'hands on' experience for students to understand the methodological issues in the conduct of the studies. With the above mentioned knowledge, students will be able to increase their expertise in appraising scientific articles and producing research proposal in a scientific manner.

Main References  

Assessment Methods  
Continuous assessment (100%)

MQB7002  
Research Project (9 Credits)

Learning Outcomes  
At the end of the course, the candidate is able to:  
1. Conduct all steps of research process
2. Develop a research proposal
3. Collect data
4. Manage and analyse data
5. Write up the report

Synopsis
The course takes the candidate through the steps of research process and provides the candidate a hands-on experience to develop a research project, carry out the research and write up the report.

Pre-Requisite
Candidate must have successfully completed Research Methodology (MQB7001)

Main References

Assessment Methods
Continuous assessment: 100%

Note: To be registered in 2 semesters (Semester 2 + special semester)

MQB7003
Principles of Family Health (3 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the Family Health concepts and principles in the promotion of health in the population.
2. Illustrate in depth, methods of assessing the population health status in the community using various health statistics.
3. Solve the problems faced by population subgroups e.g. women, children, adolescents, disabled and elderly; and the recommended strategies needed.

Synopsis
This course is an introduction to the principles of Family Health. The course will cover basic programmes of reproductive health such as safe motherhood and high-risk approach in MCH care. It will also include child survival and development strategies and common conditions seen in mothers and children. Nutrition topics and wellness promotion programmes will also be covered.

Main References
5. Lawrence S.Neinstein. 2007. Adolescent health care : a practical guide (5th eds). Lippincott Williams & Wilkins

Assessment Methods
Continuous assessment (seminar presentation): 50%.
Final examination: 50%

MQB7004
Society, Behaviour and Health (3 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the influences of society and behaviour on health.
2. Illustrate models of health behaviour of individuals and community.

Synopsis
This course will discuss the influence of behaviour, cultural and social class on health and illness. Issues of socialization, social control, deviance and stigma will also be covered. Models of health behaviour in the individual and community levels will be covered. The planning, managing and research on health promotion programs will also be discussed.

Main References

Assessment Methods
Continuous assessment (seminar presentation): 50%
Final examination: 50%

MQB7005
Principles and Methods of Epidemiology (3 Credits)

Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply the epidemiological concepts to explain disease occurrence and transmission
2. Apply the principles of prevention and control to manage health problems
3. Demonstrate ability to calculate population statistics and measures of association

Synopsis
This course introduces candidates to the principles and methods of epidemiology which will form the basis to other courses in epidemiology. This course also demonstrates the applications of epidemiologic principles and methods.

Main Reference

Assessment Methods
Continuous assessment: 50%
Final examination: 50%

MQB7006
Principles of Biostatistics (3 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Demonstrate an understanding of Biostatistics concepts and its principles in population health.
2. Apply the appropriate statistical techniques to analyse data from public health research.
3. Interpret and communicate the results of statistical analyses accurately and effectively for evidence-based public health.

Synopsis
This will cover basic statistical techniques that are important for analyzing data arising from public health research. Major topics include descriptive statistics, elements of probability, introduction to estimation and hypothesis testing, nonparametric methods, analytical techniques for categorical data, regression analysis, analysis of variance, and elements of study design. The concept and applications of statistical methods are stressed. At the end of the module, the candidate will also have the knowledge of the need for non-parametric statistical techniques as alternatives to parametric methods; acquired skills in their practical implementation and have an understanding of the underlying theory.

Main References

Assessment Methods
Continuous assessment: 60%
Final examination: 40%

MQB7029
Principles of Management in Health (3 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Apply the concepts on management functions and principles and able to utilise their application in any healthcare programmes.
2. Review current health management practise based on individual and group experiences.
3. Able to solve problem regarding current health management practise based on individual and group experiences.

Synopsis
This course is designed to expose the student the basic principles of Management and its application to the Health Services delivery. It will also expose issues in management as applicable to Primary Health Care and Hospitals.

**Main References**

**Assessment Methods**
Continuous assessment: 50%
Final examination: 50%

**MQB7034**
Environmental Health (3 Credits)

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Describe environmental health issues
2. Relate environmental health issues to individual and public health
3. Solve basic environmental health issues.

**Synopsis**
This course is an overview of the environmental health issues in the local and global perspective, addressing the current and future issues. The course covers core topics that prepare students to understand and address environmental health issues; air pollution; water pollution; housing environments and health impact assessment.

**Main References**

**Assessment Methods**
Continuous assessment: 50%
Final examination: 50%

**ELECTIVE COURSES**

**MQB7010**
Epidemiology of Diseases in Malaysia (2 Credits)
Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the characteristics of communicable (CDs) and non-communicable diseases (NCDs) diseases.
2. Illustrate a network factors that contribute to the emergence of NCDs and re-emergence of CDs.
3. Solve problem in term of prevention and control measures for CDs and NCDs.

Synopsis
This course provides a broad introduction to the epidemiology, prevention and control of the major communicable (including emerging and re-emerging) diseases. Other emphasis is epidemiology of major non-communicable diseases and their methods of prevention and control.

Main References

Assessment Methods
Continuous assessment: 50%
Final examination: 50%

MQB7012
Producing Better Evidence (2 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe method to produce scientific evidence
2. Illustrate method to produce scientific evidence
3. Solve problems using the scientific method “Systemic review/meta-analysis

Synopsis
Introduction to performing systematic search and critically appraising the literature / evidence. Systematic reviews and meta-analyses produce the highest hierarchy of evidence should be used to inform clinical decision-making and health care policy. The principles of meta-analytic statistical methods are reviewed, and the application of these to data sets is explored. Application of methods includes considerations for clinical trials and observational studies. The use of meta-analysis to explore data and identify sources of variation among studies is emphasized, as is the use of meta-analysis to identify future research questions

Main References
**Assessment Methods**
Continuous assessment : 50%
Final examination: 50%

**MQB7014**
Health Economics (2 Credits)

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Describe the economic concepts to the evaluation of performance of a health care system
2. Illustrate appropriate economic evaluation tool to be applied to different problems of resource allocation, management, evaluation and planning in health services.
3. Solve the problem related strengths and weaknesses of different health financing mechanisms and different provider payment methods

**Synopsis**
This course is designed to introduce students to the aims, concepts, theories and methods of economic analysis as well as to give an appreciation of how these methods are being applied to problems of resource allocation, management, evaluation and planning in health services.

**Main References**

**Assessment Methods**
Continuous assessment : 50%
Final examination: 50%

**MQB7015**
Law and Health (2 Credits)

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Describe the principle of medical ethics, Malaysian federal system & health governance.
2. Apply the concept of medical ethics in Doctor-Patient relationship.
3. Apply the public health laws in implementing health care programme

**Synopsis**
This course is designed to provide the candidate with the basic knowledge of legal issues related to medical and public health practice. It will introduce the working of a legal system in a country and explore current issues in medical ethics, Doctor – Patient relationship and Public Health Law.

**Main References**

**Assessment Methods**
Continuous assessment (seminar): 50%,
Final examination: 50%

**MQB7016**
Women, Child and Adolescent Health (2 Credits)

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Identify the leading public health issues that are facing men, women, child and adolescents
2. Elaborate the factors affecting men, women, child, and adolescent health.
3. Apply the concepts and principles of family health in the management of public health issues facing men, women, child and adolescents

**Synopsis**
This course introduces the principles of women, child and adolescent’s health. The course will include the women’s reproductive health, chronic conditions among women as well as infertility and contraception. The children’s growth and development, immunization and breast-feeding and the common diseases of the children will be covered. High risk behaviour and counselling of children and adolescents will be discussed.

**Main References**

**Assessment Methods**
Continuous assessment (seminar presentation): 50%
Final examination: 50%

**MQB7026**
Public Health Nutrition (2 Credits)

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Evaluate methods of nutritional assessment for all age groups.
2. Analyse the importance of nutrition in health promotion and disease prevention.
3. Propose appropriate strategies to improve community nutrition programs in the country you serve.

**Synopsis**
The course will focus on the nutrition related problems throughout the life cycle, various methods of nutritional assessments, public health nutrition approach in health promotion and primary prevention of diseases as well as community programs in nutrition carried out in the country. Current nutritional issues affecting health will also be discussed.

Main References

Assessment Methods
Continuous assessment: 50%
Final examination: 50%

MQB7027
Qualitative Inquiry in Public Health (2 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Practice of qualitative research and produce a qualitative research proposal
2. Perform qualitative interview and data analysis.
3. Critically appraise of qualitative research in the literature

Synopsis
This unit is mainly concerned with the development of capacities and skills in using a range of qualitative research techniques in public health. It is expected that the students will be familiar with the theoretical foundations of qualitative research and common methods of data collection, sampling techniques, validity, ethical issues, and data analysis. The unit also seeks to enhance students’ knowledge and skills to critically assess qualitative research by the end of the course.

Main References

Assessment Methods
Continuous assessment: 100%
At the end of the course, the candidate is able to:
1. Analyse the adverse effects of chemical, physical, biological, ergonomics and psychosocial hazards;
2. Evaluate the adverse effect of hazards to individual health and public health;
3. Conduct basic health risk assessment
4. Communicate health risk to specific audience.

Synopsis
The course focuses on the three components of health risk assessment: which is risk assessment, risk management and risk communication. It will include overview on methods and modalities for qualitative and quantitative risk assessment in the workplace. The courses will stress on the assessment of health risk related to exposure to chemicals, physical, biological, ergonomics and psychosocial hazards.

Main References

Assessment Methods
Continuous assessment: 100%

MQB7030
Comparative Health System (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the framework, actors and services of different health systems
2. Identify the challenges of health care delivery to achieve universal coverage
3. Evaluate different component of health systems

Main references:
1. Comparative Health System: Global Perspectives; James A. Johnson; Carleen Stoskopf; Wiley 2011.
2. Global Health System: Comparing Strategies for Delivering Health Services; Margie Lovett-Scott and Faith Prather; Michael Brown Publisher; 2012.

Synopsis
This course provides the knowledge and assessment of health systems.

Assessment Methods
Continuous assessment: 100%

MQB7031
Global Health (2 credits)
Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the concepts and theoretical perspectives in global health
2. Illustrate the governance of global health including the key institutions involved
3. Solve the problem about understanding of concepts, theory and governance to analysis of current and emerging issues in global health

Main references
1. Global Health 101 (Essentials Public Health); Richard Skolnik; Jones and Bartlett, USA; 2015
2. Comparative Health System: Global Perpectives; James A. Johnson; Carleen Stoskopf; Wiley 2011.
3. Global Health Care: Issues and Policies (Holtz, Global Health Care); Carol Holtz, 2012
4. Introduction to Global Health; Kathryn H. Jacobsen; Jones and Bartlett, USA; 2013

Synopsis
This course is designed to increase student understanding of current and emerging transnational issues in population health through application of concepts and theories and through an understanding of governing structure of global health. Topics include health impact of global climate changes, trade liberalisations and increased population mobility.

Assessment Methods
Continuous assessment (seminars and written assignments): 100%

MQB7032
Primary Health Care (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe the principles and practice of
2. Apply the participatory approach of delivering PHC services in line with the concept of Universal Health Coverage (UHC).
3. Demonstrate the integration of health care services within the concept of PHC.

Main references:
1. Advanced Health Assessment & Clinical Diagnosis in Primary Care; Joyce E. Dains; Linda Ciofu Baumann; Elsevier Publication, 5th Edition; 2015.
2. Current Practise Guidelines in Primary Care; Joseph S. Esherick, Daniel S. Clark, Lange, 2015

Synopsis
This course is designed to expose the students the basic principles of the delivery of health services to the disadvantaged community. It will also expose issues in community empowerment and the development of partnering relationships between the communities and the providers of care.

Assessment Methods
Continuous assessment: 100%

MQB7033
Social Health Determinants (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Examine pathways through which social determinants operate in different population groups.
2. Apply the major conceptual and measurement issues in conducting research into the effects of key social factors on individual, community and population health.
3. Determine policy responses and interventions to promote health or reduce health inequalities through structural interventions.

Main references:
1. Social Determinants of Health: A Comparative Approach; Alan Davidson; Oxford University Press; 2015

Synopsis
Social epidemiology is the study of the distribution of health outcomes and their social determinants that contribute to or detract from the health of individuals and communities. This course will provide an overview of the major conceptual and measurement issues in conducting research into the effects of key social factors on individual, community and population health and examine pathways through which social determinants operate at different stages of the life course and in different population groups. Policy responses and interventions to promote health or reduce health inequality will also be introduced. The course also includes developing an understanding of a research methods used in social epidemiology.

Assessment Methods
Continuous assessment: 100%

MQB7035 Occupational Health (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Identify occupational health issues
2. Relate occupational health issues to workers, workplace and community
3. Conduct basic workplace assessment
4. Solve basic occupational health issues

Main references:

Synopsis
This course is an overview of the occupational health issues in the local and global perspective. The course covers core topics that prepare students to understand and address occupational health issues; toxicology; exposure assessment; risk assessment, occupational disease and disability, accident and safety at work.
Assessment Methods
Continuous assessment: 50%
Final examination: 50%

MQB7036
Occupational Medicine (2 Credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Describe diseases related to work
2. Diagnose work related diseases
3. Manage work related diseases as a Public Health Specialist

Synopsis
This course will provide the student with the basic to intermediate knowledge of diseases related to workplace exposure, diagnosis and management of work aggravated and occupational diseases, and an introduction to the principle of occupational toxicology. It will also cover the principle of methods and modalities used in the establishment of those diseases in the workplace and community.

Main references:

Assessment Methods
Continuous assessment: 100%

MQB7037
Medical Surveillance and Fitness for Work (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Identify the appropriate tests used in medical surveillance
2. Analyse and draw conclusions from the medical surveillance results
3. Conduct fitness for work evaluation
4. Propose appropriate workplace recommendations based on medical surveillance results and evaluate fitness for work

Synopsis
The course focus on the three component of health risk assessment; which is risk assessment, risk management and risk communication. It will include overview on methods and modalities for qualitative and quantitative risk assessment in the workplace. The courses will stress on the assessment of health risk related to exposure to chemicals, physical, biological, ergonomics and psychosocial hazards.

Pre-Requisite
Candidate must have registered for the Occupational Medicine (MQB7036) course or have successfully completed MQB7036.

Main References

Assessment Methods
Continuous assessment: 100%

MQB7038
Clinical Occupational Medicine (2 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Describe diseases related to work (C2,P2,A1)
2. Diagnose work related diseases (C3,P1,A2)
3. Manage work related diseases as a Public Health Specialist (C4,P3,A3)

Synopsis
This course will provide the student with the practical experience in the clinic on basic to intermediate knowledge of diseases related to workplace exposure, diagnosis and management of work aggravated and occupational diseases, including relevant workplace assessment.

Pre-Requisite
Candidate must have registered for the Occupational Medicine (MQB7036) and the Medical Surveillance and Fitness for Work (MQB7037) courses or have successfully completed MQB7036 and MQB7037

Main references:

Assessment Methods
Continuous assessment: 100%

MQB7039
Global Health Leadership (2 credits)

Learning Outcomes
At the end of the course, the candidate is able to:
1. Explain the key trends and issues in the management of global health agencies and organisations.
2. Explain the key challenges in developing and implementing health programs in resource-constrained settings.
3. Determine critical traits that contribute to successful global health leadership from the example of current and past leaders that exhibit these qualities.

Main references
1. Emotional Intelligence 2.0 by Travis Bradberry & Jean Greaves
2. Global Health Leadership: Case Studies from the Asia-Pacific by Mellissa Withers and Judith McCool

3. Harvard Business School Online Training “Global Cross-Cultural Collaboration”

**Synopsis**
This course introduces students to the practice of leadership in global health. Students will learn how leaders have overcome challenges faced in the operationalisation of complex global health interventions, foreign policy, and working with key stakeholders and organisation in this context. They will be exposed to real-world cases in global health leadership.

**Assessment Methods**
Continuous assessment (seminars and written assignments): 100%

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**MQB 7040**  
**Nutritional Epidemiology (2 credits)**

**Learning Outcomes**
At the end of the course, the candidate is able to:
1. Describe the strengths and limitations of different methods of dietary assessment and identify when specific dietary methods may be most appropriate.
2. Understand statistical methods commonly used in nutritional epidemiology to analyse diet-disease associations.
3. Describe the current state of epidemiological evidence for relationships of diet to the development of selected diseases.

**Synopsis**
This course is designed for candidates who are interested in better understanding and interpreting epidemiologic studies on the associations of diet and diseases. This course examines study designs, dietary assessment and statistical methods used in nutritional epidemiology, as well as to review the current evidence on diet and selected diseases.

**Main References:**
1. Willett W. Nutritional epidemiology: Oxford University Press; 2013

**Assessment Methods**
Continuous assessment: 50%  
Final examination: 50%
### Master of Public Health Programme Schedule

<table>
<thead>
<tr>
<th>Semester</th>
<th>Duration</th>
<th>Courses Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>14 weeks</td>
<td>Seven core courses each of three credit hours, totalling twenty one (21) credit hours.</td>
</tr>
<tr>
<td>Semester 2</td>
<td>14 weeks</td>
<td>Six elective courses each of two credit hours, totalling twelve (12) credit hours.</td>
</tr>
<tr>
<td>Special semester</td>
<td>8 weeks</td>
<td>One core course of nine (9) credit hours.</td>
</tr>
</tbody>
</table>

### Examination

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Registration</td>
<td>(Admission Evaluation)</td>
</tr>
<tr>
<td>End of Semester 1</td>
<td></td>
</tr>
<tr>
<td>End of Semester 2</td>
<td></td>
</tr>
</tbody>
</table>
1. Classification of Programme

The Master of Medical Science by Research is a programme in which the research component comprises one hundred (100) percent of the programme of study.

2. Entry Requirements

(1) The degrees of Bachelor of Medicine and Bachelor of Surgery or the degree of Bachelor of Dental Surgery; or

(2) The Bachelor degrees in the relevant sciences field of the University and a CGPA of not less than 3.0 or equivalent; or

(3) An equivalent qualification approved by the Senate from time to time; and

(4) A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme and/or write his thesis in the English language shall be required:

(a) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

(b) To obtain a band of 6 for the International English Language Testing System (IELTS).

3. Duration of Study

(1) The minimum duration of study shall be two (2) semesters

(2) The maximum duration of study shall be eight (8) semesters

4. Structure of Programme

(1) Dissertation:

This programme is a research programme leading to the submission of a dissertation and the format is as provided in the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.

(2) Research Methodology (MMX7001) (3 credits):

a. Candidate must successfully complete Research Methodology Course (MMX7001) within the first two (2) semester of registering as a student at University of Malaya.

b. Pass your Proposal Defense by Semester II.

5. Course Registration

Except where he/she has been permitted to withdraw from the semester concerned, a candidate for the programme by dissertation who is required to follow or follow and pass such course or
courses shall be required to register for the course or courses in the semester the course or courses is or are offered.

6. Supervision

(1) The supervisor for a candidate shall be appointed when the area of research is approved.

(2) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research

The area of research for the dissertation shall be determined when the candidate is accepted for admission to the programme of study.

8. Submission

(1) A candidate who is required to follow such course or courses as determined by the Faculty shall not be permitted to submit the dissertation until the Dean confirms that he has followed the course or courses to his satisfactions.

(2) A candidate shall submit his dissertation for examination within the period of candidature.

MMX7001 Research Methodology (3 credits)

Course Learning Outcomes
At the end of the course, students are able to:

1. Formulate the problem statement, research questions and / or hypotheses.
2. Critically appraise relevant literature from authoritative sources within respective research field.
3. Design appropriate research methods for their respective projects.

Synopsis
This course is designed to provide knowledge and skills to candidates regarding conducting research projects. The course consists of an overview of skills required for selecting appropriate research methods, designing Research Proposal, writing reports and thesis, conducting Literature Reviews, considering ethical issues, plagiarism and the use of the Turnitin software – statistical measures and the relevant use of analysis software.

Main Reference

Assessment Weightage
Continuous Assessment:100%
Final Examination: -
Name of Programme : Master of Medical Science (Physiology)  
Mode : By Mixed Mode  
Faculty : Faculty of Medicine  

1. Classification of Programme

The Master of Medical Science (Physiology) by Mixed Mode is a programme by coursework and dissertation in which the credit hours for the research component comprises seventy (70%) percent or more of the total credits for the whole programme of study.

2. Entry Requirements

(1) The qualifications for admission into the programme are as follows:

(a) The degrees of Bachelor of Medicine and Bachelor of Surgery or the degree of Bachelor of Dental Surgery; OR
(b) Bachelor in Sciences which are related to the field of medical physiology with cumulative grade point average (CGPA) of at least 3.0 or equivalent; OR
(c) An equivalent qualification approved by the Senate from time to time

(2) A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme shall be required:

(a) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or
(b) To obtain a band of 6 for the International English Language Testing System (IELTS).

(3) Other requirement

Satisfies the entrance evaluation of the Department responsible for the candidate’s programme of study, which is recognised by the Faculty.

3. Duration of Study

(1) The minimum duration of study shall be three (3) semesters
(2) The maximum duration of study shall be eight (8) semesters

4. Structure of Programme

(1) The Master of Medical Science (Physiology) programme by Mixed-Mode comprises forty-four (44) credits and consists of two parts as follows:

(a) Part I consists of five core courses and one elective course, totalling fourteen (14) credits;
(b) Part II consists of a research project leading to the submission of a dissertation, totaling thirty (30) credits.
(2) Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty, and candidates shall be informed of such details at the beginning of each session.

(3) The lists of courses for the programme of Master of Medical Science (Physiology) are provided in List 1.

(3) Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) (Regulations 2014).

5. Registration

(1) Registration for the courses shall commence the week prior to the start of the relevant semester.

(2) A candidate is required to register for at least nine credits in any semester except -

(a) in the final semester of her/his programme of study where he may register for less than the number of credits stated above; or

(b) where the candidate has been permitted to withdraw from the semester concerned.

(3) A candidate may only register for Part II of the programme of study after he/she has obtained at least nine credit hours.

6. Supervision

(a) The supervisor for a candidate shall be appointed when the area of research is approved.

(b) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research

The area of research for the dissertation shall be determined before the candidate commences the research part of his programme of study.

8. Submission

(1) A candidate is allowed to submit the dissertation when he/she has conducted research for at least one semester after registering for Part II of this programme.

(2) A candidate shall submit his/her dissertation for examination within the period of candidature.

List 1: Core Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQA 7001</td>
<td>Research Methodology</td>
<td>3</td>
</tr>
<tr>
<td>MOA 7001</td>
<td>Human Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>MOA 7002</td>
<td>Dissertation</td>
<td>30</td>
</tr>
<tr>
<td>MOA 7003</td>
<td>Human Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>MOA 7004</td>
<td>Seminar and Literature Review</td>
<td>3</td>
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</tbody>
</table>
List 2: *Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>MOA 7005</td>
<td>Advanced Medical Physiology</td>
<td>2</td>
</tr>
<tr>
<td>MQB7012</td>
<td>Producing Better Evidence</td>
<td>2</td>
</tr>
</tbody>
</table>

*Choose one (1) from two (2)
Subject to change from time to time

**MQA7001**

**Research Methodology (3 credits)**

**Learning Outcomes**
At the end of the course, students are able to:
1. Defend a research proposal.
2. Develop a sound research methodology.
3. Identify the appropriate statistical analysis for different data scale.

**Synopsis:**
Knowledge of research planning as well as the necessary statistical methods

**Main Reference:**

**Assessment Methods:**
Continuous Assessment: 100%
Final Examination: -

**MOA7001**

**Human Physiology I (3 credits)**

**Learning Outcomes**
At the end of the course, students are able to:
- Elaborate the theoretical knowledge of physiology
- Apply the practical skills in physiology
- Apply the communication and continuous learning skills in physiology

**Synopsis:**
Human Physiology is the study of how the human body functions under normal conditions. The human body is organised into various organ systems namely: nervous, musculoskeletal, cardiovascular, respiratory, gastrointestinal, renal, endocrine and reproductive systems. The Physiology course in Sem 1 is taught based on core subjects and system blocks, namely:

- Cell physiology
- Blood
- Nerve physiology, neuromuscular & synaptic transmission
- Muscle physiology
- Autonomic nervous system
- Physiology of the cardiovascular system
- Physiology of the respiratory system

**Main References:**
Barman, Scott Boitano, Heddwen Brooks.
Medical Physiology (2016) 3rd Edition by Walter F. Boron MD PhD, Emile L. Boulpaep MD.

Assessment Methods:
Continuous Assessment: 30%
Final Examination: 70%

MOA7002
Dissertation (30 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Implement a planned research project
2. Interpret data and research findings
3. Report research findings in written report and oral presentation

Synopsis:
A research project in the field of medical sciences.

Main References:
5. Peh WCG & Ng KH, Effective Medical Writing, University of Malaya Press, 2

Assessment Methods:
Continuous Assessment: 100%
Final Examination: -

MOA7003
Human Physiology II (3 credits)

Learning Outcomes
At the end of the course, students are able to:
- Elaborate the theoretical knowledge of basic human physiology
- Apply the practical skills in physiology
- Apply the communication and continuous learning skills in physiology

Synopsis:
Human Physiology 2 is the extension of Human Physiology 1 and is the study of how the human body functions under normal conditions.

The Physiology course in Semester II is taught based on system blocks, namely:
- Gastrointestinal system
- Renal system
- Endocrine system
- Reproductive system
- Neurophysiology

Main References:
M. Barman, Scott Boitano, Heddwen Brooks.

Assessment Methods:
Continuous Assessment: 30%
Final Examination: 70%

**MOA7004**
*Seminar and Literature Review (3 credits)*

**Learning Outcomes**
At the end of the course, students are able to:

1. Evaluate the latest knowledge in physiology
2. Analyze data and latest information in physiology
3. Present the results of analysis to the targeted group

**Synopsis:**
Students are trained to search literatures and prepare reviews of the given topics. They are also required to make oral presentations and submit written reports for the topics they presented.

**Main Reference:**
1. Scientific articles in peer-reviewed journals

**Assessment Methods:**
Continuous Assessment: 100%
Final Examination: -

**MOA7005**
*Advanced Medical Physiology (2 credits)*

**Learning Outcomes**
At the end of the course, students are able to:

1. Analyze the deeper knowledge in physiology
2. Apply the deeper knowledge in physiology
3. Apply the communication and continuous learning skills

**Synopsis:**
Advanced Medical Physiology is a further study on the human body functions. The taught subjects are:

- Ion channels
- Neurosciences
- Advanced renal physiology
- Pain
- Physiology in ageing
- Exercise Physiology
- Advanced cardiovascular physiology
- Advanced reproductive physiology

**Main References:**
Assessment Methods:
Continuous Assessment: 30%
Final Examination: 70%

**MQB7012**
**Producing Better Evidence (2 credits)**

Learning Outcomes
At the end of the course, students are able to:

1. Describe method to produce scientific evidence.
2. Illustrate method to produce scientific evidence.

Synopsis:
The objective of this course is to produce valid scientific evidence which can be used to modify policy or management standards. It contains the following:

Introduction to performing systematic search and critically appraising the literature / evidence. Systematic reviews and meta-analyses produce the highest hierarchy of evidence should be used to inform decision-making and health care policy. The principles of meta-analytic statistical methods are reviewed, and the application of these to data sets is explored. Application of methods includes considerations for clinical trials and observational studies. The use of meta-analysis to explore data and identify sources of variation among studies is emphasized, as is the use of meta-analysis to identify future research questions.

Main References:


Assessment Methods:
Continuous Assessment: 50%
Final Examination: 50%
Summary of curriculum structure of Master of Medical Science (Physiology) is as follow:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SEMESTER I</th>
<th>SEMESTER II</th>
<th>TOTAL CREDIT</th>
</tr>
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<tr>
<td></td>
<td>SUBJECTS</td>
<td>CREDIT</td>
<td>SUBJECTS</td>
</tr>
<tr>
<td></td>
<td>MOA 7001 Human Physiology I</td>
<td>3</td>
<td>MOA 7003 Human Physiology II</td>
</tr>
<tr>
<td></td>
<td>MQA 7001 Research methodology</td>
<td>3</td>
<td>MOA 7002 Dissertation (P)</td>
</tr>
<tr>
<td></td>
<td>MOA 7004 Seminar and Literature Review</td>
<td>3</td>
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<tr>
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<table>
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<tr>
<th>COMPONENT</th>
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<th>TOTAL CREDIT</th>
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<tbody>
<tr>
<td></td>
<td>SUBJECTS</td>
<td>CREDIT</td>
</tr>
<tr>
<td></td>
<td>MOA 7002 Dissertation (P)</td>
<td>16</td>
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<tr>
<td></td>
<td>MOA 7005 Advanced Medical Physiology</td>
<td>2</td>
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<tr>
<td></td>
<td>MQB 7012 Providing Better Evidences</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Program core courses</td>
<td>18</td>
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<tr>
<td>* Elective courses</td>
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<td></td>
</tr>
<tr>
<td>* choose one (1) from two (2)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Total credit</td>
<td>18</td>
</tr>
</tbody>
</table>

OVERALL CREDIT: 44
1. **Classification of Programme**

The Master of Medical Science (Regenerative Medicine) by Mixed Mode is a programme in which the credits for the research component comprises seventy (70%) percent or more of the total credits for the whole programme of study. After completion of the relevant programme of study specified in this Schedule, a candidate shall be eligible for the award of the Master of Medical Science (Regenerative Medicine) degree.

2. **Entry Requirements**

The qualification for admission into the Degree programme of study are as follows:

a) A Bachelor’s degree of Medicine and Degree of Surgery or a Bachelor’s Degree of Dental Surgery; or a professional qualification from a recognized professional body; or

A Bachelor’s Degree of Science in the related field with a CGPA of not less than 3.0; or

A Bachelor’s Degree of Science with a CGPA of not less than 3.0 and with at least one year working experience in the field of regenerative medicine.

b) Any other qualification as may be approved by the Senate from time to time;

c) With a CGPA of not less than 3.0 or equivalent;

d) Candidates with a Bachelor’s Degree of CGPA 2.7 to 2.99 may be considered if they meet at least one of the following criteria:

   a. Have relevant work experience; Or
   b. Produce publications in related fields; Or
   c. Is a scholarship recipient; Or
   d. Graduates of the University of Malaya.

e) Candidates with a Bachelor’s Degree of CGPA of 2.5 to 2.69 may be considered if they meet at least two of the criteria in (4).

f) Candidates with a Bachelor’s Degree of CGPA 2.10 to 2.49 may be considered if they meet the following criteria as outlined in the guidelines provided by the Institute of Postgraduate Studies (IPS) that:

   a. Graduates of University of Malaya; And
   b. Have a working experience of not less than 5 years or have produced at least one publication in a refereed journal in the field of regenerative medicine; And
   c. Application of entry must be submitted to the Senate for consideration based on the merits of each case

g) **Language Requirement**
A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme shall be required:

(a) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

(b) To obtain a band of 6 for the International English Language Testing System (IELTS).

3. Duration of Study
(1) The minimum duration of study shall be three (3) semesters
(2) The minimum duration of study shall be eight (8) semesters

4. Structure of Programme
(1) The Master of Medical Science (Regenerative Medicine) programme by Mixed Mode comprises forty eight (48) credits and consists of two parts, namely:
   c. Part I consisting of five (5) core courses totalling twenty (20) credits and one elective courses totalling four (4) credits;
   d. Part II involving research leading to the submission of a dissertation totalling twenty four (24) credits.
(2) Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty and candidates shall be informed of such details at the beginning of each session.
(3) The lists of courses for the programme of Master of Medical Science (Regenerative Medicine) are provided in List 1.
(4) Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree)(Regulations 2014).

5. Registration
(1) Registration for the courses shall commence the week prior to the start of the relevant semester.

6. Supervision
(a) The supervisor for a candidate shall be appointed when the area of research is approved.
(b) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research
The area of research for the dissertation shall be determined before the candidate commences the research part of his programme of study.

8. Submission
(1) A candidate is allowed to submit the dissertation when he/she has conducted research for at least one semester after registering for Part II of this programme.
A candidate shall submit his/her dissertation for examination within the period of candidature.

List 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOB7001</td>
<td>Research Methodology</td>
<td>4</td>
</tr>
<tr>
<td>MOB7002</td>
<td>Dissertation</td>
<td>24</td>
</tr>
<tr>
<td>MOB7003</td>
<td>Stem Cell and Tissue Engineering</td>
<td>4</td>
</tr>
<tr>
<td>MOB7004</td>
<td>Advanced regenerative medicine</td>
<td>4</td>
</tr>
<tr>
<td>MOB7005</td>
<td>Cell Based Therapy and Regulation in Regenerative Medicine</td>
<td>4</td>
</tr>
<tr>
<td>MOB7006</td>
<td>Regenerative Medicine-Industry</td>
<td>4</td>
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<td>MOB7007</td>
<td>Advance Tools in Regenerative Medicine (Elective)</td>
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</tr>
<tr>
<td>MOB7008</td>
<td>Advance Medical Biotechnology (Elective)</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

**MOB7001**  
Research Methodology (4 credits)

**Learning Outcomes**
At the end of the course, students are be able to:
1. Adhere to the ethical requirement for basic science research in stem cells and tissue engineering.
2. Adhere to the ethical requirement for clinical research in stem cells and tissue engineering.
3. Relate the knowledge for the development of research concepts and design a research in a systematic and scientific way.
4. Organize the experiment design/pre-clinical/clinical trials.

**Synopsis**
In this course, the student will be taught about literature search (in the field of regenerative medicine), development of research concepts, research design, design experiment/pre-clinical/clinical trials, and basic data analysis, and ethics application. Student needs to submit a proposal, submit an ethics application, present for seminar and proposal. Besides, the student will also be taught on communication skills for clinical related research. Student will also needs to go for clinical attachment for practical communications session with clinician and patients. At the end of the semester, the student needs to sit for an oral exam.

**Main Reference**

**Assessment Methods**
Continuous Assessment : 800%
Final Examination : 20%
Dissertation (24 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Integrate/combine scientific theory and research practical skills for research purposes in stem cells and regenerative medicine or related fields.
2. Appraise based on the scientific theory and regulations in stem cells and regenerative medicine industry.
3. Master the practical skills in stem cells and regenerative medicine industry or research.
4. Adhere to the professionalism ethics in the basic science and/or clinical research in the discipline of regenerative medicine

Synopsis
This course module provide the students with an opportunity to conduct a research project within life science disciplines and/or related to clinical applications. The dissertation will be a research-based study that will allow student to participate in and develop a current research area. This course module will help students in developing their practical skills required for professional research, appraise of knowledge, methods and data; data collection and comprehensive data analysis, interpretation and presentation, as well as self-learning and project management. The module is expected to draw on knowledge and skills developed throughout the modules in this programme to facilitate the demonstration of an integrated and multidisciplinary approach in reserach.

In this course, the student will conduct a research project, present research progress, compile and analyse data, write a dissertation, present the final findings at public (and viva voce).

Additional into: Students are encourage to participate in projects either already underway within the subject areas of the Tissue Engineering Group (TEG), in the Department of Orthopaedic Surgery, Faculty of Medicine, UM. However, we may be able to help initiating new projects proposed by students, providing this fall within an area of staff research interest, appropriate for the course/programme and feasible in terms of budget and timeframe. Students are encourage to seek academic advice on these matters. Individual specialist Supervisors will be selected from staff whose background and experience will allow them to make an effective contribution to identified projects.

The end-of-program examination will be held at the end of the semester and the candidate must PASS the final exam of the program and PASS in the continuous assessment of the dissertation. Candidates should only sit and pass this examination once during this practice, if the candidate needs to register for the MOB7002 Dissertation course due to unsuccessful work done or the dissertation report has not been checked by the examiner.

Students must pass “Good Clinical Practice (GCP)” course organized by Clinical Investigation Center (CIC), UMMC, as one of the faculty requirement (for this program) during the candidacy in this program.

Main Reference

Assessment Methods
Continuous Assessment : 50%
Final Examination : 50%

MOB7003
Stem Cell and Tissue Engineering (4 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Distinguish based on scientific theory the different types of stem cells and culture related techniques.
2. Compare and adapt the applications of different stem cells in tissue engineering.
3. Master the techniques of mesenchymal stem cells primary culture, sub-passaging, cryo-preservation, characterization and regrow the cryo-preserved MSCs.

Synopsis
This course is designed to introduce students to the fundamental of stem cells biology and allow them to develop a detailed understanding of stem cells applications in current and future medicine. Students will be encouraged to develop a critical approach in evaluating different types of stem cells, in terms of properties, differentiation potential, applications (in regenerative medicine and other diseases) and limitations. In addition, students will also be introduced with the advances in genetically modified stem cells, biomaterials and their potential applications. Landmark scientific literature and key findings will be discussed and reported to develop a sound understanding of the technology used in cell therapies. The first-hand experience of stem cell culture techniques and characterization tests will allow students an appreciation of some technical aspects involved in cell therapies and clinical scale cell production.

Main Reference

Assessment Methods
Continuous Assessment: 45%
Final examination: 55%

MOB7004
Advanced Regenerative Medicine (4 credits)

Learning Outcomes
At the end of this course, students are able to:
1. Evaluate regenerative medicine with related fields including biomaterials, basic immunology mechanism underpinning the rejection of transplanted tissue or organs, and cell based therapy of several diseases.
2. Demonstrate mesenchymal stem cell seedings to different biofuels and basic characterization techniques, which comply with industry regulations/legislation/requirements.
3. Compare mesenchymal stem cell seedings to different biofuels and basic characterization techniques, which comply with industry regulations/legislation/requirements.

Synopsis
This course module will provide students with a detailed understanding of cell-based therapies and tissue engineering. In this module, you will be provided with insights into current and future cell therapies and techniques of tissue engineering. This course focuses on advances in biomaterials and tissue engineering; cell biology for regenerative medicine; applications of regenerative medicine in cartilage, bone, tendon, blood vessel, liver, cardiovascular tissue engineering; cell and organ transplantation; molecular basis of transplantation; basic mechanism of immunology and those related to cell or organ transplantation; and prospects of tissue engineering and regenerative medicine.

Main References

Assessment Methods
Continuous Assessment : 65%
Final Examination : 35%

**MOB7005**
Cell Based Therapy and Regulation in Regenerative Medicine (4 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Value the regulations and legislation in clinical applications of products related to tissue engineering and cell based therapy.
2. Compare the regulations and legislation in clinical applications of products related to tissue engineering and cell based therapy.
3. To identify and integrate the regulatory requirements in the development of tissue engineering and cell based therapy products.
4. Adapt to the industry environment which adhere to the regulations and legislation.

Synopsis
This course introduces students to the regulations and legislations related to cell based therapy. This course consist of the current regulatory framework for cell based therapy in Malaysia and other countries. This course also covers the legal unit/entiti which enforce the regulations and legislation in the development fo regenerative medicine related products as well as regenerative medicine industries. This course also addresses the healthcare economics which is related to the regenerative medicine industry, under the regulations and legislations associated with tissue engineering and cell based therapy. Throughout this course, student need to do laboratories visits (GMP and GLP accredited laboratories) as well as industries attachments.

Main Reference

Assessment Methods
Continuous Assessment: 85%
Final Examination: 15%

**MOB7006**
Regenerative Medicine-Industry (4 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Relate the industrial scale and standard requirements for products of tissue engineering and cell based therapy.
2. Relate the industrial scale and standard requirements for products of tissue engineering and cell based therapy.
3. Relate the industrial scale and standard requirements for products of tissue engineering and cell based therapy.

4. Integrate the knowledge of the regenerative medicine to the industry of biomedical engineering.

Synopsis
In this module, the student will be exposed to the knowledge in the aspect of regenerative medicine industry, such as biomaterials for regenerative medicine industry, facility/industry regulation, economic evaluation and health economic for regenerative medicine.

In this module, there will be an opportunity for industrial placement for five weeks, within a biomedical engineering company or regenerative medicine industry specifying in the aspect of tissue engineering and cell based therapy.

No finance assistance will be available to cover travel expenses to the location of the industry placement.

Main Reference

Assessment Methods
Continuous Assessment: 80%
Final Examination: 20%

MOB7007
Advance Tools in Regenerative Medicine (4 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Compare the advantages and limitations of advance analysis tools for applications in stem cells and tissue engineering research.
2. Integrate the advantages and limitations of advance analysis tools for applications in stem cells and tissue engineering research.
3. Integrate the use of advance analysis tools in the analysis in stem cells and tissue engineering research.

Synopsis
This module covers the theoretical knowledge and experience of the core iotechnology laboratory techniques used to carry out experimental research within the medical biotechnology and tissue engineering. This module is based on a series of practical sessions and will give students experience of performing experimental work, collecting data and interpreting and presenting results.

Main Reference
5. Stem Cell Transplantation / edited by Carlos López-Larrea, Antonio López-Vázquez, Beatriz

Assessment Methods
Continuous Assessment: 55%
Final Examination: 45%

MOB7008
Advance Medical Biotechnology (4 credits)

Learning Outcomes
At the end of the course, students are able to:
1. Compare the advantages and limitations of advance biotechnology tools for regenerative medicine research applications based on theory.
2. Compare the advantages and limitations of advance biotechnology tools for regenerative medicine research applications based on practical.
3. To integrate advance biotechnology tools in regenerative medicine study.

Synopsis
This module covers the theoretical knowledge and experience of the core biotechnology techniques used to carry out experimental research within the regenerative medicine. This module is based on a series of practical sessions and will give students experience of performing experimental work, collecting data and interpreting and presenting results.

Main Reference

Assessment Methods
Continuous Assessment: 55%
Final Examination: 45%
Name of Programme : Master of Health Research Ethics
Mode : By Coursework
Faculty : Faculty of Medicine

1. Classification of Programme

The Master of Health Research Ethics is a programme by coursework in which the credits for the research component comprises less than thirty (30) percent of the total credits for the whole programme of study. After completion of the relevant programme of study specified in this Schedule, a candidate shall be eligible for the award of the Master of Health Research Ethics degree.

2. Entry Requirements

(1) A Bachelor’s degree related to health research ethics with CGPA of at least 3.0 and above or equivalent; or
(2) A Bachelor’s degree with at least 1 year of working experience in related field; or
(3) An equivalent qualification approved by the Senate from time to time.

AND

Pass the entrance assessment set by the faculty

(4) A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme shall be required:

(i) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or
(ii) To obtain a band of 6 for the International English Language Testing System (IELTS).

3. Duration of Study

(1) The minimum duration of study shall be two (2) semesters and one (1) special semester
(2) The maximum duration of study shall be eight (8) semesters

4. Structure of Programme

(1) The Master of Health Research Ethics programme by coursework comprises of forty-two (42) credits namely.

(c) six (6) core courses, each of three (3) credits, totalling eighteen (18) credits
(d) Practicum in Health Research Ethics of nine (9) credits;
(e) A Research Project of nine (9) credits;
(e) two (2) elective courses, each of three (3) credits, totaling six (6) credits.

(2) Details of the courses offered are as approved by Senate from time to time on the recommendation of the Faculty and candidates shall be informed of such details at the beginning of each session.

(5) The lists of courses for the programme of Master of Health Research Ethics are provided in List 1.

5. Registration

(1) Registration for the courses shall commence the week prior to the start of the relevant semester.

(2) A candidate is required to register for at least six (6) credits in any semester except -

(a) in the final semester of his/her programme of study where he/she may register for less than the number of credits stated above; or

(b) where the candidate has been permitted to withdraw from the semester concerned.

6. Supervision

(1) The supervisor for a candidate shall be appointed when the area of research is approved.

(2) The co-supervisor and/or consultant may be appointed at any time when required.

7. Title of Research

The area of research shall be determined before the candidate commences the research part of his programme of study.

8. Submission

A candidate is required to submit his/her project report before the end of his maximum period of candidature.

9. Examination for the Degree

(1) The Examination leading to the degree of Master of Health Research Ethics by coursework shall consist of an examination or examinations in each of the courses prescribed for the Master of Health Research Ethics degree programme as follows:

(a) six (6) core courses, each of three (3) credits, totalling eighteen (18) credits;

(b) a practicum of nine (9) credits;

(c) a research project of nine (9) credits;

(d) two (2) elective courses, each of three (3) credits, totaling six (6) credits.
(2) Examination Components and Allocation of Marks

(a) Taught Courses

(i) The components of the courses and the marks to be allocated to the components of the courses prescribed for the Examination shall be:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>End of Semester Examination</td>
<td>30%</td>
</tr>
<tr>
<td>(B)</td>
<td>Continuous Assessment</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

This applies to the following courses:
MQF7003 Foundations of Research Ethics
MQF7004 Research Ethics in Special Populations
MQF7010 Ethics in Animal Research (Elective)
MQF7011 Healthcare Law and Ethics (Elective)

(ii) For SQE7006 Ethics of Sustainability (Elective), the marks to be allocated to the components of the courses prescribed for the Examination shall be:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Allocation of Marks (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>End of Semester Examination</td>
<td>40%</td>
</tr>
<tr>
<td>(B)</td>
<td>Continuous Assessment</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

(iii) For the following courses, students will only be assessed via continuous assessment (100%) and there is no End of Semester Examination:
MQB7001 Research Method
MQF7002 Research Project
MQF7005 Responsible Conduct of Research
MQF7006 Ethical issues in global health research and clinical trials
MQF7007 Ethical Issues of Emerging Sciences
MQF7008 Practicum in Health Research Ethics
MQF7009 Good Clinical Practice (Elective)

The Senate may on the recommendation of the Faculty, amend the allocation of marks for the components of a course for the Examination.

5. Course Grade Requirements

Course grades are subjected to regulations prescribed in the Marking Scheme of the University of Malaya (Master’s Degree) Rules 2014 and University of Malaya (Master’s Degree) Regulations 2014.

(b) Award of Degree

No candidate shall be recommended for the award of the degree of Master of Health Research Ethics unless he/she has successfully completed all parts of the course and passed all the prescribed examination.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MQB7001</td>
<td>Research Method</td>
<td>3</td>
</tr>
<tr>
<td>MQF7002</td>
<td>Research Project</td>
<td>9</td>
</tr>
<tr>
<td>MQF7003</td>
<td>Foundations of Research Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MQF7004</td>
<td>Research Ethics in Special Populations</td>
<td>3</td>
</tr>
<tr>
<td>MQF7005</td>
<td>Responsible Conduct of Research</td>
<td>3</td>
</tr>
<tr>
<td>MQF7006</td>
<td>Ethical Issues in Global Health Research and Clinical Trials</td>
<td>3</td>
</tr>
<tr>
<td>MQF7007</td>
<td>Ethical Issues of Emerging Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MQF7008</td>
<td>Practicum in Health Research Ethics</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Elective Courses (choose two)</td>
<td></td>
</tr>
<tr>
<td>MQF7009</td>
<td>Good Clinical Practice</td>
<td>3</td>
</tr>
<tr>
<td>MQF7010</td>
<td>Ethics in Animal Research</td>
<td>3</td>
</tr>
<tr>
<td>MQF7011</td>
<td>Healthcare Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>SQE7006</td>
<td>Ethics of Sustainability</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

**MQB7001**  
Research Method (3 credits)

Learning Outcomes

At the end of the course, students are able to:

4. Formulating a good research questions. (C3,P2,A2)
5. Choose the design and research methods appropriate to the research question is formulated. (C4,P3,A3)
6. Evaluate critically various epidemiologic studies the basic study design. (C5,P4,A4)

Synopsis

This course introduces candidates to the critical appraisal. Journal readings and exercises in journal critiques are used to illustrate methodological issues in epidemiological studies. This course also introduces the candidate to the basic principles of research methods. The course takes the candidate through the steps of the research process and provides the candidate a hands-on experience to write critique on an article and a research proposal.

Main Reference


Assessment Weightage

Continuous Assessment: 100%
Final Examination: -

**MQF7002**  
Research Project (9 credits)

Learning Outcomes
At the end of the course, students will be able to:

- Propose a research project that examines the ethical issues.
- Conduct appropriate research to address the ethical challenges.
- Present the research plan and results professionally.

Synopsis

The course requires candidates to formulate a research question, design and conduct a research project that aims to address the ethical challenges in research, clinical practice, and program implementation. During the project, students will collect data and apply suitable analytic methods in order to evaluate specific ethical principles such as informed consent, individual and community rights, confidentiality, and other ethical standards.

Main Reference


Assessment Weightage

Continuous Assessment: 100%
Final Examination: -

MQF7003

Foundations of Research Ethics (3 credits)

Learning Outcomes

At the end of this course, students are able to:

- Demonstrate an awareness of key ethical theories and principles guiding research.
- Differentiate relevant ethical theories and principles in various research contexts.
- Assess the impact of ethical decisions and choices in a research setting.

Synopsis

This course provides the candidate an overview of research ethics including the history, theories and principles of research ethics. Key topics such as consent, risks and benefits, confidentiality and justice will be taught. The student will have an opportunity to discuss and debate basic issues surrounding research ethics through small group discussions and individual presentations.

Main Reference


Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQF7004
Research Ethics in Special Populations (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- apply the principles of research ethics and protecting values and rights of special populations (C3, P4, A3) (PLO3)
- examine research ethical issues unique to the population (C4, P3, A3) (PLO4)
- solve research ethical problems in special populations relevant to the local cultural context (C4, P4, A4) (PLO6)

Synopsis
This course focuses on research ethical issues in special populations including children and women, key populations, and people with physical and mental illnesses and disabilities. It teaches candidates how to apply research ethical concepts in the real world and equips them with the skills to appraise and solve research ethical problems when conducting research in these populations through case studies. This course also allows the candidates to reflect on their own values when examining research ethical issues in these vulnerable populations through case presentations and case reports.

Main Reference
7. ACOG. Ethical Considerations for Including Woman as Research Participants. Available from: https://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Ethics/Ethical-Considerations-for-Including-Women-as-Research-Participants

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQF7005
Responsible Conduct of Research (3 credits)

Learning Outcomes
At the end of this course, students are able to:
1. apply the concept of publication ethics when writing a research paper
2. anticipate the impact of publication ethics on research dissemination
3. propose strategies to manage and prevent publication misconducts

Synopsis
This course teaches the candidates the concept of publication ethics and different types of publication ethical issues including falsification and fabrication, plagiarism, authorship and conflicts of interest. It also stimulates the student to reflect the importance of publication ethics and its implications in the
context of research dissemination. The course will use case studies to demonstrate how publication misconducts can be prevented and addressed.

Main Reference
2. ASM Module of Responsible Conduct of Research
3. UM Manual for Responsible Research

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQF7006
Ethical issues in global health research and clinical trials (3 credits)

Learning Outcomes
At the end of this course, students are able to:
4. Demonstrate an awareness of key aspects of global health and public health research ethics.
5. Analyse the ethical and legal issues involved in global health and public health situations.
6. Assess the impact of ethical choices and actions in a global health setting.

Synopsis
This course is designed for the candidate to understand the key aspects of global health research and public health situation through case studies. This course also introduce the candidates on certain topics for example ancilary care, vaccine research, HIV research and so on.

Main Reference

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQF7007
Ethical Issues of Emerging Sciences (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- Illustrate the ethical and legal issues surrounding the area of emerging sciences (C3, P4, A3) (PLO1)
- Examine the conflicting moral values and ethical principles involved in various areas of emerging sciences (C4, P3, A3) (PLO4)
- Evaluate possible course of actions to address the ethical issues at stake (C5, P4, PL06)

Synopsis
This courses introduces the ethical and legal issues arising from the emerging sciences, such as research in genetics and genomics, neuroethics, stem cell and biobanking. It teaches the candidate how to examine and deconstruct ethical problems arising from these emerging sciences, and determine and justify ethical principles that are relevant to the ethical problem. It also guides the candidate to find
possible solutions to the ethical problem and make ethical decisions, including using regulatory measures. The candidates will be trained to make decisions when faced with situations where ethics, legal, and the values of the technologies interplay through case studies.

Main Reference
1. Universal Declaration on Bioethics and Human Rights
2. Universal Declaration on the Human Genome and Human Rights
3. UNESCO’s Core Curriculum on Bioethics
4. World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) Reports

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

MQF7008
Practicum in Health Research Ethics (9 credits)

Learning Outcomes
At the end of this course, students are able to:
- Interpret the principles of research ethics in practical setting. (C5) (PLO3)
- Demonstrate leadership and teamwork while working with key population (C3) (PLO5)
- Solve real world ethical issue in research through various attachments and field work. (P4) (PLO6)

Synopsis
This course focuses on the practical aspects of research ethical issues in special populations including prisoners, those who are culturally vulnerable and with physical and mental illnesses and disabilities. It intends to provide a broad but reasonably detailed examination of central ethical issues in these populations. This course follows a format, which after an introductory session, time is devoted to gain hands-on experience through working with special populations, attending research ethics meetings, presentations, group discussions and development of the research report. The candidate will have the opportunity to be attached to two different research ethics committees, so that they can learn and compare different systems of reviewing research ethics. It teaches the candidates how to apply research ethical concepts as well as to equip them with the skills to appraise and solve research ethical problems when conducting research with these populations through field visits and feedback.

Main Reference
2. MOH. Medical Research and Ethics Committee. Availabler from http://nih.gov.my/web/mrec/

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQF7009
Good Clinical Practice (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- Apply the principles of Good Clinical Practice in Clinical Trial (C3,P1,A3) (PLO2)
Examine clinical trials that involve the participation of human subjects. (C4,A4,P2) (PLO4)
Solve ethical problems in Clinical Trials to ensure study subjects' wellbeing are safeguarded
(C5,A4,P5) (PLO6)

Synopsis
This course teaches international and local ethical and scientific quality standards for designing,
conducting, recording and reporting clinical trials that involve the participation of human subjects. It will
include ethical and regulatory issues related to the conduct of clinical trials such as responsibilities of
investigators, safety monitoring and reporting, legal issues in clinical trials, audit and inspections.
Besides, Good Clinical Practice, other relevant practice guidelines such as Good Laboratory Practice,
Good Manufacturing Practice, Good Statistical Practice will be covered.

Main Reference
1. Malaysian Guideline for Independent Ethics Committee Registration and
   Inspection, First Edition, 2016, NPRA, MOH.
2. Malaysian Guideline For Safety Reporting Of Investigational
3. Malaysian Guideline for Application of Clinical Trial Import Licence and
   Clinical Trial Exemption. 6.3 edition, July 2016, NPRA, MOH.
4. Guidelines For Good Clinical Practice (Gcp) Inspection, August
   2010, NPRA, MOH.
6. ICH Harmonised Guidelines

Assessment Weightage
Continuous Assessment: 100%
Final Examination: -

MQF7010
Ethics in Animal Research (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- Describe different methods and techniques used in experiments involving animals (C2, A3)
- Discuss ethical and welfare issues with regards to animal experimentation (C2, A3)
- Analyze the applications of laboratory animals in research (C4)

Synopsis
This course is designed to provide facts and instil principles essential to the humane use and care of
animals that will in turn ensure the quality of biomedical research. Students will be taught basic animal
biology and husbandry, as well as animal handling techniques during experimental procedures. The
students’ responsibilities towards the welfare of the animals used and the ethical concerns of biomedical
research will be emphasised.

Main Reference
   Academies Press.

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%
Healthcare Law and Ethics (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- Evaluate the ethical and medico-legal issues that might arise in health research;
- Analyse the adequacy or inadequacy of existing law in conducting and managing health research;
- Examine a specific health research ethics issue, present a critique of the issue and offer possible solutions.

Synopsis
The study of healthcare matters may be considered from four aspects. First the relationship between the healthcare provider and the patient; Second, the relationship between the state and the individual in relation to public health; Third, the relationship between the state and the healthcare provider and lastly, selected bioethics issues that require a consideration of the relationship between law and ethics in dealing with advances in science and technology.

The emphasis of this course is on the first aspect mentioned above, namely, the patient-doctor/hospital relationship. Selected bio-ethics issues will also be examined.

Main Reference

Assessment Weightage
Continuous Assessment: 70%
Final Examination: 30%

SQE7006
Ethics of Sustainability (3 credits)

Learning Outcomes
At the end of this course, students are able to:
- analyse ethical issues in sustainability based on basic ethical principles.
- suggest solution to contemporary ethical problems related sustainable development.
- exhibit skills associated with decision-making process.

Synopsis
Introduction to the worldview of modern science and emphasis on its relation with ethical issues of sustainable development. Ethical implications of new technologies and moral choices. Professional ethics in science, technology, experimentation and research related to sustainable development.

Main Reference
### Assessment Weightage

Continuous Assessment: 60%
Final Examination: 40%

### Master of Health Research Ethics

#### Programme Schedule

<table>
<thead>
<tr>
<th>Special Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- A practicum of nine (9) credits</td>
</tr>
<tr>
<td></td>
<td>- A research project of nine (9) credits</td>
</tr>
<tr>
<td></td>
<td>- Two (2) elective courses, each of three (3) credits, totalling six (6) credits; and</td>
</tr>
<tr>
<td></td>
<td>- Two (2) core courses, each of three (3) credits, totalling six (6) credits;</td>
</tr>
<tr>
<td>Semester I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Two (2) elective courses, each of three (3) credits, totalling six (6) credits</td>
</tr>
<tr>
<td></td>
<td>- Four (4) core courses, each of three (3) credits, totalling twelve (12) credits</td>
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<table>
<thead>
<tr>
<th>Examination</th>
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</thead>
<tbody>
<tr>
<td>(v) End of Semester I</td>
</tr>
<tr>
<td>(vi) End of Semester II</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Admission Evaluation)</td>
</tr>
</tbody>
</table>
Name of Programme : Doctor of Medicine
Mode : Research
Faculty : Faculty of Medicine

This programme is offered for Malaysian applicant, who is registered medical doctor working in University Malaya Medical Center (UMMC).

The Doctor of Medicine programme offered by the Faculty of Medicine, University of Malaya is a higher doctoral degree programme, to which the candidate must already have the necessary medical experience before application to this program.

The research component comprises one hundred (100) percent of this Doctor of Medicine Programme.

1. Entry Requirements

(1) A Master’s degree or equivalent in relevant fields;

Or

(2) Specialist qualification in clinical fields;

and

(3) The degrees in Bachelor of Medicine and Bachelor of Surgery or an equivalent qualification;

and

(4) At least two years working experience as a registered medical practitioners.

2. Duration of study

(1) The minimum duration of study shall be four (4) semesters.

(2) The maximum duration of study shall be ten (10) semesters.

3. Structure of Programme

(1) Thesis:

To supplicate for the degree of Doctor of Medicine, a candidate shall submit a thesis (not more than 100,000 words) which must be original work on a subject approved by the Senate on the recommendation of the Faculty and at the discretion of the examiners be examined in such manner as the examiners think fit on the subject matter of the thesis and related subjects;

A candidate may not submit this thesis earlier than twenty four (24) months nor later than five (5) years after the date of his initial registration except with the approval of the Senate. A candidate shall give at least three (3) months notice in writing to the Registrar of his/her intention to submit his thesis for Examination.
(2) **Research Methodology (MVX8001) (3 credits):**
   (a) Candidate must successfully complete Research Methodology Course (MVX8001) within the first two (2) semester of registering as a student at University of Malaya.
   (b) Pass your Proposal Defense by Semester II.

4. **Supervision**
   
   (1) The supervisor for a candidate shall be appointed when the area of research is approved.
   
   (2) The co-supervisor and/or consultant may be appointed at any time when required.

5. **Title of Research**
   
   The area of research for the dissertation shall be determined when the candidate is accepted for admission to the programme of study.

6. **Submission**
   
   (1) A candidate who is required to follow such course or courses as determined by the Faculty shall not be permitted to submit the dissertation until the Dean confirms that he has followed the course or courses to his satisfactions.
   
   (2) A candidate shall submit his/her thesis for examination within the period of candidature.

**MVX8001 Research Methodology (3 credits)**

Course Learning Outcomes
At the end of the course, students are able to:

4. Formulate the problem statement, research questions and/or hypotheses.
5. Critically appraise relevant literature from authoritative sources within respective research field.
6. Design appropriate research methods for their respective projects.

**Synopsis**
This course is designed to provide knowledge and skills to candidates regarding conducting research projects. The course consists of an overview of skills required for selecting appropriate research methods, designing Research Proposal, writing reports and thesis, conducting Literature Reviews, considering ethical issues, plagiarism and the use of the Turnitin software – statistical measures and the relevant use of analysis software.

**Main Reference**

**Assessment Weightage**
Continuous Assessment: 100%
Final Examination: -
1. **Classification of Programme**

The Doctor of Public Health programme is a mix mode programme (coursework and research) which the credits for the coursework component comprise less than thirty (30) percent of the whole programme of study. After completion of the relevant programme of study specified in this Schedule, a candidate shall be eligible for the award of the Doctor of Public Health degree.

2. **Entry Requirements**

   i. Entry requirements for admission into the Doctor of Public Health programme (Mix Mode) – [Regulations 3 (2)] are as follows:

   (2) The minimum qualifications for admission into the Doctor of Public Health programme are as follows:

   (i) A Master of Public Health degree with a CGPA of not less than 3.0 (or its equivalent); or

   (ii) A Master’s degree in the relevant Public Health field with a CGPA of not less than 3.0 (or its equivalent); and

   (iii) Have work related experience of at least one (1) year or for a certain period that has been decided by the Department from time to time

   ii. A non-Malaysian applicant whose degree is from a university or institution of higher learning where the medium of instruction for that degree is not the English language and where the applicant wishes to follow a programme and/or write his thesis in the English language shall be required:

   (a) To obtain a score of 600 for a paper-based total (PBT); a score of 250 for a computer-based total (CBT) or a score of 100 for an internet-based total (IBT) for the Test of English as a Foreign Language (TOEFL); or

   (b) To obtain a band of 6 for the International English Language Testing System (IELTS).

3. **Duration of Study**

   (1) The minimum duration of study shall be six (6) semesters.

   (2) The maximum duration of study shall be twelve (12) semesters.

4. **Structure of Programme**

The Doctor of Public Health programme of study with a total of 84 credit hours comprises the two following parts:

   i. Part 1 which consists of courses with a total of 24 credits includes –
(a) One Compulsory Core Course of three (3) credits;
(b) One Compulsory Internship Course of six (6) credits;
(c) Two Compulsory Professional Area Core Courses of three (3) credits each; and
(d) Three Professional Specialisation Courses of three credits each.

ii. Part 2 which consists of research that leads to a thesis of 60 credits.

A candidate must successfully complete Part 1 before he is allowed to proceed to Part 2.

A candidate shall attain a minimum of grade B in the Compulsory Core Course MWA8001 – Advanced Research Methods.

iii. The list of courses for the programme of Doctor of Public Health is provided in List 1.

5. Registration

(1) Registration for the courses of study shall commence the week prior to the start of the relevant semester.

(2) A candidate is required to register for at least three (3) credits in any semester except where the candidate has been permitted to withdraw from the semester concerned.

6. Attendance

(1) A candidate shall attend all programmes of instruction and research in respect of the programme of study he is attending except where the candidate has been granted medical or maternity leave by a registered medical officer or has been given leave of absence by the Dean of the Faculty.

(2) A candidate may with the approval of the Faculty undergo a part of the programme of study at another institution.

7. Supervision

(1) The Faculty shall appoint at least two (2) supervisors for each candidate not later than two months after the registration of the candidate.

(2) The maximum number of supervisors for each candidate allowed by the faculty is three (3). For a candidate requiring more than three supervisors, the Department shall provide justification to the Faculty.

(3) The co-supervisor and/or consultant shall be appointed when required.

(4) A consultant shall be appointed for a candidate who undertakes part of his programme of study outside the University. The consultant shall be appointed not later than two months after the candidate has commenced training in the outside location.

8. Title of Research

The title of the thesis for a candidate shall be submitted to the faculty for approval when the candidate has submitted the three months’ notice of submission of the thesis.
9. Submission

(1) A candidate shall submit his thesis for examination within the period of candidature.
(2) A candidate shall give at least three months’ notice in writing to the Faculty prior to the submission of his thesis for examination.

10. Examinations for the Degree

(1) The Examination leading to the degree of Doctor of Public Health shall consist of an examination; or examinations in each of the courses prescribed for Part 1 of the Doctor of Public Health degree programme as follows:

(a) One Compulsory Core Course of three (3) credits;
(b) One Compulsory Internship Course of six (6) credits;
(c) Two Compulsory Professional Area Core Courses of three (3) credits each; and
(d) Three Professional Specialisation Courses of three credits each.

(2) Examination Components and Allocation of Marks:

(a) Taught Courses

The components of the taught courses and the marks to be allocated to the components of the courses prescribed for the Examination shall be:

Component Allocation of Marks (Maximum)

(i) Continuous Assessment 50 -100%
(ii) End of Semester Examination 0 - 50%

Total 100%

(b) The Senate may on the recommendation of the Faculty amend the allocation of marks for the components of a course for the Examination.

(3) Write a thesis of 60 credit hours in Part 2.

(4) Course Grade Requirements

Course grades are subjected to regulations prescribed in the University of Malaya (Doctoral Degree) Rules 2017 and University of Malaya (Doctoral Degree) Regulations 2017.

11. Award of Degree

No candidate shall be recommended for the award of the Degree of Doctor of Public Health unless he has completed all parts of the course and has passed the prescribed Examinations.

List 1

List of Courses
## Part 1: Coursework Component
### Compulsory Core Course
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWA8001</td>
<td>Advanced Research Methods</td>
<td>3</td>
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</table>

### Compulsory Internship Course
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWA8006</td>
<td>Professional Internship</td>
<td>6</td>
</tr>
</tbody>
</table>

### Professional Area Core Courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWA8004</td>
<td>Essentials of Epidemiology in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>MWA8005</td>
<td>Health Policy and Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

### Professional Specialization Courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Area : Health Services Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MWA8003</td>
<td>Economic Evaluation in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>MWA8007</td>
<td>Human Resource Planning and Management</td>
<td>3</td>
</tr>
<tr>
<td>MWA8008</td>
<td>Health Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MWA8009</td>
<td>Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>MWA8010</td>
<td>Health Logistics Management</td>
<td>3</td>
</tr>
<tr>
<td>MWA8011</td>
<td>Quality in Health</td>
<td>3</td>
</tr>
<tr>
<td>(2) Area : Family Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MWA8012</td>
<td>Women's Health</td>
<td>3</td>
</tr>
<tr>
<td>MWA8013</td>
<td>Child and Adolescent Health</td>
<td>3</td>
</tr>
<tr>
<td>MWA8014</td>
<td>Lifetime Health</td>
<td>3</td>
</tr>
<tr>
<td>MWA8015</td>
<td>Nutrition and Lactation Management</td>
<td>3</td>
</tr>
<tr>
<td>MWA8016</td>
<td>Society, Behaviour and Health</td>
<td>3</td>
</tr>
<tr>
<td>(3) Area : Environmental Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MWA8017</td>
<td>Environmental Pollution</td>
<td>3</td>
</tr>
<tr>
<td>MWA8018</td>
<td>Food Technology and Health</td>
<td>3</td>
</tr>
<tr>
<td>MWA8019</td>
<td>Waste Management</td>
<td>3</td>
</tr>
<tr>
<td>(4) Area : Occupational Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MWA8020</td>
<td>Human Factor and Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>MWA8021</td>
<td>Disability Assessment</td>
<td>3</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
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<tr>
<td>----------</td>
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<tr>
<td>MWA8022</td>
<td>Occupational Lung Diseases</td>
<td>3</td>
</tr>
<tr>
<td>MWA8023</td>
<td><em>Occupational Safety and Health Management Systems</em></td>
<td>3</td>
</tr>
</tbody>
</table>

(4) Area: Epidemiology in Health

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MWA8024</td>
<td>Advanced Epidemiology</td>
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<tr>
<td>MWA8025</td>
<td>Clinical Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>MWA8026</td>
<td>Epidemiology of Communicable Diseases</td>
<td>3</td>
</tr>
<tr>
<td>MWA8027</td>
<td>Epidemiology of Non Communicable Diseases</td>
<td>3</td>
</tr>
</tbody>
</table>

(5) Area: Biomedical Statistics

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWA8028</td>
<td>Analysis of Rates and Proportions</td>
<td>3</td>
</tr>
<tr>
<td>MWA8029</td>
<td>Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td>MWA8030</td>
<td>Introduction to Meta-Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MWA8031</td>
<td>Principles of Clinical Trials</td>
<td>3</td>
</tr>
<tr>
<td>MWA8032</td>
<td><em>Qualitative Methods in Health Research</em></td>
<td>3</td>
</tr>
<tr>
<td>MWA8033</td>
<td>Critical Readings and Special Topics in Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>MWA8034</td>
<td>Nutritional Epidemiology</td>
<td>3</td>
</tr>
</tbody>
</table>

Part 2: Research Component

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWA8002</td>
<td>Tesis/Thesis</td>
<td>60</td>
</tr>
</tbody>
</table>

CORE COURSES

MWA8001 Advanced Research Methods (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Evaluate the various methods of data collection, questionnaire design, data management, data analysis utilising quantitative and/or qualitative research design to develop a research proposal
2. Apply ethical issues in conducting research
3. Write a research proposal

Synopsis
This course aims to further develop students understanding on the principles, concepts and methods of public health and health service research. The content of this course covers the theoretical considerations and practical steps of planning, implementation of research as well as the ethical principles and challenges of conducting research. In this course, higher level methods of appraisal and review of literature will be discussed. More complex form of study design will be examined in depth with consideration of both qualitative and quantitative methods. Students will be guided to develop the skills required to disseminate research plans and findings in a range of contexts.

Individual discussions with supervisor are mandatory in order to complete this course.

Main References
2. Szkelo M, Nieto FJ. Epidemiology Beyond the Basics. Jones and Bartlett Publishers; 2014

Assessment Methods
Continuous Assessment: 100%
Final Examination: -

MWA8002 Thesis (60 Credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Demonstrate a critical understanding of situational analysis, research, health policy, project management within the context of public health setting
2. Demonstrate the synthesis of knowledge based on critical appraisal of a situation, definition of a research problem, collection and analysis of relevant primary or secondary data, and the interpretation of these findings
3. Produce a thesis relevant to his/her research problem.

Synopsis
The DrPH thesis is the final academic test of candidate's competency addressing a practical problem confronting a leader in public health practice. The focus of the programme is on the scholarship of application and translation of health practice. This module requires candidate to apply key features of the taught curriculum to improve understanding of an important public health-related issue. The thesis will demonstrate candidate's mastery of skills and knowledge needed to lead a health-related programme, suggest change in the guideline or policy and/or develop new methods to accomplish the stated goals. The thesis must be based on original research, worthy of publication and acceptable to the department.

Main References

Assessment Methods
Final Examination: 100%

**MWA8004 Essentials of Epidemiology in Public Health (3 credits)**

Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply the principles and methods of epidemiology and the quantitative approach to clinical and public health problems.
2. Identify the important elements of study design, data analysis and inference in epidemiology research
3. Define ethics and its importance to epidemiology, and solve problems of dealing with uncertainty in making public health policies.

Synopsis
This course will provide an orientation to epidemiology as a basic science for public health and clinical medicine. It provides an introduction to the terminology and methods used in the core scientific practices of public health. It will address the principles of the quantitative approach to clinical and public health problems. One of the important components in understanding these concepts is through literature appraisal. Critical readings in epidemiology will enable candidates to make objective, sound and independent evaluations of the literatures read.

Main References

Assessment Methods
Continuous assessment: 50%
Final Examination: 50%

**MWA8005 Health Policy and Leadership (3 credits)**

Learning Outcomes
At the end of this course, the candidate is able to:
1. Evaluate the different processes involved in the formulation of health policies and the impact of health policies on performance of health systems
2. Evaluate type of leadership skills required in public and private health sectors.

Synopsis
An introductory course on the study of public policy & leadership. It explains the basis, development and importance to public health, rules and regulations formulation and its impact on organisation and community. The student will also be exposed to the role of advocacy (persuasion) which is used to convince policy makers (governments) on its adoption. The role of good leadership in public health practitioner will also be explored in this activity.

Main References

Assessment Methods
Continuous assessment: 50%
Final examination: 50%

**MWA8006 Professional Internship (6 credits)**
Learning Outcomes
At the end of this course, the candidate is able to:
1. Determine the healthcare system and the policy in the implementation of the healthcare programs.
2. Integrate the relationship of public health problems, the role of society and pressure groups in the formulation of policy and implementation of healthcare programs.
3. Experience the politics of getting problems to the government’s perception and priorities.

Synopsis
An introductory course on the study of public policy & leadership. It explains the basis, development and importance to public health, rules and regulations formulation and its impact on organisation and community. The student will experience the role of advocacy (persuasion) which is used to convince policy makers (governments) on its adoption. Practicing good leadership and management of public health system.

Main References

Assessment Methods
Continuous Assessment: 100%

**ELECTIVE COURSES**

**MWA8003 Economic Evaluation in Health Care (3 credits)**
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply the common tools for Economic Evaluation studies.
2. Make decision based on the various methods of costing for healthcare
3. Conduct a health economic evaluation project.
4. Interpret the findings of economic evaluation studies

Synopsis
This course provides the skill in conducting health economic evaluation and evaluating the various economic evaluation studies.

Main References

Assessment Methods
Continuous Assessment: 100%

**MWA 8007 Human Resource Planning and Management (3 credits)**
Learning Outcomes
At the end of this course, the candidate is able to:
1. Explain the concepts of human resource planning and management in health care organization.
2. Identify and implement the various methods and principles used in planning human resource, recruit, train and appraise in health care organization.
Synopsis
This course deals with most of the facets of current thinking on human resource management. The aim is to equip potential public health specialists in health and hospital services management with the knowledge, attitudes and skills to deal with human resources in the future.

Main References

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8008 Health Law and Ethics (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Assess relevance and impact of relevant health laws to the management and administration of health services.
2. Assess relevance of the ethical basis of health care guidelines and laws governing provision of health care

Synopsis
An introductory course in the assessment of the application and impact of various laws governing the provision of health care services. Students will also review ethical basis for such health laws.

Main References

Assessment Methods
Continuous assessment: 50%
Final examination: 50%

MWA 8009 Health Economics (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply the concepts of economics to healthcare.
2. Conduct a health economic evaluation project.
3. Make comparison on the respective healthcare system and the healthcare financing system in the world and identify the strength and weaknesses of each system

Synopsis
This course provides the skill in conducting health economics evaluation and evaluating the various financial and healthcare systems in the world.

Main References

Assessment Methods
Continuous assessment: 100%

MWA 8010 Health Logistics Management (3 credits)

Learning Outcomes
At the end of this course, the candidate is able to:
1. Explain how technology in health is developed, adopted, diffused, used, assessed and managed.
2. Determine the various logistics tasks in patient-related medical secondary processes with specific reference to information and documentation management, drug management, maintenance of medical equipment and facilities, logistics of sterile goods, and disposal of hazardous waste.
3. Determine the various logistics tasks in patient-related non-medical secondary processes with specific reference to food management, management of linen and laundry, and cleansing services.
4. Determine the various logistic tasks in patient remote tertiary processes with specific reference to management of administrative demands, mail service, and disposal of non-hazardous waste.

Synopsis
This course introduces the concepts of health technology assessment, defines the scope of health technology assessment and management. It does also explore the other aspect of health logistics which is related to this course.

Main References
2. Sebastian, Hans-Jürgen, Kaminsky, Phil, Müller, Thomas (Eds.) Quantitative Approaches in Logistics and Supply Chain Management; 2013. Springer International Publishing Switzerland.

Assessment Methods
Continuous Assessment 60%,
Final examination: 40%

MWA 8011 Quality in Health (3 credits)

Learning Outcomes
At the end of this course, the candidate is able to:
1. Describe the concepts of quality assurance in health care.
2. Develop quality assurance programme in health care organization.
3. Apply quality assurance programme in health care organization.

Synopsis
This course introduces the philosophy of quality in health from planning to the process. It also covers health management and the importance of leadership, teambuilding and internalization of quality.

Main References

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8012 Women’s Health (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Recommend population based approach to improved women's health.
3. Differentiate and decide the beneficial and harmful practices including traditional practices in MCH and its dangers during antenatal care, labour and post partum.

Synopsis
Aspects on women’s health will be covered in detail. The topics such as gender issues and violence and infertility will be covered to give a wider perspective of women’s health. Basically the health of the women depends on many issues beyond the scope of health services and these will be discussed. International issues related to women’s health will be discussed.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8013 Child and Adolescent Health (3 credit)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Integrate the importance and principles of early childhood development and the relationship between health and nutrition, psychological and social development of children.
2. Critically analyse the child & adolescent health programmes implemented in Malaysia

Synopsis
Child health will cover in more detail on the topics that have been covered in MPH syllabus. Communicable and non-communicable diseases will be covered. New areas like child abuse, new vaccines and the child’s rights will also be discussed. The adolescent health includes the theories of behaviour change, access to health care, and guidelines to preventive services available in the country.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8014 Lifetime Health (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply knowledge and principle of Public Health to current lifetime health problem.
2. Critically appraise Family Health Programmes implemented in Malaysia
3. Perform a situational analysis of public Health problem across the Lifetime and strategies future program

Synopsis
This will discuss the health problems of the segments of the population from womb to tomb and how the issues are addressed in the country. The physical, social, psychological and emotional, problems will be discussed.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8015 Nutrition and Lactation Management (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Critically appraise current health problems, the evidence relating dietary factors to health and disease with methods of implementation.
2. Analyse Nutritional Plan of Action Malaysia (NPAM) and the implementation for communities which are at risk for nutritional disorders
3. Discuss the principles and concepts for nutritional supplement feeding, types and benefits.

Synopsis
The course will cover in more detail topics on the latest strategies and programmes in nutrition.

Main References

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8016 Society, Behaviour and Health (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Critically appraise the contribution of medical sociology to health, health beliefs and practices, deviance, labelling, stigmatisation and social control.
2. Analyse the social determinants of health & the implications of social class on planning health policies and programmes.
3. Apply the concept of mass media, social marketing and community development approach in Health Promotion.

Synopsis
The Society, Behaviour and Health course will provide current knowledge in the field of behavioural sciences and health promotion.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8017 Environmental Pollution (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Identify the various environmental pollutants.
2. Evaluate the pollutants related to human health.
3. Formulate pollution prevention and control programmes related to human health.

Synopsis
This course will provide the candidate with in-depth knowledge of environmental pollution and its relation to human health. The candidate will learn different types of environmental pollution in general followed by each specific pollutant and possible health risks and prevention and control. The candidate will have better understanding of the diseases related to pollution and plan for prevention programmes to reduce the effect of pollution on human health.

Main References
4. Understanding Environmental Health: How We Live in the World, Nancy Irwin Maxwell Jones and Bartlett learning 2013
8. Basic Environmental Health, Annalee Yassi, Oxford University Press 2001

Assessment Methods
Continuous Assessment: 100%

MWA 8018 Food Technology and Health (3 credits)

Learning Outcomes
At the end of this course, the candidate is able to:
1. identify various food-borne diseases and food processing critical control points
2. evaluate Food Safety and Quality Control
3. formulate Food Technology and Health Hazards Management

Synopsis
This course will provide the candidate with in-depth knowledge of food technology in relation to human health. The candidate will learn different types of food processing, food safety and quality control in various stages in general and ministry in particular. The candidate will have better understanding of the current issues related to foods and how to involve in prevention and control of the food related health hazards in the community.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8019 Waste Management (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Identify the different types of waste in the environment and various solid waste, waste water and excreta disposal systems
2. Evaluate various existing wastes management and disease control
3. Recommend new wastes management and disease control methods

Synopsis
This course will provide the candidate with in-depth knowledge of wastes management and its relation to human health. The candidate will learn different types of various waste disposal systems and how to apply in different situations. The candidate will have better understanding of the current issues related wastes management, and how to involve in prevention and control of the waste related health hazards in the community.

Main References
5. Basic Environmental Health, Annalee Yassi, Oxford University Press 2001

Assessment Methods
Continuous Assessment: 100%

MWA 8020 Human Factor and Ergonomics (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Describe the relationship between ergonomics, human factors, the limits of human capacity and diseases.
2. Evaluate the workstations and work environment in relationship to ergonomics principles
3. Recommend modifications to the workstations and work environment to improve ergon

Synopsis
This course will provide the candidate with an in-depth knowledge of ergonomics and human factors. The candidate will learn workplace assessment and the limits of human capacity. The candidate will have better understanding of the diseases related to ergonomics and workstation design.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8021 Disability Assessment (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. analyse the principles of disability assessment based on AMA guidelines and SOCSO guidelines
2. evaluate the level of disability and impairment of individuals for the purpose of compensation and return to work
3. recommend an appropriate programme for return to work in a disabled person
Synopsis
This course will provide the candidate the skill to conduct Disability and Impairment Assessment and develop return to work programmes.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8022 Occupational Lung Diseases (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. identify the types of Occupational Lung Diseases that occur due to workplace exposures
2. diagnose and manage the individual with occupational lung diseases
3. manage return to work and compensation issues in occupational lung diseases

Synopsis
The course will provide the candidate the knowledge and skills on the types of occupational lung diseases, diagnosis, management, return to work and compensation issues related to occupational lung diseases.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8023 Occupational Safety and Health Management Systems (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Analyse the OSH management systems and standards like ISO, OSAS 18000 and ILO-OSH MS
2. Evaluate Occupational Health Policy and management systems to the needs of an organisation
3. Recommend OSH management systems in improving safety and health issues in an organisation

Synopsis
This course will provide the candidate the knowledge on the International Labour Organisation-Occupational Health Management Systems. The course will include the planning and implementation of the system in an organisation.

Main References

Assessment Methods
Continuous assessment: 100%

MWA 8024 Advanced Epidemiology (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply and analyse the history of epidemiology, epidemiologic concepts, analytical approaches, and interpretation of study results.
2. Identify modelling issues in multivariate regression analysis for etiologic studies (case control and cohort studies).
3. Perform survival analysis, mathematical modelling and the causal theory.

Synopsis
Epidemiology provides the scientific basis for much of public health and clinical practice. The current revolution in health care and disease prevention indicates that the demand for valuable results from this field will continue to grow. This module provides in-depth discussion for understanding the common problems faced in the design, conduct and analysis as well as interpretation of research. Topics on causal inferences will be discussed in much wider perspective.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8025 Clinical Epidemiology (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. apply the principles and methods of clinical epidemiology and related issues
2. critically appraise the quantitative epidemiology literature, including clinical guidelines and patient-based measures used in clinical setting

Synopsis
The aim of the course is to introduce the candidates to make rational evidenced based decisions in clinical practice. Clinical epidemiology attempts to answer clinical questions relevant to the daily practice of medicine and to improve patient care. It focuses on individuals or groups of patients in clinical settings. The tasks of clinical epidemiology in clinical sciences, the concepts, methods and tools will be presented and discussed; particular emphasis will be place on the use of randomised trials and observational study design.

Main References
Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8026 Epidemiology of Communicable Diseases (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Interpret infectious diseases epidemiology, including outbreak investigation, surveillance, analysis of infectious diseases data, and laboratory testing of specimens;
2. Evaluate the different control strategies for infectious diseases, including infection control, antimicrobial management, immunization, risk factor modification, and screening;
3. Apply Infectious Disease Modelling for informed decision-making.

Synopsis
This course is designed to provide students with an overview of the principles and practices of infectious diseases epidemiology with focus on how the presence and control of communicable diseases affects public health locally, nationally and internationally.

Main References

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8027 Epidemiology of Non Communicable Diseases (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply principles of life course approach to non-communicable disease epidemiology
2. Appraise molecular biomarkers in measuring exposure, susceptibility and disease outcomes in epidemiological studies of non-communicable diseases
3. Distinguish between determinants of disease at an individual level and at a population level

Synopsis
The course is designed to provide an in-depth understanding on the epidemiology of several important non-communicable diseases and conditions. The focus of this course is on the principles and methods of epidemiology and prevention that are of particular relevance to non-communicable diseases. The course introduces the new aspects in epidemiology ie: Mendelian randomization, molecular biomarkers etc.

Main References
1. Randall H. Epidemiology of Chronic Diseases Global Perspective, Jones and Bartlett Publishers; 2013
2. Kuh D, Ben-Shlomo Y. A Life course approach to Chronic Disease Epidemiology, Oxford University Press, 2004

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

**MWA 8028 Analysis of Rates and Proportions (3 credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Construct various measures of health occurrences
2. Perform statistical analysis for categorical data
3. Perform statistical analysis for time to event data

**Synopsis**

This module will emphasize concepts and methods for analysis of data that are of categorical and rate-of-occurrence (e.g., incidence rate), and time-to-event (survival duration). The module will divide into two parts. The first part covers topics such as measures of association, 2x2 tables, stratification, matched pairs, logistic regression and model building. The second half of the module covers methods for analysis of rates and survival data. These include hazard, survivor, and cumulative hazard functions, Kaplan-Meier and actuarial estimation of the survival distribution, comparison of survival using log rank and other tests, regression models including the Cox proportional hazards model, adjustment for time-varying covariates, and use of parametric distributions (exponential, Weibull) in survival analysis. Class material will include presentation of statistical methods for estimation and testing, along with current software (Stata, SPSS, SAS) for implementing analysis of survival data. Applications of statistical methods will be emphasized.

**Main References**


**Assessment Methods**

Continuous Assessment: 100%

**MWA 8029 Statistical Computing (3 credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. manage and process data in terms of secure and safe storage, data cleaning and data editing.
2. perform appropriate statistical analyses for the right type of data
3. create and use codes (syntax/commands) in performing data analysis operations

**Synopsis**

This module will emphasize concepts and methods for analysis of data by the use of statistical programs. In this course the students are exposed to current statistical programs i.e. Stata, SPSS, SAS. It is a prerequisite that the students have already acquired a good understanding of basic principles of statistics before using such programs.

**Main References**


**Assessment Methods**

Continuous assessment: 80%
Final Examination: 20%

**MWA 8030 Introduction to Meta-Analysis (3 credits)**

**Learning Outcomes**
At the end of this course, the candidate is able to:
1. develop a protocol of conducting meta analysis
2. develop search strategies and critically appraise the evidence
3. interpret statistical methods used to pool estimates
4. explain heterogeneity and meta regression

Synopsis
This is an introduction of meta-analysis and is concerned with the use of existing data to inform clinical decision-making and health care policy, the course focuses on research synthesis (meta-analysis). The principles of meta-analytic statistical methods are reviewed, and the application of these to data sets is explored. Application of methods includes considerations for clinical trials and observational studies. The use of meta-analysis to explore data and identify sources of variation among studies is emphasized, as is the use of meta-analysis to identify future research questions.

Main References

Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%

MWA 8031 Principles of Clinical Trials (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. critique a clinical trial
2. Design and prepare a proposal for clinical trial
3. Conduct a clinical trial

Synopsis
The module is designed for individuals interested in the scientific, policy, and management aspects of clinical trials. This provides an understanding of the principles of clinical trials. Topics include the types of clinical research, organization, study design, treatment allocation, randomization and stratification, quality control, protocol adherence and compliance, sample size requirements, patient consent, and interpretation of results. It will also cover ethical considerations, safety data reporting and data collection techniques. Students design a clinical investigation in their own field of interest, write a proposal for it, and critique recently published medical literature.

Main References
1. Friedman L, Furberg C, Demets D. Fundamentals of Clinical Trials: Springer-Verlag GmbH; 2014

Assessment Methods
Continuous assessment: 100%

MWA 8032 Qualitative Methods in Health Research (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Apply qualitative methodologies in their research projects
2. Critically appraise quality of qualitative research in the literature.
3. Discuss ethical issues in the conduct of qualitative research

Synopsis
This course is mainly concerned with the development of capacities and skills in using a range of qualitative research techniques in health. It is expected that the students will be familiar with the
theoretical foundations of qualitative research and common methods of data collection, sampling techniques, validity, ethical issues, and data analysis to apply in their research projects. The unit also seeks to enhance students’ knowledge and skills to critically assess qualitative research by the end of the course.

Main References

Assessment Methods
Continuous assessment: 100%

MWA 8033 Critical Readings and Special Topics in Epidemiology (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. critically appraise hybrid study designs that can be used for data collection;
2. synthesize scientific evidence to refute research questions; and
3. critically appraise scientific articles for errors and bias

Synopsis
This course examines common problems in the design, analysis, and interpretation of observational studies. Problems of exposure and disease definitions, time-dependent effects, confounding, and misclassification are considered in the light of data sources typically available. Relevant statistical methods are discussed. The module also discusses the surge of epidemiology activities, its expanded scope and influence to other disciplines.

Main References

Assessment Methods
Continuous Assessment: 100%

MWA 8034 Nutritional Epidemiology (3 credits)
Learning Outcomes
At the end of this course, the candidate is able to:
1. Conduct various methods of nutritional assessments
2. Analyse nutritional data
3. Apply the principles of nutritional epidemiology to clinical practice

Synopsis
This course is designed for candidates who are interested in conducting or better interpreting epidemiologic studies relating diet and nutrition to health and disease. There is an increasing awareness that various aspects of diet and nutrition may be important contributing factors in chronic disease. This course aims to examine epidemiologic methodology in relation to nutritional measures, and to review the current state of knowledge regarding diet and other nutritional indicators as etiologic factors in disease.

Main References
2. Willett W. Nutritional epidemiology: Oxford University Press; 2013


Assessment Methods
Continuous Assessment: 50%
Final Examination: 50%
K. PATHMARAJAH MEMORIAL AWARD

The K. Pathmarajah Memorial Award is an annual award established from the income of a fund of RM10,800.00 donated by members of the Manipal Alumni Association, family and friends in memory of the late Dr. K. Pathmarajah formerly lecturer in the Faculty of Medicine.

Rules

1. The K. Pathmarajah Memorial Award shall be awarded to the best student in the Part II Examination for the Degree of Master of Anesthesiology.

2. The award shall be made by the Senate on the recommendation of the Board of Examiners for the examination concerned.

3. The award shall take the form of a gold medal up to a value of RM500.00.

4. The gold medal shall not be awarded in any academic year if no candidate is deemed worthy of the award. In such event the funds available for that academic year shall be carried forward for additional awards in any subsequent academic year if there is more than one candidate worthy of the award.

DR. RANJEET BHAGWAN SINGH AWARD

The Dr. Ranjeet Bhagwan Singh Award has been established from the income of a fund of Ringgit 5,000 donated to the University of Malaya by Dr. Ranjeet Bhagwan Singh for award to the best student in the Master of Pathology Examination.

Rules

1. The Dr. Ranjeet Bhagwan Singh Award shall take the form of a gold medal which shall be awarded annually by the Senate of the University of Malaya to the best student in the Master of Pathology Examinations.

2. The award shall be made by the Senate on the recommendation of the Board of Examiners concerned.

3. No award shall be made if there is no candidate of sufficient merit in any academic year. In such event, the fund available shall be carried forward to provide for an additional award in another year if there are more than one candidate of sufficient academic merit.

4. The cost of the award shall be met from the income derived annually from the donation.

MASTER OF RADIOLOGY PRIZE

The Master of Radiology Prize was established with a donation of Ringgit Ten Thousand from Pribumi Sdn. Bhd. and Ringgit Five Thousand from Meditel Electronics Sdn. Bhd. to the University of Malaya. The prize will be awarded annually to a student with the best overall achievement in the Master of Radiology Program based on the final examination for the degree of Master of Radiology. The cost of the prize will be met from the income derived annually from this donation.
Rules

1. The Master of Radiology Prize shall be awarded annually to one student with the best achievement in the Program based on the final examination for the Degree of Master of Radiology.

2. The award shall be made by the Senate on the recommendation of the Board of Examiners concerned.

3. A candidate who has failed in any of the Part I, Part II or Final Assessment shall not be considered for this prize.

4. The first award shall commence based on the academic achievement of the student in the examination for the 2001/2002 Academic Session.

5. The prize will be in the form of cash with a value of RM600.00.

6. No award shall be made in any academic year if there is no candidate of sufficient academic merit. In such an event, the funds available will be carried forward to provide for additional awards in any subsequent academic year where there is more than one candidate of sufficient merit.

MASTER OF MEDICAL PHYSICS PRIZE

The Master of Medical Physics Prize was established with a donation of Ringgit Ten Thousand from Primabumi Sdn. Bhd. and Ringgit Five Thousand from Meditel Electronics Sdn. Bhd. to the University of Malaya. The prize will be awarded annually to a student with the best overall achievement in the Master of Medical Physics Program based on the final examination for the degree of Master of Medical Physics. The cost of the prize will be met from the income derived annually from this donation.

Rules

1. The Master of Medical Physics Prize shall be awarded annually to one student with the best achievement in the Program based on the final examination for the Degree of Master of Medical Physics.

2. The award shall be made by the Senate on the recommendation of the Board of Examiners concerned.

3. A candidate who has failed in any of the Semester I or Semester II Examination shall not be considered for this prize.

4. The first award shall commence based on the academic achievement of the student in the examination for the 2001/2002 Academic Session.

5. The prize will be in the form of cash with a value of RM600.00.

6. No award shall be made in any academic year if there is no candidate of sufficient academic merit. In such an event, the funds available will be carried forward to provide for additional awards in any subsequent academic year where there is more than one candidate of sufficient merit.
DR. JOHN BOSCO AWARD

The John Bosco Award is an annual award established from the John Bosco Memorial Fund which was started with donations from family and friends of the late Professor John Bosco, former head of the Department of Medicine.

Rules

1. The John Bosco Award is to be given to the best and most worthy candidate who passes the part II and final examination for the degree of Master of Internal Medicine. He or she must not fail in any section of the exams clinical or written and the candidate should show consistent performance through his or her training.

2. The award shall be in the form of a book prize and the total value of RM2000.00.

3. Dr. John Bosco award shall be made on every session by the Senate on the recommendation of the Board of Examiners concerned.

4. The award may be withheld if no candidate is deemed to be of sufficient merit in any academic year. In such event, the fund shall be carried forward to provide for an additional award in another year if there is more than one candidate of sufficient academic merit.

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SNM 28.4.2019
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**SPECIALTY**

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Notes:
* Programmes offered for International candidates only.

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TAN SRI DANARAJ MEDICAL LIBRARY

SERVICES

Academic Services
Tan Sri Danaraj Medical Library

The Medical Library on the 3rd floor of the faculty contains around 100,000 volumes and subscribes to around 2,000 current journals. An extensive collection of reference works, printed indexing and abstracting services are maintained. It permits access to a number of databases both on-line and on compact disk in the various fields of medicine and allied health care. In addition, the library offers cassette-tape, tape-slide, video-viewing and discussion room facilities, inter-library loan, photocopying and document binding services. Branch libraries are at the Klang and Kuala Langat District Complexes. These libraries aim to provide good quality and friendly service in a pleasant environment. Care of all library material is essential to maintaining this standard. Instructions regarding the use of facilities should be obtained from library staff.

The Main UM Library situated in the main campus contains more than 1 million volumes, a microfilm processing unit and photostating facilities.

Library times:
Mon-Fri: 0800 – 2230 hr
Sat & Sun: 0800 – 1630 hr

MULTI-DISCIPLINARY LABORATORIES

A special facility at FOM is the multidisciplinary laboratories commonly known as the MD Labs (I and II). As their name implies, these labs serve various purposes which include wet and dry laboratory practical’s, tutorials, self-directed learning stations, structured paraclinical examinations as well as for tutorial and self learning. It also serves as a home-based for the students.
**CLINICAL SKILLS LABORATORIES**

The Clinical Skill Laboratory (CSL) of Faculty of Medicine provides facilities for the teaching of clinical skills and procedures. It is equipped with wide range of simulators. The centre allows medical and paramedical students and doctors to use these simulators for learning and practicing the clinical skills and procedures in a safe, controlled environment. For detail information check its webpage: [http://www.ummc.edu.my/csl](http://www.ummc.edu.my/csl).

![Clinical Skill Laboratory](image1.jpg)

**COMPUTER LABORATORIES**

The computers laboratories equip with a total of 90 computers are available to students of UMMC for various computer-aided learning programmes. These laboratories are opened up to 11.30 pm on working days.

![Computer Laboratories](image2.jpg)
MEDICAL ILLUSTRATIONS AND MULTIMEDIA DEVELOPMENT UNIT

This unit is a centre for the production of media and resources to support teaching and research at the faculty. Comprehensive photographic and graphic services are offered as well as a fully equipped video unit. Other services include management of the Faculty’s lecture theatres and audiovisual equipment.

ANATOMY RESOURCE CENTRE

The Anatomy Resource Centre (ARC) has been designed to emphasise clinically relevant anatomy and stimulate ‘active learning’ in students in a pleasant conducive environment. Although designed as a multidisciplinary resource primarily for medical students, it also serves the needs of dental students and others from the allied health sciences as well as postgraduate health professionals. In addition, the ARC plays a very vital role in educating the public about the importance of anatomy in clinical medicine (see below).

Key features include potted and plastinated cadaveric specimens, a range of diagnostic images and clinical scenarios quizzes. In addition, activity stations have been designed to focus on interactive learning through multimedia computers, educational anatomy software/ medical websites as well as anatomy videotapes. Dedicated timetable slots in the Phase I medical course encourage self-learning in the ARC by medical students. All regular ARC users are issued with security smart cards to enter and exit the centre. User profile of the ARC is continuously recorded and analysed from computerised door entry records. Student perception of ARC educational value is assessed regularly through feedback questionnaires surveys.
CENTRAL PATHOLOGY MUSEUM

UNIVERSITY BOOK STORE (MEDICAL)

Located on the ground floor of Menara Timur in UMMC, the Medical Book Store stocks a comprehensive supply of medical textbooks in all medical disciplines. It also stock student’s clinical learning aids and stationaries.

MEDSOC

You can have complete information on the Medical Society and their activities at the FOM website.
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ACCOMMODATION

The Ibnu Sina Residential College houses 700 Faculty of Medicine students. A branch hostel in Klang, next to the Hospital is specially for medical students in Phase III. Full board and lodging is provided at reasonable rates.

Further information for on-campus or off-campus accommodation can be obtained from the Student Affairs Section, UM.

STUDENT SCHOLARSHIP/LOANS UNIT

This unit, located in the Student Affairs Section, UM handles applications for scholarship/loans from national, state and statutory bodies, including private companies and philanthropic organizations.

STUDENT HEALTH CLINIC

Mon-Fri: 0800 – 1230
Sat: 0800 – 1245 hr
No service on Sun/public holiday
This service is available to all students throughout the year. The clinic is situated in the 12th Residential College building in UM

UM MEDICAL CENTRE

A 24-hour emergency medical service is available to all UM students at the Accident & Emergency Unit of the UM Medical Centre.

STUDENT COUNSELING SERVICE

Mon-Fri: 0900 – 1230hr
Sat: 0900 hr
A confidential counseling service available for all UM students, is offered by the Student Development Section, which is situated at the Perdanasiswa Complex.

The UM Medical Center provides an added counseling service for its students. For further information, please refer to current faculty notices on Counseling Service.
PEKAN BUKU (0900 – 1700 hr)

A large bookshop is strategically placed at the Perdanasiswa complex (C). Prices are competitive and the range is wide. A branch outlet for medical books is available on the ground floor of the main hospital block.

PEKAN SISWA (0900 – 1700 hr)

A minimarket on the ground floor of the Baktisiswa building is available for foodstuff, porting and electrical goods.

MOSQUE

Masjid Al-Rahman is situated at the main entrance to UM. A surau is situated adjacent to the hospital. A newly built surau is situated in the Faculty of Medicine at level 4 between the Department of Anatomy and Molecular Medicine.

SHOPS - PHARMACY, FRUITSHOP & FLORIST

These shops are available on the first and ground floor of the main hospital block.

BANKING FACILITIES

A CIMB is situated on the ground floor of the new administrative building in the campus. A CIMB and a Bank Islam auto-teller machine is available on the ground floor of the main hospital block. A Bank Simpanan Nasional branch is situated in the Siswarama building on the main campus. Bank Islam is situated on the ground of the new examination building in the campus.
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Thank you
Prepared by:

Postgraduate Section, Deans Office
Faculty of Medicine
University of Malaya