



UNIVERSITY  
OF MALAYA  
Faculty of Medicine

# Postgraduate Handbook

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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 2614 full-time and part-time undergraduate and postgraduate students including more than 500 postgraduate researchers.

We undertake a range of high-quality teaching and research programmes facilitated by an experienced and enthusiastic faculty of academic staff and the privilege of having a large and busy tertiary care teaching hospital on site. 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 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 disease and conditions such as cancer, infectious diseases, and diabetes and improving patient care and outcomes and to public health. 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.

Through the years the academic staff of the Faculty of Medicine has developed a vast network of international collaborators who can provide a 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.

A handwritten signature in black ink, appearing to read 'Adeeba'.

**PROFESSOR DR. ADEEBA BINTI KAMARULZAMAN**  
Dean  
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2015



Welcome to University of Malaya and the Faculty of Medicine!

I extend my warmest congratulations to you all on your new beginning as postgraduate students. I hope that the next few years will turn out to be a most happy, meaningful and memorable time of your life.

Please always feel free to discuss any problem with your supervisors and academic staff or with us at the Dean's office. As you begin a new phase of your studies, I would like to share with you some words of wisdom from two great men of the past.

Ralph Waldo Emerson once wrote poetically about the importance of doing your very best in a manner true to yourself. There is no need to get agitated by comparing yourself with others so long as you are fully exerting yourself to reveal your own unique potential. He said: *"These roses under my window make no reference to former roses or to better ones. .... There is simply the rose; it is perfect in every moment of its existence. Before a leaf-bud has burst, its whole life acts; in the full-blown flower there is no more; in the leafless root there is no less. Its nature is satisfied, and it satisfies nature, in all moments alike. There is no time to it. But man postpones or remembers; he does not live in the present, but with reverted eye laments the past, or, heedless of the riches that surround him, stands on tiptoe to foresee the future. He cannot be happy and strong until he too lives with nature in the present, above time."*

Victor Hugo wrote in the novel, *Les Miserables*, *"There is a prospect greater than the sea, and it is the sky; there is a prospect greater than the sky, and it is the human soul."* Indeed, life is the most precious treasure. Whether in the hospital ward, in the outpatient clinic, in the community or in the laboratory, your subject of study in medicine is ultimately life itself. I hope that in the course of your studies in the Faculty of Medicine, you will discover even more how fascinating and precious life is, and dedicate yourselves to studying, protecting, supporting, healing and nurturing it.

All of us in the Faculty of Medicine warmly welcome you once again, wishing you good health and every success in all your endeavours. Please also convey our gratitude and best wishes to your parents and family members who have continued to support you to this day.

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Associate Professor Dr Victor Hoe Chee Wai Abdullah MBBS (Mangalore), MPH (Mal), MPH (OH) (Mal), Meng (Safety, Health & Env) (Mal), PhD (Aust)

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Dr Marzuki bin Isahak MBBS (Mal), MPH (Mal), DrPH (Mal)

Dr Maslinor Ismail MD (UKM), MPH (Mal), MPH (Family Health)(Mal)

Dr Nasrin Agha Mohammadi BSc. (Environmental Health Engineering) (Iran), MSc (Civil Engineering) (USM), PhD (Mal)

Dr Nik Daliana binti Nik Farid MBBS (Aust), MPH (Mal), DrPH (Mal)

Dr Rafdzah binti Ahmad Zaki MBChB (Liverpool), MPH (Mal), DrPH (Mal)

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Associate Professor Dr Oliver Hautmann (GMC, UK), Full Specialisation Consultant PhD (ULM (Germany), FRCS (England)

Dr Ahmad Rafizi Hariz bin Ramli MBBS (Mal), MS (Mal) - Attachment

Dr Chong Hoong Yin MBBS (Mal), MS (Mal)

Dr Koh Peng Soon MS (Mal) – study leave

Dr Lau Peng Choong MBBS (Mal), MS (Mal) – study leave

Dr Ng Khoon Leong MBBS, FRCS (Edin), FRCS (Glasg)

Dr Pok Eng Hong MBBS (Mal), MS (Mal)

Dr Sandip Kumar a/l Mahendra Kumar MBChB (Hons (UK)), MRCS (Edinburg), MS (Mal) - study leave

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Associate Professor Dr Yik Yee Ian MBBS (Mal), MS (Mal), MRCSEd, PhD (Melb)

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Dr Ganesh a/l P.Vythilingam (MAHE), MS (Pediatric Surgery) (Mal), MRCS (Ireland)

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Associate Professor Dr Ong Teng Aik MBBS (Mal), MS (Mal), FRCS (UK), FEBU (European), FRCSI (Ireland)

Dr Khaidhir bin Haji Abu Bakar MBBS (Queensland), MS (Mal)

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Dr Shanggar a/l Kuppusamy MBBS (MAHE), MS (Mal)

Dr Siti Nur Masyithah binti Ma'arof MBBS (Mal), Ms (Mal), Master of Clinical (Equal to PhD)

Dr Sivaprakasam a/l Sivalingam MS (Mal), MRCS (Edin)

Dr Thi Ha Htun MBBS, FRCS (Edin), MS (Mal)

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Dr Sek Weng Yew (Kevin) *MD (Canada), MS (Mal) – study leave*  
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Dr Wan Zamariah binti Wan Ishak *MBBS (Mal), Mco (Mal)*

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Dr Khadijah Poh Yuen Yoong, MBBS (Mal)

Dr Mohd Zahir Amin Mohd Nazri MBBS (Mal)

**Trainee Lecturers:**

Mohd Hafyzuddin bin Md Yusuf MB Bch BAO (Ireland)

Mohammad Aizuddin Azizah Ariffin MBBS (Otago, New Zealand)



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

To become a Centre of Excellence in Medicine

## MISSION

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



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 1<sup>st</sup> 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.



**FIRST BATCH- 1969**

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 unrelentingly. 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)

<b>Introduction Week</b>	-	01.6.2015 – 04.06.2015
<b>Courses/Placement</b>	-	06.06.2015 – 31.12.2015
<b>Revision / Exam part I/II/III/Final*</b>	-	October/November 2015
<b>Courses / Placement</b>	-	01.01.2016 – 31.5.2016
<b>Revision / Exam I/II/III/Final*</b>	-	April/May 2016

\* Examination Schedule according to the program of study

2015/2016

POSTGRADUATE  
HANDBOOK

## ACADEMIC CALENDAR

FOR SEMESTER SYSTEM ONLY

SEMESTER I			NOTE
Introduction Week	1 week	01.09.2015 - 06.09.2015	* Malaysia Day Public Holiday on 16.09.2015 Aidil Adha Public Holiday on 24.09.2015 Maal Hijrah on 14.10.2015 Deepavali Public Holiday on 10.11.2015 Maulidur Rasul on 24.11.2015 Christmas Public Holiday on 25.12.2015 New Year on 01.1.2016 Thaipusam on 23.01.2016 Chinese New Year Public Holiday 08 & 09.02.2016 Labour Day on 01.05.2016 Wesak Day on 21.05.2016
Lectures	9 weeks*	07.09.2015 - 06.11.2015	
Mid Semester Break	1 week	07.11.2015 - 15.11.2015	
Lectures	5 weeks*	16.11.2015 - 18.12.2015	
Revision Week	1 week*	19.12.2015 - 27.12.2015	
Examination	3 weeks*	28.12.2015 - 16.01.2016	
Inter Semester Break	4 weeks*	17.01.2016 - 21.02.2016	
----- 25 weeks =====			
SEMESTER II			
Lectures	7 weeks	22.02.2016 - 08.04.2016	
Mid Semester Break	1 week	09.04.2016 - 17.04.2016	
Lectures	7 weeks*	18.04.2016 - 03.06.2016	
Revision Week	1 week*	04.06.2016 - 12.06.2016	
Examination	3 weeks	13.06.2016 - 02.07.2016	
----- 19 weeks =====			
SESSION BREAK/SPECIAL SEMESTER			
Session Break	9 weeks or	03.07.2016 - 04.09.2016	
Lectures & Examination	8 weeks	03.07.2016 - 28.08.2016	



**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 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 of the Faculty of Anaesthetists of the Royal College of Surgeons of Ireland;
    - (iv) the Primary Examination for the degree of Master of Medicine in Anaesthesia of the National University of Singapore;
    - (v) the Part II Examination of the Royal College of Anaesthetists;
    - (vi) the Part II Examination of the Faculty of Anaesthetists of the Royal College of Surgeons of Ireland; or
    - (vii) 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 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 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 and posting reports not later than one month before 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
  - (b) the Final Examination
- (2) No candidate shall be permitted to sit for the Final Examination unless he has –
  - (a) passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he 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 of the Faculty of Anaesthetists of the Royal College of Surgeons of Ireland;
    - (iv) the Primary Examination for the degree of Master of Medicine in Anaesthesia of the National University of Singapore;
    - (v) the Part II Examination of the Royal College of Anaesthetists UK;
    - (vi) the Part II Examination of the Faculty of Anaesthetists of the Royal College of Surgeons of Ireland; or
    - (vii) passed any other examination as may be approved from time to time by the Senate on the recommendation of the Faculty;
  - (b) submitted his log book and posting reports not later than one month before the Final Examination; and
  - (c) completed and submitted his research report six months prior to the Final Examination.
- (3)
  - (a) 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:

Subject	Description	Allocation of Marks (Maximum)
Subject: Pharmacology		
<b>A. Written Section</b>		
MBGE6101 Paper 1	Multiple Choice Questions	30
MBGE6102 Paper 2	Essay and Short Answer Questions	30
<b>B. Oral Section</b>		
MBGE6121	Viva Voce	40
Total		<u>100</u>

Subject: Physiology and Clinical Measurements

<b>A. Written Section</b>		
MBGE6104 Paper 1	Multiple Choice Questions	30
MBGE6105 Paper 2	Essay and Short Answer Questions	30
<b>B. Oral Section</b>		
MBGE6122	Viva Voce	40
Total		<u>100</u>

(b) Final Examination

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

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

(5) Requirements for Passing an Examination

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

(a) Part I Examination

- (i) On his 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 ie 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 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 –

- (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 –

- (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**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>▪ Clinical training in specialized fields of Anaesthesiology and/or intensive Care</li> </ul>	Final Examination
	Year 3 Year 2	<ul style="list-style-type: none"> <li>▪ Clinical Anaesthesiology and Non-Anaesthesiology Posting in rotation</li> </ul>	
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ Basic Anaesthesiology</li> </ul>	Part I Examination
			Registration (Entrance Evaluation)



**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 three 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 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 log book not later than two weeks before the Final Examination.
- (2) A candidate is required to submit his 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 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 has
- (a) passed the Part II Examination;
  - (b) submitted his log book not later than two weeks 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:

No	Subject Description	Component/Description/Allocation of Marks (Maximum)			
		Short Answer Questions	Multiple Choice Questions	Viva Voce	Marks Total
1.	MAGT610 Radiotherapy Physics	100	100	100	300
2.	MAGT6108 Medical Statistics	100	100	100	300
3.	MAGT6109 Molecular Biology	100	100	100	300
4.	MAGT6110 Pathology	100	100	100	300
5.	MAGT6111 Pharmacology	100	100	100	300
6.	MAGT6112 Radiobiology	100	100	100	300
<b>Grand Total</b>					<b>1800</b>

- (b) Part II Examination

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

Subject	Description	Allocation of Mark (Maximum)
A. Written		
MAGT6236	Paper 1 Multiple Choice Questions	100
MAGT6237	Paper 2 Case Orientated Questions	100
	Total	200
B. MAGT6237	Clinical Cases	100
C. MAGT6250	Viva Voce	100
	<b>Grand Total</b>	<b>400</b>

- (c) Final Examination

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

<b>Subject</b>	<b>Description</b>	<b>Allocation of Marks (Maximum)</b>
A.	MAGT6371 Research report	100
B.	MAGT6386 Log Book continuous assessment	<u>100</u>
	Total	<u>200</u>

(6) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations prescribe below if he 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 has passed and be required to repeat only the Subject that he 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 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 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 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 –

- (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 has passed with Distinction in both the Part I and Part II Examinations.

**Master of Clinical Oncology  
Programme Schedule**

<b>S T A G E  I</b>	Year 4	<ul style="list-style-type: none"> <li>Clinical training as per year 2 and 3, and in addition, the undertaking of a research project.</li> </ul>	Final Examination
	Year 3	<ul style="list-style-type: none"> <li>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.</li> </ul>	Part II Examination
	Year 2		
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>Teaching in basic oncological sciences, cancer pathology, radiotherapy physics and medical statistics, and ongoing clinical training with continuous assessment.</li> <li>Documentation in a log book of procedures and clinical skills undertaken will be done throughout the whole duration of the programme.</li> </ul>	Part I Examination
			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 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 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 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 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 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 has:
- (a) passed the Part I Examination.
  - (b) completed and submitted his 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 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:

Subject	Description	Allocation of Marks (Maximum)
A.	Supervisors' reports	Satisfactory reports
	Continuous Assessment	
	Case write-ups	
	Log book assessment	
	Participation in the Continuous Medical Education (CME)	
B.	Written	
	MEGV6101	Paper 1 Multiple Choice Questions 400
	MEGV6102	Paper 2 Multiple Essay Questions <u>200</u>
		Total <u>600</u>
C.	Clinical	
	MEGV6111	Objective Structured Clinical Examination 200
	MEGV6121	Viva Voce <u>200</u>
		Total <u>400</u>

**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:

Subject	Description	Allocation of Marks (Maximum)
A.	Continuous Assessment	Supervisors' reports Case write-up Log book assessment Participation in the Continuous Medical Education (CME)
		Satisfactory reports
B.	Written	
	MEGV6236 Paper 1 Multiple Choice Questions	200
	MEGV6237 Paper 2 Multiple Essay Questions	50
	MEGV6238 Paper 3 Short Answer Type Questions	150
		Total 400
C.	Clinical	
	MEGV6243 Objective Structured Clinical Examination	150
	MEGV6244 Short Cases	300
	MEGV6250 Viva Voce	150
		Total 600
Grand Total		1000

(5) Requirements for Passing an Examination

A candidate shall be deemed to have passed the examination prescribed below if he 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

- (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) 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:

- (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.

**Master of Emergency Medicine  
Programme Schedule**

<b>S T A G E  III</b>	Year 4 (at UM)	<ul style="list-style-type: none"> <li>comprise of posting in Emergency Medicine in University of Malaya</li> <li>A research report to be submitted at least 6 months before Final Examination</li> </ul>	Final Examination
<b>S T A G E  IIb</b>	Year 3 (at UM or other centres)	<ul style="list-style-type: none"> <li>Clinical postings in                             <ul style="list-style-type: none"> <li>Emergency Medicine;</li> <li>Obstetrics and Gynaecology;</li> <li>Radiology;</li> <li>Otorhinolaryngology;</li> <li>Ophthalmology;</li> <li>Elective;</li> <li>Orthopaedic surgery;</li> <li>Neurosurgery.</li> </ul> </li> <li>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</li> </ul>	
<b>S T A G E  IIa</b>	Year 2 (at UM or other centres)	<ul style="list-style-type: none"> <li>clinical postings in:                             <ul style="list-style-type: none"> <li>internal medicine,</li> <li>general surgery</li> <li>emergency medicine</li> <li>paediatrics.</li> </ul> </li> <li>A Research Project must be started during the early phase in this stage</li> </ul>	
<b>S T A G E  I</b>	Year 1 (at UM)	<ul style="list-style-type: none"> <li>The study of basic sciences relevant to the practice of Emergency medicine</li> <li>Clinical postings under supervision with the emphasis on emergency situations in the specialties of Anaesthesia and Emergency Medicine</li> </ul>	Part I Examination   Registration (Entrance Evaluation)

**Name of Programme :** Master of Family Medicine

**Faculty :** Faculty of 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

Opthalmology  
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 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 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 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 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 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 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 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 has -
  - (a) passed or has been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he possesses a postgraduate qualification in Family Medicine or any qualifications of equivalent standard recognised by the Senate; and
  - (b) satisfactorily completed and submitted his 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 has -
  - (a) passed the Part II Examination; and
  - (b) satisfactorily completed and submitted his posting reports, family case studies, and research report not later than one (1) month before the Part III Examination.
    - (i) A candidate whose research report is 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 research report for re-examination.
    - (ii) A candidate who fails to submit a satisfactory research report by the end of the prescribed period shall be deemed to have failed the research report.

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

Component	Description	Allocation of Marks (Maximum)
A. Written MMGK6101	Multiple Choice Questions Paper (MCQ)	60%
	Total	60%
B. Clinical MMGK6126	Objective Structured Clinical Examination (OSCE)	40%
	Total	100%

(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:

Component	Description	Allocation of Marks (Maximum)
A. Written MMGK6238	Multiple Choice Questions Paper (MCQ)	16%
	MMGK6239 Patient Management Problems (PMP)	24%
	Total	40%
B. Clinical MMGK6255	Objective Structured Clinical Examination(OSCE)	60%
	Total	60%

(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:

Subject	Description	Allocation of Marks
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**(8) 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  
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.
- (ii) 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.
- (iii) 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.
- (iv) 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
  - (i) A candidate who has failed the Part III Examination may be permitted a re-examination on two separate occasions at six monthly intervals.
  - (ii) 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.
  - (iii) 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 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 -

- (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**

<b>S T A G E  I I</b>	Year 4	<ul style="list-style-type: none"> <li>Advanced Training in Family Medicine</li> </ul>	Part III Examination
	Year 3  Year 2	<ul style="list-style-type: none"> <li>Clinical Training in Family Medicine – 18 months</li> <li>Six months of speciality posting, one month each in the following discipline:  Psychological medicine Surgery Orthopaedic Surgery Ophthalmology Otorhinolaryngology Elective (e.g. dermatology)</li> </ul>	Part II Examination
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>Clinical Training by rotation in:- General Medicine Paediatrics Obstetrics and Gynaecology</li> </ul>	Part I 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 has passed the Part I Examination.
- (3) No candidate shall be permitted to proceed to Stage III of the programme of study unless he 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 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 has -
- passed the Part I Examination; and
  - 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 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
- 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		
MPGF6104	Paper 1 One Best Answer	35%
MPGF6105	Paper 2 Problem Solving Questions	<u>25%</u>
	Total	<u>60%</u>
B. MPGF6111	Objective Structured Clinical Examination	40%
	Total	<u>40%</u>
	<b>Grand Total</b>	<b><u>100%</u></b>

- Part II Examination

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

Subject	Description	Allocation of Marks (Maximum)
A. Written		
MPGF6239 Paper 1	One Best Answer	20%
MPGF6240 Paper 2	Multiple Essay Question	10%



MPGF6238	Paper 3	Objective Structured Practical Examination	10%
		Total	40%
B. MPGF6243		Clinical and Viva Voce	
MPGF6244	Clinical 1	Long Case	25%
MPGF6245	Clinical 2	Short Cases	25%
MPGF6250	Viva Voce		10%
		Total	60%
		<b>Grand Total</b>	<b>100%</b>

(c) Final Examination

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

Subject	Description	Allocation of Marks (Maximum)
A. MPGF6371	Research Report	100
B. MPGF6381	Viva Voce	100
	Total	200

(8) Requirements for Passing an Examination

A candidate shall be deemed to have passed the Examinations mentioned below if he 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 (MPGF6381).

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 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
  - (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 Internal Medicine with Distinction if he –

- (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
- (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 Internal Medicine  
Programme Schedule**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>Speciality training in one of the small speciality fields with at least 6 months in General Medicine</li> </ul>	Final Examination
	Year 3 Year 2	<ul style="list-style-type: none"> <li>Rotational posting in small specialities</li> </ul>	Part II Examination (theory examination will be held 6 weeks before the clinical examination)
	Year 1	<ul style="list-style-type: none"> <li>Applied Basic Medical Sciences and General Medicine and Emergency Medicine</li> </ul>	Part I Examination (theory examination will be held 6 weeks before the clinical examination)
<b>S T A G E  I</b>			Registration (Entrance Evaluation)

**Name of Programme :** Master of Medical Physics  
**Mod :** By Coursework  
**Faculty :** Faculty of Medicine

## 1. Classification of Programme

The Master of Medical Physics is a programme by coursework in which the credit hours for the research component comprises less than thirty (30) percent of the total credit hours 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) Entry qualifications

- (a) A Bachelor's degree with Honours or equivalent in physical sciences; or
- (b) A Bachelor's degree with Honours or equivalent in a programme of study consisting a significant courses in physical sciences; or
- (c) A Bachelor's degree or equivalent in physical sciences and at least three years working experience in the relevant field; or
- (d) An equivalent qualification approved by the Senate from time to time.

### (2) Other requirement

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 two (2) semesters
- (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 (40) credit hours namely.
  - (a) four (4) core courses, each of four (4) credit hours, totalling sixteen (16) credit Hours;
  - (b) a core course of two (2) credit hours;
  - (c) two (2) core courses, each of five (5) credit hours, totaling ten (10) credit hours; and
  - (d) a medical physics research project of twelve (12) credit hours.

- (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 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) credit hours in any semester except -
  - (a) in the final semester of his programme of study where he may register for less than the number of credits hours 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 has obtained at least ten (10) credit hours 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 programme of study.

## **8. Submission**

A candidate is required to submit his 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 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) four (4) core courses, each of four (4) credit hours, totalling sixteen (16) credit Hours;
  - (b) a core course of two (2) credit hours;
  - (c) two (2) core courses, each of five (5) credit hours, totaling ten (10) credit hours; and
  - (d) a medical physics research project of twelve (12) credit hours.

(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 Part I Examination shall be:

Component	Description	Allocation of Marks (Maximum)
(A)	End of Semester Examination	40%
(B)	Continuous Assessment	60%
Total		100%

- (ii) MQGQ6113 Computing and Medical Informatics  
Continuous Assessment. 100%

2. 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.

(a) Award of Degree

No candidate shall be recommended for the award of the degree of Master of Medical Physics unless he has successfully completed all parts of the course and passed all the prescribed examination.

**List 1: Core Courses**

Code	Title	Credit Hours
MQGQ6101	Anatomy and Physiology	4
MQGQ6112	Biostatistics	2
MQGQ6113	Computing and Medical Informatics	4
MQGQ6114	Applied Radiation Physics and Dosimetry	4
MQGQ6115	Radiobiology and Radiation Protection	4
MQGQ6116	Medical Imaging and Nuclear Medicine	5
MQGQ6117	Radiotherapy Physics	5
MQGQ6189	Medical Physics Research Project	12
Total		40

\*subject to amendment from time to time

## **MQGQ 6101**

### **Anatomy and Physiology (4 credit hours)**

#### Learning Outcomes

At the end of this course, students are able to have:

1. Knowledge and understanding of the anatomy and physiology of cells and fetus
2. Knowledge and understanding of the anatomy and physiology of the senses, lymphatics, and of the central and peripheral nervous system
3. Knowledge and understanding of the anatomy and physiology of the musculoskeletal and endocrine system
4. Knowledge and understanding of the anatomy and physiology of the cardiovascular, blood, peripheral circulation and respiratory system
5. Knowledge and understanding of the anatomy and physiology of the integumentary and urinary systems
6. Knowledge and understanding of the anatomy and physiology of the gastrointestinal tract
7. Knowledge and understanding of the anatomy and physiology of the reproductive system and the breast

#### Synopsis

Cellular Anatomy, Foetal Anatomy, Senses (Visual, Hearing) and Lymphatics, Central Nervous System, Peripheral Nervous System, Musculoskeletal System, Endocrine System, Blood and Peripheral Circulation, Cardiovascular System, Respiratory System, Integumentary and Urinary Systems, Gastrointestinal Tract, Reproductive System and Breast.

Intro & Cell Physiology, Blood, Excitable Cells, Nervous System, Cardiovascular System, Respiratory System, Digestive System, Urinary System, Endocrine System, Reproduction.

#### Main Reference

1. Frederic H. Martini. Fundamentals of Anatomy and Physiology, 8th edition. Pearson Education, 2008
2. Rod R. Seeley, Trent D. Stephens, Philip Tate. Anatomy and Physiology. 5th edition. Mc Graw-Hill Higher Education, 2000
3. Jamie Weir, Peter H. Abrahams, Jonathan D. Spratt, Lonie R Salkowski. Imaging Atlas of Human Anatomy, 4th edition. Mosby, 2010
4. Lothar Wicke. Atlas of Radiologic Anatomy, Saunders, 2004
5. Edith Applegate. The Anatomy & Physiology Learning System, 2nd ed. Saunders, 2000.

#### Assessment Methods

Assignments, presentations, test (60%)

Examination (40%)



**MQGQ6112**  
**Biostatistics (2 credit hours)**

Learning Outcomes

At the end of this course, students are able to:

1. Understand and formulate the basic structure of biomedical research studies, including objective, design, variables, sampling, hypothesis', methodology, and presentation.
2. Understand data classification, summarization, and presentation.
3. Understand the concept of probability and distributions.
4. Understand data inferences, including hypothesis testing and confidence intervals.
5. Carry out statistical tests of comparing single, paired, and independent groups.
6. Carry out statistical tests of comparing non-parametric independent and paired groups.
7. Carry out simple linear correlation and regression.
8. Recognizing multivariate statistical analysis methods.
9. Carry out appropriate error analysis in biomedical research.
10. Understand the role of a biostatistician in research design and management.

Synopsis

Basics of statistical data analysis: Characterizing data and measurements, data screening and transformation. Descriptive statistics, shapes of distributions, application of graphical methods. Elementary statistical inference. Regression analysis, logistic regression. Analysis of variance.

Main Reference

1. Dawson B, Trapp RG, Basic & Clinical Biostatistics. 3rd ed. McGraw-Hill: 2000.
2. Daniel WW, Biostatistics: A Foundation for Analysis in the Health Sciences. 7th ed. John Wiley & Sons: 1999.
3. Glantz SA. Primer of Biostatistics. 3rd ed. McGraw-Hill: 1991.

Assessment Methods

Assignments, tutorials, practicals, test (60%)

Examination (40%)

**MQGQ6113**  
**Computing and Medical Informatics (4 credit hours)**

Learning Outcomes

At the end of this course, students are able to:

1. Understand fundamental topics of computing including terminology, organization, representation, and operations.
2. Understand and apply basic computer programming for scientific tasks.
3. Understand and apply basic numerical methods for solving mathematical functions.
4. Understand basic topics of signal processing including analog/digital, convolution and transforms.
5. Understand and apply basic digital image processing for biomedical imaging tasks.
6. Be familiar with the basics of artificial intelligence and its application in clinical systems.
7. Be familiar with the basics of medical imaging data visualization.
8. Understand the basics of medical informatics including medical data and communication standards and protocols.

Synopsis

Computing fundamentals, programming, numerical methods, signal and image processing, communication and medical informatics.

Main Reference

1. Long L, Long N, Computers: Information Technology in Perspective. 11th ed. Prentice-Hall: 2003.
2. Norris AC, Essentials of Telemedicine and Telecare. John Wiley & Sons: 2002.
3. Gonzalez RC, Woods RE, Digital Image Processing. 2nd ed. Prentice-Hall: 2002.

## Assessment Methods

Practicals (60%)  
Project (40%)

### **MQGQ6114**

#### **Applied Radiation Physics and Dosimetry (4 credit hours)**

##### Learning Outcomes

At the end of this course, students are able to:

1. Understand the concepts and principles of radiation physics, radioactivity, and the interaction of radiation with matter.
2. Understand the principles, quantities and units of radiation dosimetry.
3. Be able to measure or calculate the radiation dose to different personnel in different circumstances.

##### Synopsis

Basic radiation physics. Radioactivity. Radiation interaction with matter. Dosimetric principles, quantities and units. Radiation dosimeters. Radiation monitoring instruments. Basic non-ionizing radiation physics. Dosimetry on non-ionizing radiation.

##### Main Reference

1. Attix FH, Introduction to Radiological Physics and Radiation Dosimetry. 2nd ed. John Wiley & Sons: 1999.
2. Knoll GF, Radiation Detection and Measurement. 3rd ed. John Wiley & Sons: 1999.
3. Rajan G, Advanced Medical Radiation Dosimetry. Medical Physics Publishing: 1992.

## Assessment Methods

Assignments, test (60%)  
Examination (40%)

### **MQGQ6115**

#### **Radiobiology and Radiation Protection (4 credit hours)**

##### Learning Outcomes

At the end of this course, students are able to:

1. Understand the concepts and processes involved in the interaction of radiation with living matter.
2. Understand the principles behind various radiation protection recommendations.
3. Be able to practise radiation protection in hospitals.

##### Synopsis

Physics and chemistry of radiation interactions with matter. Molecular and cellular radiobiology. Tumour radiotherapy. Normal tissue response to radiotherapy. Radiobiological basis of radiation protection.

##### Main Reference

1. Hall EJ, Radiobiology for Radiologist. 6<sup>th</sup> ed. Lippincott Williams & Wilkins: 2005.
2. Martin CJ, Sutton DG, Practical Radiation Protection in Healthcare. Oxford University Press: 2002.
3. Steel GG, Basic Clinical Radiobiology. 3<sup>rd</sup> ed. Arnold: 2002.
4. IAEA book

## Assessment Methods

Assignments, test (60%)  
Examination (40%)

## **MQGQ 6116**

### **Medical Imaging and Nuclear Medicine (5 credit hours)**

#### Learning Outcomes

At the end of this course, students are able to:

1. Understand the basic concepts and principles of medical imaging and nuclear medicine.
2. Understand the theoretical basis needed for the clinical practice of medical imaging and nuclear medicine.
3. Be able to carry out and interpret the results of basic quality assurance procedures for the general diagnostic and therapeutic modalities in medical imaging and nuclear medicine.

#### Synopsis

The practice of clinical radiology. Fundamentals of atomic and nuclear physics. Fundamentals of patient dosimetry. X-ray Production. Projection radiography. Receptors for projection radiography. Digital imaging. Fluoroscopic imaging systems. Mammography. Computed Tomography. Special types of radiography. Ultrasound. Magnetic resonance imaging. Image post-processing. Image perception and assessment. Measures of image quality. Quality assurance for medical imaging. Quality assurance for digital imaging. Radionuclide production. Statistics in nuclear medicine counting. Generic performance measures. Electronics related to nuclear medicine imaging devices. Physics in the radiopharmacy. Non-imaging detectors and counters. Nuclear medicine imaging devices. Computers in nuclear medicine. Image reconstruction. Nuclear medicine image display. Hardware and software phantoms. Functional measurements in nuclear medicine. Quantitative nuclear medicine. Basic mathematics for nuclear medicine. Dosimetry – MIRD formalism. Radionuclide therapy. Management of therapy patients. Radiation protection in nuclear medicine. Quality assurance in nuclear medicine.

#### Main Reference

1. Bushberg JT, Seibert JA, Leidholdt EM, Boone JM, The Essential Physics of Medical Imaging. 2nd ed. Lippincott Williams & Wilkins: 2001.
2. Cherry SR, Sorenson JA, Phelps ME, Physics in Nuclear Medicine. 3rd ed. WB Saunders, 2003.
3. Early PJ, Sodee DB, Principles and Practice of Nuclear Medicine. 2nd ed. Mosby, 1995.
4. Sprawls P, Physical Principles of Medical Imaging. 2nd ed. Medical Physics Publishing: 1995.

#### Assessment Methods

Assignments, test (60%)

Examination (40%)

## **MQGQ6117**

### **Radiotherapy Physics (5 credit hours)**

#### Learning Outcomes

At the end of this course, students are able to:

1. Understand the basic concepts and principles of radiotherapy physics.
2. Understand the theoretical basis needed for the clinical practice of medical physics in radiotherapy.
3. Be able to carry out and interpret the results of basic quality assurance procedures for the radiotherapy modalities.

#### Synopsis

Treatment machines for external beam radiotherapy. External photon beams: physical aspects. Clinical treatment planning in external photon beam radiotherapy. Electron beams: physical and clinical aspects. Calibration of photon and electron beams. Acceptance tests and commissioning measurements. Computerized treatment planning systems for external photon beam radiotherapy. Quality assurance of external beam radiotherapy. Brachytherapy: physical and clinical aspects. Basic

radiobiology. Special procedures and techniques in radiotherapy. Radiation protection and safety in radiotherapy.

#### Main Reference

1. Hendee WR, Ibbott GS, Radiation Therapy Physics. 3rd ed. John Wiley & Sons, 2004.
2. International Atomic Energy Agency. Radiation Oncology Physics: A Handbook for Teachers and Students. IAEA, Vienna, Austria, 2005.
3. Khan FM, The Physics of Radiation Therapy. 3rd ed. Lippincott Williams & Wilkins, 2003.

#### Assessment Methods

Assignments, test (60%)

Examination (40%)

### Master of Medical Physics Programme Schedule

Semester II	<ul style="list-style-type: none"> <li>Two (2) core courses, each of five (5) credit hours, totalling ten (10) credit hours; and</li> <li>A medical physics research project of twelve (12) credit hours. A candidate may only register for medical physics research project after he has obtained at least ten (10) credit hours in the core courses.</li> </ul>	Examination (i) End of Semester I (ii) End of Semester II
Semester I	<ul style="list-style-type: none"> <li>four (4) core courses, each of four (4) credit hours, totalling sixteen (16) credit hours.</li> <li>A core course of two (2) credit hours.</li> </ul>	Registration (Admission Evaluation)

**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 preceeding 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.
- (c) International candidates are required to obtain a score of at least 550 in the TOEFL examination or band 6 in IELTS or attended and passed the UM English Language Programme For Postgraduate Students course if the Bachelor's Degree was obtain form a University that did not use English as the medium of instruction.

### 3. Duration of Study

- (1) Master of Medical Science in Clinical Pathology
  - (a) The minimum duration of study shall be two years.
  - (b) The maximum duration of study shall be four years.
- (2) Master of Medical Science in Clinical Pathology (Haematology / Histopathology / Chemical Pathology / Forensic Pathology / Medical Microbiology)
  - (a) The minimum duration of study shall be one year.
  - (b) The maximum duration of study shall be three years.

### 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 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:
  - (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 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:

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

- (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)

Component		Description	Allocation of Marks (Maximum)
A. Written	*MKGS6236	Paper 1 Essays and /or Short Answers Questions	200
	*MKGS6237	Paper 2 Essays and /or Short Answers Questions	<u>200</u>
	Total		400
B.	*MKGS6243	Practical	400
C.	*MKGS6250	Viva Voce	100
D.	*MKGS6266	Coursework Posting Assessment	<u>100</u>
<b>Grand Total</b>			<b><u>1000</u></b>



(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.

Component			Description	Allocation of Marks (Maximum)
A.	Written			
	MKGS6101	Paper 1	Multiple Choice/Essay Questions	100
	MKGS6102	Paper 2	Multiple Choice/Essay Questions	<u>100</u>
	Total			200
B.	Practical			
	MKGS6111	Practical 1	Objective Structured Tests	100
	MKGS6112	Practical 2	Objective Structured Tests	<u>100</u>
	Total			200
C.	MKGS6121	Viva Voce		<u>100</u>
	Grand Total			<b><u>500</u></b>

- (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).

\*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)

Component		Description	Allocation of Marks (Maximum)
A.	Written		
	*MKGS6236	Paper 1 Essays and /or Short Answers	200
	*MKGS6237	Paper 2 Questions	
		Essays and /or Short Answers	<u>200</u>
		Questions	
		Total	400
B.	*MKGS6243	Practical	400
C.	*MKGS6250	Viva	<u>100</u>
		Voce	
Grand Total			<u>900</u>

- (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 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 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 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 -

- (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 -

- (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**

<b>Y E A R</b>	Year 2	Posting for 14 weeks in each of these disciplines.	<ul style="list-style-type: none"> <li>• Histopathology</li> <li>• Haematology</li> </ul>	Final Examination (At the end the programme of study)
		Posting for 7 weeks in each of these disciplines.	<ul style="list-style-type: none"> <li>• Chemical Pathology</li> <li>• Medical Microbiology</li> </ul>	
	Year 1	Posting for 10 weeks in each of these disciplines.	<ul style="list-style-type: none"> <li>• Histopathology</li> <li>• Haematology</li> <li>• Chemical Pathology</li> <li>• Medical Microbiology/ Parasitology</li> </ul>	Registration (Entrance Evaluation)

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

<b>Y E A R  1</b>	<ul style="list-style-type: none"> <li>▪ 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: <ul style="list-style-type: none"> <li>• Chemical Pathology</li> <li>• Forensic Pathology</li> <li>• Haematology</li> <li>• Histopathology</li> <li>• Medical Microbiology</li> </ul> </li> </ul>	Final Examination (At the end the programme of study)
		Registration (Entrance Evaluation)

**Name of Programme :** Master of Medical Science in Public Health  
**Faculty :** Faculty of Medicine

### 1. Classification of Programme

The Master of Medical Science in Public Health programme is a coursework programme in which the credit hours 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 Medical Science in Public Health degree.

### 2. Entry Requirements

#### (1) Entry qualifications

- (a) The degrees of Bachelor of Medicine and Bachelor of Surgery of the University; or
- (b) The degree of Bachelor of Dental Surgery of the University; or
- (c) A Bachelor's degree of the University with at least a second class honours in a relevant discipline; or
- (d) An equivalent qualification approved by the Senate; and
- (e) At least one year of relevant work experience.

### 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) The Master of Medical Science in Public Health programme comprises forty (40) credit hours namely:
  - (a) seven core courses each of three credit hours, totalling twenty-one (21) credit hours;
  - (b) one core course of four (4) credit hours;
  - (c) five elective courses each of three credit hours, totalling fifteen (15) credit hours; or
  - (d) three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.
- (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 list of courses for the programme of Master of Medical Science in Public Health is provided in List 1 and 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) credit hours in any semester except where the candidate has been permitted to withdraw from the semester concerned.
- (3) A candidate may only register for the Research Paper after he has obtained at least fifteen (15) credit hours in the core courses.

## **6. Attendance**

During his programme of study a candidate 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 research papers 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 papers.

## **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**

- (1) The Examination leading to the degree of Master of Medical Science in 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:
  - (a) seven core courses, each of three credit hours, totalling twenty one (21) credit hours;
  - (b) one core course of four (4) credit hours;
  - (c) five elective courses, each of three credit hours, totalling fifteen (15) credit hours;  
or
  - (d) three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.
- (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:

<b>Subject</b>		<b>Allocation of Marks (Maximum)</b>
(i)	Continuous Assessment	50%
(ii)	End of Semester Examination	50%
<b>Total</b>		<b>100%</b>
(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.	
(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.		

## 11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Medical Science in Public Health unless he has completed all parts of the course and has passed the prescribed Examinations.

### Master of Medical Science in Public Health Degree

#### List 1

#### Core Courses

<b>CODE</b>	<b>TITLE</b>	<b>CREDIT HOURS</b>
MOGB6107	Principles and Methods of Epidemiology	3
MOGB6108	Research Methodology	3
MOGB6280	Research Proposal Development*	4
MOGB6109	Principles of Biostatistics	3
MOGB6110	Management in Health	3
MOGB6105	Principles Family Health	3
MOGB6106	Society, Behaviour and Health	3
MOGR6107	Occupational and Environmental Health	3
<b>TOTAL</b>		<b>25</b>

\*Pre-requisite: MOGB6108 Research Methodology

## Master of Medical Science in Public Health Degree

### List 2 Elective Courses

CODE	TITLE	CREDIT HOURS
MOGB6301	Epidemiology of Diseases in Malaysia	3
MOGB6302	Analysis of Rates and Proportions	3
MOGB6303	Producing Better Evidence	3
MOGB6304	Advanced Concepts of Biostatistics	3
MOGB6305	Health Economics	3
MOGB6306	Law and Health	3
MOGB6307	Women, Child and Adolescent Health	3
MOGB6308	Women's Health	3
MOGB6309	Child and Adolescent Health	3
MOGB6310	Men's Health	3
MOGB6311	Elderly Health	3
MOGB6312	Mental Health	3
MOGB6313	Medical Demography	3
MOGB6314	Sexual and Reproductive Health	3
MOGB6315	Behavioural Sciences	3
MOGB6316	Health Promotion	3
MOGB6317	Occupational Medicine	3
MOGB6318	Medical Surveillance and Fitness to Work	3
MOGB6480	Research Paper *	6
MOGR6301	Essentials in Public Health	3
MOGR6302	Public Health Nutrition	3
MOGR6303	Qualitative Inquiry in Public Health	3
MOGR6304	Health Risk Assessment	3

and any other courses approved by the Faculty

\*Pre – requisite: MOGB6108 Research Methodology

Total: 15 credit hours

**Note:**

Elective courses offered in each semester may vary from semester to semester.



**MOGB 6107**  
**Principles and Methods of Epidemiology (3 Credit)**

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.

Assessment Methods

Continuous assessment (Tests: 50%)

Final examination (50%)

**MOGB 6108**  
**Research Methodology (3 Credits)**

Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise a literature
2. Produce a research proposal relevant to his/her study area

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

1. Epidemiology 2<sup>nd</sup> edition by Gordis, Leon. Publisher :W.B. Saunders, Publication date 2004
2. Biostatistical methods in Epidemiology by Stephen C Newman. Publisher Wiley, Publication date 2001, ISBN: 0-471- 36914-4
3. Practical Statistics for Medical research 2<sup>nd</sup> by Douglas G Altman. Publisher Chapman & Hall/CRC ,Publication date 2004, ISBN: 0-412- 27630-5
4. Bowling A. Research Methods in Health. Philadelphia: Open University Press. 2002
5. Sulmasy DP, Sugarman J. Methods in Medical Ethics. Georgetown University Press. 2001
6. Ader HJ, Gideon J, Mellenberg (EDT). Research Methodology in Social, Behavioral and Life Sciences. Sage Publications Inc. 1999

Assessment Methods

Test – 30%

Final submission of journal article critique – 70%

**MOGB 6109**  
**Principles of Biostatistics (3 credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. construct probabilistic and non-probabilistic sampling methods
2. estimate descriptive and inferential statistics

**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 Reference**

1. Bernard Rosner. Fundamentals of Biostatistics. 6<sup>th</sup> Edition. Duxbury Thomson Learning. 2005.
2. Wayne W Daniel. Biostatistics. A foundation for analysis in the health sciences. 8<sup>th</sup> Edition. John Wiley & Sons, Inc., USA. 2004.
3. Douglas G Altman. Practical Statistics for Medical Research, 2<sup>nd</sup> Edition. Chapman and Hall, London 2006.

**Assessment Methods**

Continuous Assessment (test: 50%)

Final examination: 50%

**MOGB6280**  
**Research Proposal Development (6 Credit)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. develop a research proposal

**Synopsis**

The course takes the candidate through the steps of the research process and provides the candidate a hands-on experience to developing a research proposal.

**Main Reference**

1. Hulley SB, Cummings SR. Designing clinical research: An epidemiologic approach. 2<sup>nd</sup> Edition. Williams and Wilkins. 2001
2. Bowling A. Research Methods in Health. Philadelphia: Open University Press. 2002
3. Kleinbaum DG, Kupper LL, Morgenstern H. Epidemiologic Research. New York: Van Nostrand Reinhold. 1982
4. Sulmasy DP, Sugarman J. Methods in Medical Ethics. Georgetown University Press. 2001
5. Ader HJ, Gideon J, Mellenberg (EDT). Research Methodology in Social, Behavioral and Life Sciences. Sage Publications Inc. 1999

**Assessment Methods**

Submission of research brief (10%), and

Final research proposal (90%)

## **MOGB6110**

### **Management in Health (3 Credits)**

#### Learning Outcomes

At the end of the course, the student is able to:

1. Have knowledge on management functions and relate to their application in a healthcare programmes.
2. Analyse and review current health management practices 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 Reference

1. Yadav, H. Hospital Management. Univ. Malaya Pres, Kuala Lumpur, 2006
2. Malaysian Institute of Management, Management in Malaysia, 1999.
3. Griffin R.W., Management, 6thg Ed., Houghton Mifflin Co., Boston, 1999. (Chapters 11 and 12)
4. Hellriegel D and Slocum JW Jr., Management, 6<sup>th</sup> ed., Addison-Wesley Publ Co., Reading, 1993. (Chapters 10 and 11)
5. McMahon R. Barton, E. Piot, M. et.al. On Being in-charge, WHO, Geneva, 1980.

#### Assessment Methods

Continuous Assessment (Visit Report): 25%

Final examination: 75%

## **MOGB6105**

### **Principles of Family Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the Family Health concepts and principles in the promotion of health in the population.
2. Critically compare the changing trends in population health status of developed and developing countries.
3. Critically appraise in depth, methods of assessing the population health status in the community using various health statistics.
4. Critically appraise the problems faced by population subgroups e.g. women, children, adolescents, disabled and elderly; and the programmes and services available to them.
5. Recommend strategies to improve the programmes and services in the country you serve.

#### 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 Reference

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Olshansky E. 2000. Integrated Women's Health: Holistic Approaches for Comprehensive Care. Aspen Publishers Inc, USA.
3. Ratcliff KS. 2002. Women and Health. Power Technology, Inequality & Conflict in a Gendered World. Allyn & Bacon, USA.
4. Women's Health. A Guide to Health Promotion & Disorder Management. 2005. Lippincott Williams & Wilkins, USA.
5. Cash R, Kreusch GT & Lamstein J (Eds). Child Health Survival: the UNICEF GOBI-FFF Program. Croom Helm, London 1987.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%. Final Examination : 50%

### **MOGB6106**

#### **Society, Behaviour and Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the influences of society and behaviour on health.
2. Analyze models of health behaviour of individuals and community.
3. Recommend strategies on how to plan, manage and evaluate health promotion programs

#### 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 Reference

1. Roziah Omar. Health : Bridging the gaps, Social cultural Interpretations of Health; UM Press 2000.
2. Arthur Kleinman. Patients and Healers in the context of culture; an exploration of the borderland between anthropology, medicine and Psychiatry. University of California Press, 1980.
3. Cecil G Helman. Culture, Health and Illness. Wright 2000
4. Conrad P & Kern E (eds). The Sociology of Health & Illness: Critical Perspective. St. Martin's Press, 1994.
5. Taylor RJ, Smiths BH, Von Teijlingen ER. Health and Illness in the Community. Oxford U. Press, 2003.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

### **MOGR6107**

#### **Occupational and Environmental Health (3 Credits)**

#### Learning Outcomes

At the end of the course, the candidate is able to:

1. Identify occupational and environmental health issues
2. Relate occupational and environmental health issues to individual and public health
3. Conduct basic occupational and environmental health assessment;
4. Solve basic occupational and environmental health issues.

#### Synopsis

This course is an overview of the occupational and 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 occupational and environmental health issues; toxicology; exposure assessment; risk assessment/ management; air pollution; water pollution; housing environments.

#### Main Reference

1. Basic Environmental Health, Annalee Yassi, Oxford University Press 2001 (Library ref: WA30 Bas 2001
2. Current occupational & environmental medicine 4th ed. LaDou, Joseph, New York: McGraw-Hill, 2007.
3. Guidelines on the diagnosis of occupational diseases. SOCSO 2007

Assessment Methods  
Continuous Assessment 50%  
Final examination 50%

### **MOGB 6301**

#### **Epidemiology of Diseases in Malaysia (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Examine the characteristics of communicable (CDs) and non-communicable diseases (NCDs) diseases
2. Examine factors that contribute to the emergence of NCDs and re-emergence of CDs
3. describe the epidemiologic transition in relation to CDs and NCDs
4. Formulate 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 Reference

1. Chin A (2000). Control of Communicable Diseases Manual, 17<sup>th</sup> edition. American Public Health Association, Washington DC 20001-3710.
2. Johan Giesecke (2002) [Modern Infectious Disease Epidemiology](#), Oxford University Press, New York
3. Robert H., Ph.D. Friis, Thomas A., Ph.D. Sellers (2004) Epidemiology for Public Health Practice, Jones & Bartlett Publishers: Sudbury, Massachusetts. 3<sup>rd</sup> edition.
4. Lim Kean Chee, A Review of diseases in Malaysia, Pelanduk Publication (M) Sdn. Bhd, Malaysia, 1993.

Assessment Methods  
Seminars: 50%  
Final examination: 50%

### **MOGB 6302**

#### **Analysis of Rates and Proportions (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Analyze categorical data and quantitative data
2. Produce linear, logistic, poisson and weibull regression models
3. Perform analysis of survival data

##### 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 Reference

1. David G Kleinbaum, Mitchel Klein. Survival Analysis: A Self-Learning Text. 2nd Edition, Springer 2005
2. A Agresti. An Introduction to Categorical Data Analysis. John Wiley & Sons, Inc., USA. 2007
3. Hosmer, D.W., and Lemeshow, S. Applied Logistic Regression. 2nd Edition. John Wiley & Sons.

2000.

#### Assessment Methods

Continuous assessment (data analysis & reports): 50%

Final examination: 50%

### **MOGB 6303**

#### **Producing Better Evidence (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Perform appropriate data management and analysis of epidemiological datasets
2. Produce a systematic review

##### Synopsis

The objective of this module is to produce valid scientific evidence which can be used to modify policy or management standards. It contains the following three sub modules

The sub-module on data management and analysis of epidemiological datasets will provide intensive instructions in the use of a current statistical package to increase the students' skills in data management and data analyses.

The final sub-module introduces systematic reviews and meta-analyses and is concerned with the use of existing data 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 Reference

1. Evidence-Based Public Health. Ross C Brownson, Elizabeth A Baker, Terry L Leet, Kathleen N Gillespie. Oxford University Press 2003
2. Systematic Reviews in Health Care – Meta-analysis in context. Edited by Matthias Egger, George Davey Smith, Douglas G Altman. BMJ Books 2001
3. Lawrence M Friedman, Curt D Furberg, David L Demets. Fundamentals of Clinical Trials, 3rd edition. Springer-Verlag New York 1998.
4. Lawrence M Friedman, Curt D Furberg, David L Demets. Data Monitoring in Clinical Trials: A Case Studies Approach, 1st edition. Springer-Verlag New York 2005.

#### Assessment Methods

Continuous Assessment (Practical exercises: 20%, Assignment report: 30%)

Final Examination : 50%

### **MOGB 6304**

#### **Advanced Concepts of Biostatistics (3 Credits)**

##### Learning Outcomes

At the end of this course, student is able to:

Perform advanced statistical data analysis using Factor Analysis, Time Series Analysis, discriminant analysis

##### Synopsis

The sub-module on Factor Analysis describes variability among a number of observable random variables in terms of a smaller number of unobservable random variables called factors. Factor analysis

is a data reduction technique for identifying the internal structure of a set of variables. Factor analysis includes both component analysis and common factor analysis.

The sub-module on Discriminant Analysis covers the type of scenarios where discriminant analysis can be applied. It exposes the student and helps them grasp the underlying concepts of discriminate analyses. The students should be able to understand, and interpret the results of discriminant analysis and evaluate reports.

The sub-module on Time series Analysis covers the basic knowledge of time series, and introduces some statistical tools and econometric models useful for analyzing time series. This will assist the candidates who wish to learn to estimate models.

#### Main References

1. T Jolliffe. Principal Component Analysis. 2nd Edition. Springer Verlag. New York 2002.
2. Multivariate Data Analysis. 6th Edition. Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL. Pearson Prentice Hall 2006.
3. Bernard Rosner. Fundamentals of Biostatistics. 6<sup>th</sup> Edition. Duxbury Thomson Learning. 2005.
4. Francis X Diebold. Elements of Forecasting. South-Western College Publishing.
5. Spyros Makridakis. Steven Wheelwright. Rob Hyndman. Forecasting Methods and Applications. 3rd edition. John Wiley & Sons.
6. A Agresti. An Introduction to Categorical Data Analysis. John Wiley & Sons, Inc., USA. 2007

#### Assessment Methods

Continuous assessment (data analysis & report): 50%

Final Examination : 50%

### **MOGB6305**

#### **Health Economics (3 Credits)**

#### Learning Outcomes

At the end of the course, the student is able to:

1. Apply economic concepts to the evaluation of performance of a health care system
2. Identify appropriate economic evaluation tool to be applied to different problems of resource allocation, management, evaluation and planning in health services.
3. Critically analyse the 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 Reference

Folland S, Goodman A, Stano M. 2004. *The Economics of Health and Health Care*. New Jersey: Pearson Prentice Hall, 4<sup>th</sup> Edition.

#### Assessment Methods

Continuous assessment (seminar and report of seminar and mid-semester test): 50%

Final examination: 50%

### **MOGB6306**

#### **Law and Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the student is able to:

1. Apply the concept of medical ethics in Doctor-Patient relationship
2. 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

1. Puteri, NJK.: Medical Negligence Law in Malaysia. International Law Book Services, Petaling Jaya, 2003.
2. Puteri, NJK, Abu Haniffa MA. Issues in Medical Law Ethics. Int. Islamic University Malaysia, 2003.
3. Wu, M.A.: The Malaysian Legal System (2<sup>nd</sup> Ed.) Pearson Malaysia Sdn. Bhd., Petaling Jaya, 2002.
4. Suffian, M. An Introduction to the Legal System of Malaysia. Penerbit Fajar, Kuala Lumpur 1988.

### Assessment Methods

Continuous assessment (seminar): 50%,  
Final Examination: 50%

## **MOGB6307**

### **Women, Child and Adolescent Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan approach in Women's health
2. Critically appraise definitions and components of Reproductive Health
3. Critically appraise and explain factors affecting foetal, child and adolescent growth and health, as well as health measures that can modify those factors.
4. Critically analyze factors associated with child morbidity and mortality, and the important role of maternal health and behaviour in determining child health status.

### Synopsis

This course provides an introduction to 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 Reference

1. Cook RJ, Dickens BM, Fathalla MF. 2003. Reproductive Health & Human Rights. Integrating Medicine, Ethics & Law. Oxford University Press, Inc, USA.
2. Wallace HM and Giri K (Eds). 1990. Health Care of Women and Children in Developing Countries. Third Party Publishing Company. Oakland, California
3. Oates K, Currow K, Hu W. 2001. Child Health. A Practical Manual for General Practice. MacLennan & Petty Pty Limited, Australia.
4. Glockler M, Goebel W. 2003. A Guide to Child Health. Floris Books, Poland.
5. Garbino J.P. 2005. Children Health & The Environment. A Resource Manual for the Health Sector. WHO, Geneva.

### Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

## **MOGB6308**

### **Women's Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:



1. Critically appraise the lifespan approach to Women's health
2. Critically analyze the definitions and components of Reproductive Health
3. Critically appraise in view of plan, organise, and work in teams, to address current issues relating to maternal mortality and morbidity.

#### Synopsis

This course provides an in-depth study of the principles of reproductive health focusing on women. The course will include gender issues and specific illnesses affecting women of all age groups e.g. female cancers, chronic diseases and nutritional issues. Programmes introduced by Ministry of Health will also be discussed.

#### Main Reference

1. Andrews G. 2001. (2<sup>nd</sup> Eds). Women's Sexual Health. Harcourt Publishers Limited, China.
2. Cook RJ, Dickens BM, Fathalla MF. 2003. Reproductive Health & Human Rights. Integrating Medicine, Ethics & Law. Oxford University Press, Inc, USA.
3. Wallace HM and Giri K (Eds). 1990. Health Care of Women and Children in Developing Countries. Third Party Publishing Company. Oakland, California

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

### **MOGB6309**

#### **Child and Adolescent Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise factors affecting foetal, child and adolescent growth and health, as well as health measures that can modify those factors.
2. Recommend population-based approaches to improve the health of children in a community and methods to monitor and evaluate the effectiveness of these interventions.
3. Critically analyse factors associated with child morbidity and mortality, and the important role of maternal health and behaviour in determining child health status.

#### Synopsis

The child and adolescent health course will cover concepts of child and adolescent health. Topics include child survival and development, immunization, breast-feeding and the common childhood diseases. Other topics are factors affecting foetal growth, perinatal care, physiological development of adolescents and health promotion strategies among children and adolescents. Common communicable diseases such as ARI and CDD will also be included. An overview of the child and adolescent health programmes implemented in the country will be presented.

#### Main Reference

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Oates K, Currow K, Hu W. 2001. Child Health. A Practical Manual for General Practice. MacLennan & Petty Pty Limited, Australia.
3. Glockler M, Goebel W. 2003. A Guide to Child Health. Floris Books, Poland.
4. Garbino J.P. 2005. Children Health & The Environment. A Resource Manual for the Health Sector. WHO, Geneva.
5. McDevitt TM, Ormrod JE. (2<sup>nd</sup> Eds). 2004. Child Development Educating & Working with Children & Adolescents. Pearson Education, Inc. New Jersey.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

**MOGB6310**  
**Men's Health (3 Credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan approach to Men's health
2. Critically analyze the various influences of behaviour and other psychosocial factors on men's needs and health.
3. Propose strategies to address current health issues faced by men.

**Synopsis**

This course provides an introduction to men's health. Aspects covered are men's behaviour, lifestyle, work, emotional and relational issues related to their health. The differing needs of men through out the lifespan will also be covered. Health issues and health care services available to men will be discussed.

**Main Reference**

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Green LW, Ottoson JM. (Eight Eds). 1999. Community & Population Health. Mc Graw Hill Companies, USA.

**Assessment Methods**

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

**MOGB6311**  
**Elderly Health (3 Credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Critically appraise the public health importance of ageing.
2. Critically analyse the issues and challenges of dealing with elderly population.

**Synopsis**

The Elderly Health course is an introduction to the field of Gerontology. It will help the student to understand the issues related to the health care of the elderly and the importance of the relationship between social state and health for the elderly. It will also examine policies and programme related to health of the elderly.

**Main Reference**

1. WHO Geneva 1995. Epidemiology and Prevention of Cardiovascular Diseases in Elderly People. WHO Technical Series 853. 1995.
2. Proceedings of the International Symposium on Gerontology 1995 – Issues and Challenges of Ageing: Faculty of Medicine, University of Malaya Press. 1995.
3. C.F. Hollander. Growing Old in the Future. Scenarios on Health and Aging 1984 – 2000. Martinus Nijhoff Publishers, Utrecht. 1987.

**Assessment Methods**

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

**MOGB 6312**  
**Mental Health (3 Credits)**

Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the concept and scope of mental health and its importance to community medicine.
2. Critically analyze the importance of mental health needs of special population groups
3. Determine the relationship between mental health, culture and religion

Synopsis

The Mental Health course will help the student understand the spectrum of mental illness and mental health. Understanding mental health in relation to culture/ illness and religion will enable students to identify health needs of special population groups.

The purpose of the course is to make the students realise that mental health is one of the requirements of a good quality of life and that mental health affects physical health and vice versa.

Main Reference

1. Amber Haque. Mental Health in Malaysia – Issues and Concerns: University of Malaya Press. 2001.
2. Community Mental Health For Primary Care – A Training Manual. Ministry of Health Malaysia. 1998.

Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

**MOGB6313**  
**Medical Demography (3 Credits)**

Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically analyse the demographic transition theory and demographic factors that influence growth rates.
2. Critically analyse the main indices for measuring fertility and reproductively, their uses and limitations.
3. Critically analyse the concept, principles and uses of population pyramids, life table and the meaning of expectation of life.

Synopsis

This course will discuss the demography principles and the demography momentum. It will also discuss the importance of life tables and measures of fertility. Issue of family development and its effect on morbidity and mortality will be covered.

Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

## **MOGB6314**

### **Sexual and Reproductive Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan needs of sexual and reproductive health.
2. Critically analyse the importance of family planning in reproductive health and know the various methods of contraception.
3. Propose strategies in the issues of sexual and reproductive health such as sexual dysfunction, infertility and abortion.

#### Synopsis

This course covers sexual and reproductive health of gender throughout the lifespan. Methods of contraception, available family planning services, infertility, sexual dysfunction and menopause will also be discussed in this course. Programmes and services currently available for reproductive health will be discussed.

#### Main Reference

1. Bongaarts J, Potten RG. Fertility Biology and Behaviour. Proximate Determinants of Fertility., 1983.
2. Fathalla M, Rosenfield A, Indriso C, Sen DK and Ratnam SS (editors). The FIGO Manual of Human Reproduction Volume 3, Reproductive Health Issues, Chapters 1 and 2. The Parthenon Publishing Group, UK, 1990
3. Contraceptive Technology 16<sup>th</sup> Edition. Irvingstone Publication.
4. Senayake P. The Reproductive Revolution. Proceedings of an International Symposium Vienna, June 1994.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6315**

### **Behavioural Science (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the different definitions, terminologies and concepts often used in sociology and anthropology.
2. Critically analyze the influence of social factors on health seeking behaviour.
3. Propose strategies to change behaviour in the community.

#### Synopsis

This course provides an introduction to the field behavioural science. Influences of socio-demographic characteristics, equality and social justice on health will be discussed. Illness and culture, violence in the society, deviance and stigma will also be discussed; as well as other aspects such as migration, social capital and social implications genetic diseases.

#### Main Reference

1. Roziah Omar. Health : Bridging the gaps, Social cultural Interpretations of Health; UM Press 2000.
2. Arthur Kleinman. Patients and Healers in the context of culture; an exploration of the borderland between anthropology, medicine and Psychiatry. University of California Press, 1980.
3. Cecil G Helman. Culture, Health and Illness. Wright 2000
4. Conrad P & Kern E (eds). The Sociology of Health & Illness: Critical Perspective. St. Martin's Press, 1994.
5. Taylor RJ, Smiths BH, Von Teijlingen ER. Health and Illness in the Community. Oxford U. Press, 2003.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6316**

### **Health Promotion (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically discuss the theories and models of health behaviour.
2. Critically analyze the concept of various methods and approaches of health promotion.
3. Propose strategies on planning, implementation and evaluation of health promotion programs.

#### Synopsis

This course will cover in depth the various models of health behaviour and health communication. Health promotion methods and approaches discussed include detailed planning, needs assessment; implementation and evaluation of health promotion programs.

#### Main Reference

1. Egger G, Spark R, Lawson J and Donovan R. 2002. Health Promotion strategies and methods. Sydney: McGraw-Hill Co Inc.
2. Moodie R and Hume A (eds). 2004. Hands-on Health Promotion. Melbourne: IP Communications.
3. LW Green & MW Kreuter. 2005. Health program planning – an educational and ecological approach. 4<sup>th</sup> edition. New York: McGill Hall.
4. Tones K and Green J. 2004. Health Promotion Planning and Strategies. London: SAGE Publications.
5. Glanz K, Rimer B.K. & Lewis FM (Editors) 2002. Health Behaviour & Health Education, Theory Research and Practice. San Fransisco: Jossey-Bass Publishers. 3<sup>rd</sup> edition.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6317**

### **Occupational Medicine (3 Credits)**

#### Learning Outcomes

At the end of the course the student will be able to:

1. describe the diseases related to occupational medicine
2. diagnose occupational diseases
3. manage occupational diseases as a Public Health Specialist

#### Synopsis

This course will provide the student with the basic to intermediate knowledge of diseases related to occupational diseases, the methods and the limitation of medical surveillance for these 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 Reference

1. Current Occupational and Environmental Medicine 4<sup>th</sup> ed. LaDou, Joseph, New York : McGraw-Hill, 2007
2. ABC of Occupational and Environmental Medicine 2<sup>nd</sup> ed. Snashall, David. London: BMJ Books, 2003.
3. Practical Occupational Medicine 2<sup>nd</sup> ed. Agius, Raymond M. New York: Hodder Arnold, 2006.
4. Occupational Safety and Health Act and Regulations. Laws of Malaysia. MDC Publishers Sdn Bhd. Act 514. Kuala Lumpur, Aug, 2003.
5. Occupational Health: Pocket Consultant 5<sup>th</sup> Edition 2008, Aw, Gardner T. Harrington. Blackwell Science

#### Assessment Methods

Continuous Assessment 50%, Final examination 50%

**MOGB6318**  
**Medical Surveillance and Fitness for Work (3 credits)**

Learning Outcomes

At the end of the course the student will be able to:

1. identify the appropriate tests used in medical surveillance
2. analyse and draw conclusions from the medical surveillance results
3. propose appropriate workplace recommendations based on medical surveillance results and evaluate fitness for work

Synopsis

This course is complementary to the OM course. The course focuses on the use of clinical diagnostic methods and equipments to access the effect from exposure to occupational hazards. It will also include fitness for work assessment and issues related to rehabilitation and return to work.

Main Reference

1. Current occupational & environmental medicine *4th ed.* LaDou, Joseph, New York : McGraw-Hill, 2007.
2. Fitness for Work – The Medical Aspects *3rd ed.* Cox RAF, Oxford University Press 2000.
3. Guidelines on Medical Surveillance. Department of Occupational Safety and Health, Malaysia, 2001.
4. Practical Occupational Medicine *2nd ed.* Agius, Raymond M. New York : Hodder Arnold, 2006.
5. Occupational Safety and Health Act and Regulations. Laws of Malaysia. MDC Publishers Sdn. Bhd. Act 514. Kuala Lumpur. Aug, 2003.

Assessment Methods

Continuous assessment 50%, final examination 50%

**MOGB6480**  
**Research Paper (6 Credits)**

Learning Outcomes

At the end of the course, the student is able to:

1. Produce a research report

Synopsis

The course takes the candidate through the steps of the research process and provides the candidate a hands-on experience to write a research proposal.

Assessment Methods

Submission of research report: 100%

**MOGR6301**  
**Essentials in Public Health (3 Credits)**

Learning Outcomes

At the end of this course, the candidate is able to:

1. Know and understand the scope of the Public Health sector.
2. Appreciate the importance and the application of skills in the core areas in public health
3. Application of knowledge in demography, statistics and computer applications in public health

Synopsis

The course will provide the candidate with introduction to the core areas of public health such as epidemiology, statistics, family health, behavioural sciences, environmental health and health administration. Basic application of computers in public health analysis is also introduced.

#### Main Reference

1. Annual Report 2005, Ministry of Health Malaysia
2. Yadav, H. Notes on Family Health. UM Press, Kuala Lumpur. 2004
3. Yadav, H. Hospital Management. UM Press, Kuala Lumpur. 2006
4. Gordis L. (2004) Epidemiology: WB Saunders Co.: Philadelphia. 3<sup>rd</sup> edition.
5. MJ Campbell, TDV Swinscow. Statistics at Square One, 9<sup>th</sup> Ed. BMJ Publishing Group 1997.  
<http://www.bmj.com/statsbk/>
6. Current Occupational & Environmental Medicine, 4<sup>th</sup> Ed. La Dou, Joseph, New York: McGraw-Hill, 2007

#### Assessment Methods

Continuous Assessment: assignments and seminar (50%)

Final exam (50%)

### **MOGR6302**

#### **Public Health Nutrition (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically evaluate methods of nutritional assessment for all age groups
2. Critically discuss the importance of nutrition and health in the life cycle
3. Critically analyze the importance of nutrition in health promotion and disease prevention
4. Propose 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 Reference

1. Diet, nutrition and the prevention of chronic diseases. (2003) WHO Technical Report Series 916. Geneva: WHO
2. The World Health Report – Reducing risks, promoting healthy life. (2002). WHO: Geneva.
3. Mahan & Escott-Stump. (2004) Food, Nutrition & Diet Therapy. 11<sup>th</sup> edition. Philadelphia: Elsevier.
4. Webb, GP. (2002) Nutrition – a health promotion approach. 2<sup>nd</sup> edition. London: Arnold.
5. Lee, RD & Nieman, DC. (2003) Nutritional assessment. Boston: McGraw Hill.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

### **MOGR6303**

#### **Qualitative Inquiry in Public Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Produce a research proposal using qualitative research methods
2. Critically appraise quality of qualitative research in the literature
3. Identify ethical issues relating to the conduct of qualitative research

#### 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 Reference

1. Rice PL, Douglas, E. 2002. Qualitative research methods: A health focus. Oxford: Oxford University Press.
2. Green JM, Thorogood N. 2004. Qualitative Methods for Health Research. Sage Publications.
3. Ulin PR, Robinson ET, Tolley EE. 2005. Qualitative Methods in Public Health. San Francisco: Jossey-Bass

#### Assessment Methods

Assignments (reports: 50%)

Submission of a research proposal : 50%

#### **MOGR6304**

#### **Health Risk Assessment (3 Credit)**

#### Learning Outcomes

At the end of the course, the candidate is able to:

1. know 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 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.

#### Assessment Methods

Continuous assessment 50%

final examination 50%

#### **Master of Medical Science in Public Health Programme Schedule**

Semester 2	▪ Seven core courses each of three credit hours, totalling twenty one (21) credit hours.	Examination  (i) End of Semester 1 (ii) End of Semester 2
Semester 1	▪ One core course of four (4) credit hours.  ▪ Five elective courses each of three credit hours, totalling fifteen (15) credit hours.  or  ▪ Three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.	
		Registration (Admission Evaluation)



**Name of Programme :** Master of Nursing Science  
**Faculty :** Faculty of Medicine

**1. Classification of Programme**

The Master of Nursing Science programme is a coursework programme in which the credit hours for the research component comprises less than thirty (30) percent of the whole programme of study.

**2. Entry Requirements**

Entry qualifications

- (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.

**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 core courses identified for the Master of Nursing Science degree programme as follows:
  - (a) seven (7) core courses each of three (3) credit hours, totalling twenty one (21) credit hours;
  - (b) two core courses each of two (2) credit hours; totalling four (4) credit hours;
  - (c) Practicum in Nursing of ten (10) credit hours; and
  - (d) Nursing Research Project I & II totalling nine (9) credit hours.
- (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 list of courses for the programme of Master of Nursing Science is 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 two (2) credit hours in any semester.

- (3) A candidate may only register for Nursing Research Project I after he has passed at least thirteen (13) credit hours in the core courses as identified by the Department.
- (4) A candidate may only register for Nursing Research Project II after he 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 programme of study.

## 8. Submission

A candidate is required to submit his Nursing Research Project II report before the end of his 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) seven (7) core courses each of three (3) credit hours, totalling twenty one (21) credit hours;
  - (b) two core courses each of two (2) credit hours; totalling four (4) credit hours;
  - (c) Practicum in Nursing of ten (10) credit hours; and
  - (d) Nursing Research Project I & II totalling nine (9) credit hours.
- (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:

Subject		Allocation of Marks (Maximum)
(i)	Continuous Assessment	30% - 40%
(ii)	End of Semester Examination	60% - 70%
Total		100%

- (b) Research Papers and Practicum Project
  - (i) The marks allocated to the components of the Research Papers shall be 100% on submission of the written report.
  - (ii) The marks allocated to the components of the Practicum Project shall be 100% on submission of the continuous assessment.
- (c) The marks allocated to the components of the Research Papers and Practicum Project shall be 100% on submission of the written report.

- (d) 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 Nursing Science unless he 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

CODE	TITLE	CREDIT HOURS
MTGW6101	Nursing Research I – Qualitative Method	3
MTGW6102	Nursing Research II – Quantitative Method	3
MTGW6103	Health Assessment	3
MTGW6104	Issues & Trends in Nursing & Health Care	3
MTGW6105	Reflection in Nursing Practice	3
MTGW6106	Medical Statistics	3
MTGW6112	Statistical Computing Module	2
MTGW6108	Principles & Methods of Epidemiology	2
MTGW6109	Health Promotion	3
MTGW6113	Practicum in Nursing	10
MTGW6160	Nursing Research Project I	3
MTGW6161	Nursing Research Project II	6
<b>TOTAL</b>		<b>44</b>

**MTGW6101**  
**Nursing Research I- Qualitative method (3 credits)**

**Learning Outcomes**

At the end of this course, students are able :

1. explain the differences between qualitative and quantitative research and its importance towards development of theory and practice of nursing
2. Identify ethical issues related to the use of qualitative methods.
3. differentiate the various qualitative research design
4. demonstrate skills in qualitative data collection and in interpreting qualitative data

**Synopsis**

This course will focused 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**

1. Creswell, J.W. (2009) Research Design: Qualitative, Quantitative and Mixed Methods Approaches. 3rd edition. Sage. Thousand Oaks.
2. Creswell, J.W. (2009) Qualitative inquiry & research design. 3rd edition Sage. Thousand Oaks.
3. Gibson WJ & Brown A (2009) Working with Qualitative Data . Sage , Thousand Oaks
4. Grbich, C. (2007) Qualitative data analysis: an introduction. Sage. Thousand Oaks
5. Green, J. & Thorogood N (2009) Qualitative methods for health research. Introducing qualitative methods series. Sage.
6. Miles MB , Huberman AM Johnny Saldaña (2013) Qualitative Data Analysis: A Methods Sourcebook. 3rd edit. Sage
7. Polit DF & Beck CT (2014) Essentials of Nursing Research . 8th edit. Lippincott Philadelphia
8. Merriam, S.B (2009) Qualitative Research: A Guide to Design and Implementation. 3<sup>rd</sup> edit. Sage.
9. Streubert HJ & Carpenter Dr ( 2011) Qualitative Research in Nursing . 5th edition .Lippincott.Philadelphia

**Assessment Methods**

assignment and presentation : 40%  
exam (end of semester) : 60%

## **MTGW6102**

### **Nursing Research II - Quantitative method (3 credits)**

#### Learning Outcomes

At the end of the course, student should be able to :

1. explain quantitative research process and the importance of quantitative research in nursing
2. identify quantitative research designs
3. identify appropriate sampling, data collection and analyses methods according to research questions
4. assess 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

1. Burns n. & Grove, SK (2011) Understanding Nursing Research: Building an evidence based practice. 5<sup>th</sup> edit. Saunders. USA
2. LoBiondo-Wood G & Haber, J (2010) Nursing Research: Methods and critical appraisal for evidenced based practice. 7<sup>th</sup> edit. Mosby.China
3. Polit, D.F., & Beck, C.T.(2014) Essentials Of Nursing Research Methods, Appraisal evidence for nursing practice. 8<sup>th</sup> Edit. Philadelphia, Lippincott.
4. Parahoo, K (2006) nursing research: [principles, process and issues. 2<sup>nd</sup> edit New York. Macmillan.
5. Watson, R., McKenna, H., Cowman, S. & Keady, J.(2008) Nursing research: Designs and Methods. Edinburgh. Livingstone.
6. Rebar, C.R., Gersch, C.J., Macnee, C.L. & McCabe, S. (2011) Understanding nursing research : Using research in evidenced based practice.. 3<sup>rd</sup> edition. Philadelphia, Lippincott.

#### Assessment Methods

Continuous Assessment: 40%

Final Examination: 60%

**MTGW6103**  
**Health Assessment (3 credits)**

Learning Outcomes

At the end of the course , student will be able to :

1. Develop a conceptual framework for conducting nursing assessment.
2. Demonstrate understanding of performing health assessment holistically for patients at any stage of their life span.
3. Discuss how to apply clinical decision making and critical reasoning skill in health assessment
4. Integrate data from individual history and physical examinations findings scientifically
5. Understand the importance of collaboration and networking with stakeholders professionally

Synopsis

The module 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

1. Carpenito, L.J. (2012) *Handbook of Nursing Diagnosis* 14<sup>th</sup> Edition. Lippincott Williams & Wilkins, Philadelphia.
2. Carpenito, L.J. (2012) *Nursing diagnosis: application to Clinical practice* 14<sup>th</sup> Edition., Lippincott. Philadelphia.
3. Jensen, S. (2010) *Nursing Health Assessment: A Best Practice Approach*, Har/Dvdr/P edition, Lippincott Williams & Wilkins.
4. Dillon,P.(2007) *Nursing Health Assessment*,2nd edition, iGroup press Co Ltd,Thailand.
5. Dillon, P.M (2006) *Nursing Health Assessment: A Critical Thinking, Case Studies Approach*, F. A. Davis Company; 2<sup>nd</sup> edition.
6. Crouch, A & Meurier, C. (2005) *Vital Notes for nurse: Health Assessment*, Blackwell Publishing .Oxford.
7. Fuller, J. & Schaller-Ayers (2000) *Health Assessment: A Nursing Approach* 3rd Edition. Lippincott. Philadelphia, New York & Baltimore.

Assessment Methods

Assignment : 40% Week 7  
End of semester examination : 60%:7.1.2014

**MTGW 6104**  
**Issues & Trends in Nursing and Health Care (3 credits)**

**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. As health care services become complex and costly, this course aims to focus on challenges in the current roles, functions and status of nursing in the context of surrounding 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' individual / group work and written report / presentations will be carried out. The learner will be exposed to the importance of critical thinking, clinical reasoning, decision making and evaluation.

**Main Reference**

1. Baker,A.M. (2009) Advanced Practice Nursing . Jones & Bartlett Publishers. USA.
2. Catalan, J.T. (2003). Nursing now : Today's issues, tomorrow's trends. London : F.A.Davies Co.
3. Dochterman, J.M. & Grace, H.K. (2001). Current issues in nursing (6<sup>th</sup> ed). Missouri : Harcourt Health Sciences Co.
4. Hunt, G. & Wainwright, P. (1994). Expanding the role of the nurse. Oxford : Blackwell Scientific Publications.
5. Kearney-Nunnery, R. (2008) Advancing your career: Concepts of professional nursing. F.A. Davis Company. Philadelphia.
6. Leddy,J.M. & ledly , S. ( 1998) Conceptual bases of professional nursing. Fourth edition. Lippincott . Philadephia.
7. Schiwrrian, P.W. (1998). Professionalization of nursing : Current issues & trends (3<sup>rd</sup> ed.). Philadelphia : Lippincott.
8. Zerwekh,J. & Claborn J.C. ( 2006) Nursing today : transition and trends.5<sup>th</sup> edition. Saunders. St Louis.

**Assessment Methods**

Continuous Assessment: 40%  
Final Examination: 60%

## **MTGW6105**

### **Reflection in Nursing Practice (3 credits)**

#### 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 related main concept / theory for application and understanding of the learning situation.

#### Synopsis

In this module, student will acquire knowledge regarding the journaling concepts. Students will be guided to keep professionals journal. In this module, 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 module content will involve the user of case study and reflection process.

#### Main Reference

1. Bulman, C., & Schutz, S. (2013). *Reflective Practice in Nursing*, (5<sup>th</sup> ed.). West Sussex, UK: Wiley-Blackwell.
2. Holly, M.L. (2002). *Keeping A Professional Journal* (2<sup>nd</sup>.ed.). Sydney, Australia: UNSW Press.
3. Jarvis, P. (1992). Reflective Practice And Nursing, *Nurse Education Today*, 12 (3),174 -181.
4. Johns, C. (2013). *Becoming a reflective practitioner* (4<sup>th</sup> ed.). Oxford, UK: Blackwell Science.
5. Taylor, B. (2010). *Reflective Practice for Health Care Professionals: A Practical Guide* (3<sup>rd</sup>. ed.). Berkshire, England:Open University Press; McGraw Hill.
6. White, R. & Ewan, C. (1991). *Clinical Teaching In Nursing*. London, UK: Chapman & Hall.

#### Assessment Methods

Continuous Assessment: 40% (Assignment /Presentation)

Final Examination: 60%



**MTGW 6106**  
**Medical Statistical (3 credits)**

Learning Outcomes

At the end of this course, students will be able to :

1. Explain the statistical methods commonly employed in the analysis and presentation of data in nursing research.
2. Perform descriptive statistics.
3. Explain the basics of hypothesis testing and the different probability distributions used in biostatistics
4. Perform the following statistical methods: estimation of parameters, common parametric methods, basic non parametric methods, correlation and simple liner regression.
5. Explain the importance using correct statistical method in analysis of data to obtain valid and accurate research 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

1. Bernard, R (2005). *Fundamentals of Biostatistics* (6<sup>th</sup> ed.). Thomson Learning : Duxbury
2. Wayne, W. Daniel. (2004). *Biostatistics. A foundation for analysis in the health sciences* (8<sup>th</sup> ed.). John Wiley & Sons, Inc.: USA
3. Altman, D.G. (2006). *Practical Statistics for Medical Research* (2<sup>nd</sup> ed.).Chapman and Hall: London.

Assessment Methods

Continuous Assessment: 40%

Final Examination:60%

## **MTGW 6108**

### **Principle and Methods of Epidemiology (2 credits)**

#### Learning Outcomes

At the end of the course, student should be able to:

1. Explain the principles and concepts of epidemiology.
2. Integrate the knowledge of methods in epidemiology in conducting nursing research.
3. Identify the research methodology used in epidemiology research.
4. Explain the use of epidemiology research design in clinical research.
5. 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

1. Giesecke, J.(2014) Modern Infections Disease Epidemiology CRC Press; 3<sup>rd</sup> edition.
2. Gordis, L (2013) Epidemiology: with Student Consult Online Access; 5<sup>th</sup> Edition, Saunders Elsevier, Philadelphia.Velter,
3. Heymann, David. L. (2008) Control of Communicable Diseases Manual; 19<sup>th</sup> edition, American Public Health Association, Washington DC
4. Dawson, B.,Trapp. Robert G. (2004) Basic & Clinical Biostatistics (LANGE Basic Science), Lange Medical Books / McGraw-Hill; 4<sup>th</sup> edition
5. Chin, A (2000). Control of Communicable Disease Manual, 17th Edition, American Public Health Association, Washington DC.20001-3710.
6. N., Mathews, I. (1999) Epidemiology and Public Health Medicine, Churchill-Livingstone, London. Part 7.

#### Assessment Methods

Continuous Assessment: Conass: 14-10-2014 and Week 10: 18-11-2014

Final Examination:31-12-2014

## **MTGW 6113**

### **Practicum in Nursing (10 credits)**

#### Course Learning Outcomes

At the end of this course, students are able to:

1. Discuss the 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. Develop 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 principles of critical reflection and evidence-based nursing practice.
5. Collaborate effectively with clients and their family, team members, and other health care members in the management of patient care.

#### Synopsis

This course is designed to enable experienced practitioners to draw on their practice experience to critically explore their health care practice in depth. Its focus is the development of the student's clinical knowledge and competence in their field of practice. The aim is to advance practice to make contributions that are more effective to client outcome/experience. Fundamental to this course is the integration of clinical knowledge into student practice. This is logically and progressively developed using the learning contract, the log book, student presentation and final course assessment.

#### Main Reference

Books, Articles and Journal related to topics, Laptop & LCD, Actual subjects and equipments in the clinical areas

#### Assessment Weightage

Continuous Assessment:

Part A - Assignment: 30%

Part B - Practical Evaluation: 50%

Part C – Written Assessment: 20%

**MTGW6160**  
**Nursing Research Project I (3 credits)**

Course Learning Outcomes

At the end of this course, the students are able to :

1. prepare one nursing research proposal in nursing specialty
2. present the research proposal
3. apply for ethical approval
4. discuss the importance of nursing research in improving standard of care, education and nursing administration

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

1. Burns, N. & Grove, S.K. (2005) The Practice Of Nursing Research. Conduct, Critique & Utilization 5<sup>th</sup> Edit. St Louis. Saunders
2. Kuzma, J.W. & Bohnenblust, S.E. (2005) Basic statistics for the Health Sciences. 5<sup>th</sup> edit McGraw-Hill Boston.
3. Langford, R.W. ( 2001 ) Nursing Research Navigating The Maze Mosby A Harcourt Health Sciences Co, USA
4. LoBiondo-Wood, G. & Haber, J. (2006) Nursing Research Methods. Critical Appraisal and Utilization 6<sup>th</sup> Edit. Mosby Year Book Inc. St. Louis
5. Polit, D.F., Beck, C.T. & Hungler, B.P. (2006) Essentials Of Nursing Research Methods, Appraisal And Utilization 6<sup>th</sup> Edit. Philadelphia, Lippincott
6. Parahoo, K (2006) nursing research: [principles, process and issues. 2<sup>nd</sup> edit New York. Macmillan.
7. Walliman, N. (2000) Your Research Project A Step-By-Step Guide For The First Time Researcher SAGE Publications, London

Assessment Weightage

Continuous Assessment:

Part A - Oral presentations : 30%

Part C – Written Proposal : 70%

**MTGW6161**  
**Nursing Research Project II (6 credits)**

Course 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. write a research project paper and a manuscript .
3. disseminate the research findings.
4. explain the importance of nursing research in improving practice.

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 specialty. 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

1. Burns, N. & Grove, S.K. (2005) The Practice Of Nursing Research. Conduct, Critique & Utilization 5<sup>th</sup> Edit. St Louis. Saunders.
2. Kuzma, J.W. & Bohnenblust, S.E. (2005) Basic statistics for the Health Sciences. 5<sup>th</sup> (ed) McGraw-Hill Boston.
3. Polit, D.F., Beck, C.T. & Hungler, B.P. (2006) Essentials Of Nursing Research. Methods, Appraisal And Utilization 6<sup>th</sup> Edit. Philadelphia, Lippincott.
4. Walliman, N. (2000) Your Research Project A Step-By-Step Guide For The First Time Researcher SAGE Publications, London.

Assessment Weightage

Continuous assessment  
Oral presentations : 10%  
Manuscript : 20%  
Project report: 70%

**Master of Nursing Science  
Programme Schedule**

<b>Y E A R  II</b>	Semester II	<ul style="list-style-type: none"> <li>▪ A Nursing Research Project II of six (6) credit hours. No candidate is permitted to register for Nursing Research Project II unless he has passed Nursing Research Project I.</li> </ul>	Examination
	Semester I	<ul style="list-style-type: none"> <li>▪ A Practicum in Nursing of ten (10) credits hours</li> <li>▪ A Nursing Research Project I of three (3) credit hours. No candidate is permitted to register for Nursing Project I unless he has passed at least thirteen (13) credit hours in the core courses as identified by the Department.</li> </ul>	End of Semester 2 End of Semester 1
<b>Y E A R  I</b>	Semester II	<ul style="list-style-type: none"> <li>▪ Four core courses each of three credit hours, totaling twelve (12) credits hours.</li> </ul>	Examination
	Semester I	<ul style="list-style-type: none"> <li>▪ Three core courses each of three credit hours, totaling nine (9) credits hours</li> <li>▪ Two core courses each of two (2) credit hours, totaling four (4) credits hours.</li> </ul>	End of Semester 2 End of Semester 1  Registration (Admission Evaluation)

**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:
  - (a) the Part I Examination;
  - (b) the Final Examination
- (2) No candidate shall be permitted to sit for the Final Examination unless he 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:

Subject	Description	Allocation of Marks (Maximum)
A. Written		60%
MGGG6103	Multiple Choice Questions	
MGGG6104	Essay	
B. Clinical		40%
MGGG6105	Objective Structured Clinical Evaluation	
MGGG6106	Viva	
	Total	100%

(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):

Subject	Description	Allocation of Marks (Maximum)
A. Written		
MGGG6236 (Obstetrics)	Paper 1	
	Multiple Choice Questions	40%
	Modified Essay Questions	
	Short Answer Questions	
MGGG6237 (Gynaecology)	Paper 2	
	Multiple Choice Questions	
	Modified Essay Questions	
	Short Answer Questions	
B. MGGG6243 (Obstetrics)	Clinicals I	40%
	Long Case	
	Short Cases	
MGGG6244 (Gynaecology)	Long Case	
	Short Cases	
C. MGGG6255	Clinicals II	20%
	Objective Structured Clinical Evaluation	

(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 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.

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 attempt 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 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 –

- (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 -

- (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**

<b>S T A G E  II</b>	Year 4	<ul style="list-style-type: none"> <li>Advanced Clinical training in Obstetrics and Gynaecology for a period of thirty six (36) months</li> </ul>	Final Examination
	Year 3		
	Year 2		
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>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.</li> </ul>	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 studies 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 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 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 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 -

- (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 has passed or been exempted from the Part I Examination. A candidate may be exempted from the Part I Examination if he –
    - (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 protocol for the research report presented and accepted by the department 6 months before the Part II Examination.
- (c) he 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 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:

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

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

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

(6). Requirements for Passing an Examination

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

(a) Part I Examination

- (i) 50% or more of the marks for each component of the Examination; and
- (ii) 45% or more of the marks for each subcomponent of the Examination.

b) Part II Examination

- (i) 50% or more of the marks for each component of the Examination;
- (ii) a borderline mark (45.0 – 49.9%) in not more than one subcomponent under the same component.
- (iii) 45% or more of the marks for each subcomponent of the Examination
- (iv) 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.

- (v) 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 3rd 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 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 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 -

- (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 -

- (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 Ophthalmology  
Programme Schedule**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>▪ Advanced clinical Ophthalmology</li> </ul>	Final Examination
<b>S T A G E  II</b>	Year 3  Year 2	<ul style="list-style-type: none"> <li>▪ Clinical Ophthalmology</li> <li>▪ Clinical Ophthalmology</li> </ul>	Part II Examination
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ Basic Sciences</li> <li>▪ Basic Ocular Sciences</li> <li>▪ Basic Ophthalmology</li> </ul>	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 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**

- (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;
- or

- (ii) Basic Sciences Examination Orthopaedic Surgery (BSE Orth). From Exam November 2014.
- (2) No candidate shall be permitted to sit for the Final Examination unless he has submitted -
- his 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 subspecialties, 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
  - his 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.
- (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
- Part I Examination

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

Section	Description	Allocation of Marks (Maximum)
A. Written		
MRGJ6104	Multiple Choice Questions	100
	Total	100
B. MGRJ6124	OSCE	100
MRGJ6125	Viva Voce 1 - Anatomy	100
MRGJ6126	Viva Voce 2 - Physiology	100
MRGJ6127	Viva Voce 3 - Pathology	100
	Principles of Surgery, Biomaterials and Biomechanics	
	Total	400
	<b>Grand Total</b>	<b>500</b>

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).

- 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		
MRGJ6236 Paper 1	Essay	50
MRGJ6237 Paper 2	Essay	50
MRGJ6238 Paper 3	Best Answer Question (BAQ)	100
	Total	200

B. Clinical		
MRGJ6243 Long Cases		100
MRGJ6244 Short Cases		<u>100</u>
	Total	<u>200</u>
C. Viva Voce and OSCE		
MRGJ6251 OSCE	Pathology, Biomechanics and implants, Orthotics and prosthetics, Imaging	100
MRGJ6252 Viva Voce 1	Principles of Orthopaedic Surgery	100
MRGJ6253 Viva Voce 2	Operative Orthopaedics	<u>100</u>
	Total	<u>300</u>
	<b>Grand Total</b>	<b><u>700</u></b>

(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

(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 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 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 -

- (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**

<b>S T A G E  II</b>	Year 4	<ul style="list-style-type: none"> <li>Training in Orthopaedic Surgery including rotation through the following subspecialties and a research report:                             <ul style="list-style-type: none"> <li>Spinal Surgery</li> <li>Orthopaedic Oncology</li> <li>Paediatric Orthopaedics</li> <li>Upperlimb and reconstructive and micro surgery</li> <li>Arthroscopy sports and joint reconstructive surgery</li> <li>Arthroplasty</li> <li>Orthopaedic Traumatology</li> <li>Limb Lengthening and reconstructive surgery</li> </ul> </li> </ul>	Final Examination
	Year 3		
<b>S T A G E  I</b>	Year 2	<ul style="list-style-type: none"> <li>Orthopaedic Surgery (Basic and Applied Medical Sciences, Principles of Surgery, Basic Orthopaedic Surgery and traumatology)</li> </ul>	Part I Examination (At the end of the first six months of Stage I)
	Year 1		Registration (Entrance Evaluation)

**Name of Programme :** Master of Otorhinolaryngology – Head & Neck Surgery  
**Faculty :** Faculty of Medicine

### 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 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 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 has -
- (a) submitted his 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 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:

Component	Description	Allocation of Marks (Maximum)
A. Written		
MIGL6101	Paper 1 Essay	300
MIGL6102	Paper 2 Multiple Choice Questions	200
MIGL6103	Paper 3 Multiple Choice Questions	200
		<b>Total 700</b>
B. Viva Voce		
MIGL6121	Anatomy	100
MIGL6123	Physiology and Principles of Surgery	100

MIGL6124	Pathology (including Medical Microbiology)	<u>100</u>
	Total	<u>300</u>
	<b>Grand Total</b>	<b><u>1000</u></b>

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:

Component	Description	Allocation of Marks (Maximum)
A. Written		
MIGL6236 Paper 1	Essay and Short Answer Type Questions	100
MIGL6237 Paper 2	Multiple Choice Questions	<u>100</u>
	Total	200
B. MIGL6243	Clinical	
MIGL6244	Long Case	100
C. MIGL6245	Short Cases	100
	MIGL6246 Otology	
	MIGL6247 Rhinology	
	MIGL6248 Laryngology	
	MIGL6249 Head & Neck Surgery	
D. MIGL6250	Viva Voce	
MIGL6251	Otology including Audiology and Otoneurology	100
MIGL6252	Rhinolaryngology and Head & Neck Surgery	<u>100</u>
	Total	<u>200</u>
	<b>Grand Total</b>	<b><u>600</u></b>

(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 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

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

and;

- (i) Not less than 50% marks in three short cases
  - and;
  - (ii) Not less than 40% marks in any short cases
- (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.
    - (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.
  - (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 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 –

- (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 -

- (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**

<b>S T A G E  II</b>	Year 4	<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>	Final Examination
	Year 3		
	Year 2		
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ Basic Otorhinolaryngology (18 months) including:               <ul style="list-style-type: none"> <li>(i) Basic and Applied Medical Sciences and Principles of Surgery (6 months)</li> <li>(ii) General Surgery (6 months)</li> </ul> </li> </ul>	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 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 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 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 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**

- (1) A candidate is required to submit his 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 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) 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 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 has -
- (a) satisfactorily completed Stage III 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;
  - (c) submitted his research report not later than two months before the Final Examination;
  - (d) submitted his log book not later than one month before the Final Examination; and
  - (e) passed the Part II Examination.
- (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:

Component	Description	Allocation of Marks (Maximum)
A. Written		

MLGH6101	Paper 1	Multiple Choice Questions	300
MLGH6102	Paper 2	Modified Essay Questions/ (Long MEQ & Short MEQ)	250
		Slides	<u>50</u>
		Total	<u>600</u>

(b) Part II Examination

Part II Examination consists of the following components:

- 1 Long Case
- 1 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
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(6) 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

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

(b) Part II Examination

- (i) total marks  $\geq 90$  and
- (ii) Passes in either long case or observe long case

Allocation of Marks

Clear pass	12
Pass	10
Bare fail	8
Fail	4

(c) Final Examination

50% or more of the marks in the research report.

(7) 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 trainee 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 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) 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 -

- (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 Paediatrics  
Programme Schedule**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>▪ Advanced Training in Paediatrics and completion of research project</li> </ul>	Final Examination
<b>S T A G E  II</b>	Year 3  Year 2	<ul style="list-style-type: none"> <li>▪ Advance training in Paediatrics and preparation of research project</li> </ul>	Part II Examination
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ Clinical Training in Basic Medical Science, General and emergency Paediatrics</li> </ul>	Part I Examination  Registration (Entrance Evaluation)

**Name of Programme :** Master of Paediatric Surgery  
**Faculty :** Faculty of Medicine

**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 Surgeonsor
  - (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 Senateor
  - (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:

Component	Description	Allocation of Marks (Maximum)
A. Written		
MSGU6101 Paper 1	Multiple Choice Questions	150
MSGU6102 Paper 2	Short Answer Type Questions	150
	Total	300
B. MSGU6121 Viva Voce	Applied Anatomy	100
	Applied Physiology & Principles of Surgery	100
	Applied Pathology	



(including Microbiology)	<u>100</u>
Total	<u>300</u>

C. Continuous Assessment	<u>400</u>
<b>Grand Total</b>	<b><u>1000</u></b>

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

(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

<b>S T A G E  II</b>	Year 3 & 4 (24 months)	<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>	Final Examination
	Year 2 (6 months)	<ul style="list-style-type: none"> <li>▪ To conduct a research project / keep a case book. To submit a report six months before the Final Examination.</li> </ul>	
	Year 2 (6 months)	<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ To start a research project or keep a case book.</li> </ul>	
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ 12 months of Applied Basic Sciences &amp; General Principles of Surgery and/or subspecialties in Surgery.</li> </ul>	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 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 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 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 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 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 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	<u>150</u>
	Total	300
B. *MKGA6111 Practical		
*MKGA6112 Paper 1	Objective Structured Examination	150
*MKGA6113 Paper 2	Objective Structured Examination	<u>150</u>
	Total	<u>300</u>
	<b>Grand Total</b>	<b><u>600</u></b>

(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	<u>225</u>
	Total	<u>450</u>
B. *MKGA6243 Practical	Objective Structured Questions, Speciality Practicals and Others	450
C. *MKGA6250 Viva Voce		<u>100</u>
	<b>Grand Total</b>	<b><u>1000</u></b>

(6) 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 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.
  - (iv) 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 –

- (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 –

- (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 Pathology (Anatomical Pathology) / (Haematology) /  
(Chemical Pathology) / (Medical Microbiology) / (Forensic Pathology)  
Programme Schedule**

S T A G E  II	Year 4	<ul style="list-style-type: none"><li>▪ Specialisation in any one Pathology discipline, including Anatomic Pathology, Haematology, Chemical Pathology, Medical Microbiology, Forensic Pathology, Immunology, and</li><li>▪ Research Project in the chosen discipline</li></ul>	Final Examination
	Year 3		
	Year 2		
S T A G E  I	Year 1	Intensive Course (3 weeks)	Part I Examination
		<table><tr><td>Posting for 10 weeks in each of these disciplines</td><td><ul style="list-style-type: none"><li>• Anatomic Pathology</li><li>• Haematology</li><li>• Chemical Pathology</li><li>• Medical Microbiology/Parasitology</li></ul></td></tr></table>	
Posting for 10 weeks in each of these disciplines	<ul style="list-style-type: none"><li>• Anatomic Pathology</li><li>• Haematology</li><li>• Chemical Pathology</li><li>• Medical Microbiology/Parasitology</li></ul>		
			Registration (Entrance Evaluation)

**Name of Programme :** Master of Psychological Medicine  
**Faculty :** Faculty of Medicine

### 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.

##### (c) Stage III, in the forth year of study comprising advanced training in psychiatry and completion of research project

- (2) No candidate shall be permitted to proceed to Stage II of the programme study unless he has passed the Part I Examination.
- (3) No candidate shall be permitted to proceed to Stage III of the programme study unless he 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 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 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 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.
- (7) Examination Components and Allocation of Marks:

Component	Description	Allocation of Marks (Maximum)
A. Written		
MNGC6101 Paper 1	Multiple Choice Questions	40
MNGC6102 Paper 2	Multiple Choice Questions	60
MNGC6103 Paper 3	Short Essay Questions	100
B. Clinical		
MNGC6111 Short Case	Psychiatry	100
<b>Grand Total</b>		<b><u>300</u></b>

(b) Part II Examination

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

Component	Description	Allocation of Marks (Maximum)
A. Written		
MNGC6236 Paper 1	Essay Questions and Critical Review Paper	100
MNGC6237 Paper 2	Short Notes Questions	100
Total		200
B. Clinical		
MNGC6244 Long Case	Psychiatry	100
MNGC6245 Short Case	Psychiatry	50
MNGC6246 Short Case	Medicine/Neurology	50
Total		200
<b>Grand Total</b>		<b><u>400</u></b>

(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
MNGC6250 Dissertation Viva	<u>30</u>
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) MNGC624 Consultation Viva	<u>100</u>
<b>Grand Total</b>	<b><u>200</u></b>

(8) 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

- (ii) 50% or more of the written component
- (iii) 50% or more of the average marks from the clinical component; and
- (iv) 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 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 –

- (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**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>Advanced training in psychiatry and completion of research project</li> </ul>	Final Examination
	Year 3	<ul style="list-style-type: none"> <li>Training in clinical psychiatry and rotational postings in psychiatric sub-specialities</li> </ul>	Part II Examination
<b>S T A G E  II</b>	Year 2	<ul style="list-style-type: none"> <li>Preparation of case protocols for the number of cases which shall be determined by the department from time to time</li> </ul>	Part I Examination
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>Clinical training in basic attitudes</li> <li>Training in clinical skills and management in psychiatry</li> <li>Training in basic sciences relevant to psychiatry and training in psychiatric management</li> <li>Preparation of two cases protocols in general psychiatry</li> </ul>	Registration (Entrance Evaluation)

**Name of Programme :** Master of Public Health  
**Faculty :** Faculty of Medicine

**(1) Classification of Programme**

The Master of Public Health programme is a coursework programme in which the credit hours 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) Entry qualifications**

- (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.

**(2) Other requirements**

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 two (2) semesters.
- (2) The maximum duration of study shall be eight (8) semesters.

**(4) Structure of Programme**

- (1) The Master of Public Health programme comprises forty (40) credit hours namely:
  - (a) seven core courses each of three credit hours, totalling twenty-one (21) credit hours;
  - (b) one core course of four (4) credit hours;
  - (c) five elective courses each of three credit hours, totalling fifteen (15) credit hours;
  - or
  - (d) three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.
- (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 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) credit hours in any semester except where the candidate has been permitted to withdraw from the semester concerned.
- (3) A candidate may only register for the Research paper after he has obtained at least fifteen (15) credit hours in the core courses.

## **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.
- (1) The co-supervisor and/or consultant shall be appointed when required.
- (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 papers 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 papers.

## **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 core courses, each of three credit hours, totalling twenty one (21) credit hours;
- (2) one core course of four (4) credit hours;
- (3) five elective courses, each of three credit hours, totalling fifteen (15) credit hours;  
or
- (4) three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.
- (5) 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%
(ii)	End of Semester Examination		50%
<b>Total</b>		<b>100%</b>	

- (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 2010 and University of Malaya (Master's Degree) Regulations 2010.

## 11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Public Health unless he has completed all parts of the course and has passed the prescribed Examinations.

### List 1: Core Courses

CODE	TITLE	CREDIT HOURS
MOGB6107	Principles and Methods of Epidemiology	3
MOGB6108	Research Methodology I	3
MOGB6280	Research Proposal Development *	4
MOGB6109	Principles of Biostatistics	3
MOGB6110	Management in Health	3
MOGB6105	Principles Family Health	3
MOGB6106	Society, Behaviour and Health	3
MOGR6107	Occupational and Environmental Health	3
<b>TOTAL</b>		<b>25</b>

\* Pre-requisite: MOGB6108 Research Methodology

## List 2: Elective Courses

CODE	TITLE	CREDIT HOURS
MOGB6301	Epidemiology of Diseases in Malaysia	3
MOGB6302	Analysis of Rates and Proportions	3
MOGB6303	Producing Better Evidence	3
MOGB6304	Advanced Concepts of Biostatistics	3
MOGB6305	Health Economics	3
MOGB6306	Law and Health	3
MOGB6307	Women, Child and Adolescent Health	3
MOGB6308	Women's Health	3
MOGB6309	Child and Adolescent Health	3
MOGB6310	Men's Health	3
MOGB6311	Elderly Health	3
MOGB6312	Mental Health	3
MOGB6313	Medical Demography	3
MOGB6314	Sexual and Reproductive Health	3
MOGB6315	Behavioural Sciences	3
MOGB6316	Health Promotion	3
MOGB6317	Occupational Medicine	3
MOGB6318	Medical Surveillance and Fitness to Work	3
MOGB6480	Research Paper *	6
MOGR6301	Essentials in Public Health	3
MOGR6302	Public Health Nutrition	3
MOGR6303	Qualitative Inquiry in Public Health	3
MOGR6304	Health Risk Assessment	3

and any other courses approved by the Faculty

\* Pre – requisite: MOGB6108 Research Methods

**Total: 15 credit hours**

**Note:**

Elective courses offered in each semester may vary from semester to semester

**MOGB 6107**  
**Principles and Methods of Epidemiology (3 Credit)**

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.

Assessment Methods

Continuous assessment (Tests: 50%)

Final examination (50%)

**MOGB 6108**  
**Research Methodology (3 Credits)**

Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise a literature
2. Produce a research proposal relevant to his/her study area

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

1. Epidemiology 2<sup>nd</sup> edition by Gordis, Leon. Publisher :W.B. Saunders, Publication date 2004
2. Biostatistical methods in Epidemiology by Stephen C Newman. Publisher Wiley, Publication date 2001, ISBN: 0-471- 36914-4
3. Practical Statistics for Medical research 2<sup>nd</sup> by Douglas G Altman. Publisher Chapman & Hall/CRC ,Publication date 2004, ISBN: 0-412- 27630-5
4. Bowling A. Research Methods in Health. Philadelphia: Open University Press. 2002
5. Sulmasy DP, Sugarman J. Methods in Medical Ethics. Georgetown University Press. 2001
6. Ader HJ, Gideon J, Mellenberg (EDT). Research Methodology in Social, Behavioral and Life Sciences. Sage Publications Inc. 1999

Assessment Methods

Test – 30%

Final submission of journal article critique – 70%

## **MOGB 6109**

### **Principles of Biostatistics (3 credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. construct probabilistic and non-probabilistic sampling methods
2. estimate descriptive and inferential statistics

#### 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 Reference

1. Bernard Rosner. Fundamentals of Biostatistics. 6<sup>th</sup> Edition. Duxbury Thomson Learning. 2005.
2. Wayne W Daniel. Biostatistics. A foundation for analysis in the health sciences. 8<sup>th</sup> Edition. John Wiley & Sons, Inc., USA. 2004.
3. Douglas G Altman. Practical Statistics for Medical Research, 2<sup>nd</sup> Edition. Chapman and Hall, London 2006.

#### Assessment Methods

Continuous Assessment (test: 50%)

Final examination: 50%

## **MOGB6280**

### **Research Proposal Development (6 Credit)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Develop a research proposal

#### Synopsis

The course takes the candidate through the steps of the research process and provides the candidate a hands-on experience to developing a research proposal.

#### Main Reference

1. Hulley SB, Cummings SR. Designing clinical research: An epidemiologic approach. 2<sup>nd</sup> Edition. Williams and Wilkins. 2001
2. Bowling A. Research Methods in Health. Philadelphia: Open University Press. 2002
3. Kleinbaum DG, Kupper LL, Morgenstern H. Epidemiologic Research. New York: Van Nostrand Reinhold. 1982
4. Sulmasy DP, Sugarman J. Methods in Medical Ethics. Georgetown University Press. 2001
5. Ader HJ, Gideon J, Mellenberg (EDT). Research Methodology in Social, Behavioral and Life Sciences. Sage Publications Inc. 1999

#### Assessment Methods

Submission of research brief (10%), and

Final research proposal (90%)

## **MOGB6110**

### **Management in Health (3 Credits)**

#### Learning Outcomes

At the end of the course, the student is able to:

1. Have knowledge on management functions and relate to their application in a healthcare programmes.
2. Analyse and review current health management practices 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 Reference

1. Yadav, H. Hospital Management. Univ. Malaya Pres, Kuala Lumpur, 2006
2. Malaysian Institute of Management, Management in Malaysia, 1999.
3. Griffin R.W., Management, 6th Ed., Houghton Mifflin Co., Boston, 1999. (Chapters 11 and 12)
4. Hellriegel D and Slocum JW Jr., Management, 6<sup>th</sup> ed., Addison-Wesley Publ Co., Reading, 1993. (Chapters 10 and 11)
5. McMahon R. Barton, E. Piot, M. et.al. On Being in-charge, WHO, Geneva, 1980.

#### Assessment Methods

Continuous Assessment (Visit Report): 25%

Final examination: 75%

## **MOGB6105**

### **Principles of Family Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the Family Health concepts and principles in the promotion of health in the population.
2. Critically compare the changing trends in population health status of developed and developing countries.
3. Critically appraise in depth, methods of assessing the population health status in the community using various health statistics.
4. Critically appraise the problems faced by population subgroups e.g. women, children, adolescents, disabled and elderly; and the programmes and services available to them.
5. Recommend strategies to improve the programmes and services in the country you serve.

#### 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 Reference

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Olshansky E. 2000. Integrated Women's Health: Holistic Approaches for Comprehensive Care. Aspen Publishers Inc, USA.
3. Ratcliff KS. 2002. Women and Health. Power Technology, Inequality & Conflict in a Gendered World. Allyn & Bacon, USA.
4. Women's Health. A Guide to Health Promotion & Disorder Management. 2005. Lippincott Williams & Wilkins, USA.
5. Cash R, Kreusch GT & Lamstein J (Eds). Child Health Survival: the UNICEF GOBI-FFF Program. Croom Helm, London 1987.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%.

Final Examination : 50%

### **MOGB6106**

#### **Society, Behaviour and Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the influences of society and behaviour on health.
2. Analyze models of health behaviour of individuals and community.
3. Recommend strategies on how to plan, manage and evaluate health promotion programs

#### 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 Reference

1. Roziah Omar. Health : Bridging the gaps, Social cultural Interpretations of Health; UM Press 2000.
2. Arthur Kleinman. Patients and Healers in the context of culture; an exploration of the borderland between anthropology, medicine and Psychiatry. University of California Press, 1980.
3. Cecil G Helman. Culture, Health and Illness. Wright 2000
4. Conrad P & Kern E (eds). The Sociology of Health & Illness: Critical Perspective. St. Martin's Press, 1994.
5. Taylor RJ, Smiths BH, Von Teijlingen ER. Health and Illness in the Community. Oxford U. Press, 2003.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

### **MOGR6107**

#### **Occupational and Environmental Health (3 Credits)**

#### Learning Outcomes

At the end of the course, the candidate is able to:

1. Identify occupational and environmental health issues
2. Relate occupational and environmental health issues to individual and public health
3. Conduct basic occupational and environmental health assessment;
4. Solve basic occupational and environmental health issues.

#### Synopsis

This course is an overview of the occupational and 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 occupational and environmental health issues; toxicology; exposure assessment; risk assessment/ management; air pollution; water pollution; housing environments.

#### Main Reference

1. Basic Environmental Health, Annalee Yassi, Oxford University Press 2001 (Library ref: WA30 Bas 2001
2. Current occupational & environmental medicine 4th ed. LaDou, Joseph, New York: McGraw-Hill, 2007.
3. Guidelines on the diagnosis of occupational diseases. SOCSO 2007

#### Assessment Methods

Continuous Assessment 50%  
Final examination 50%

### **MOGB 6301**

#### **Epidemiology of Diseases in Malaysia (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Examine the characteristics of communicable (CDs) and non-communicable diseases (NCDs) diseases
2. Examine factors that contribute to the emergence of NCDs and re-emergence of CDs
3. describe the epidemiologic transition in relation to CDs and NCDs
4. Formulate 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 Reference

1. Chin A (2000). Control of Communicable Diseases Manual, 17<sup>th</sup> edition. American Public Health Association, Washington DC 20001-3710.
2. Johan Giesecke (2002) [Modern Infectious Disease Epidemiology](#), Oxford University Press, New York
3. Robert H., Ph.D. Friis, Thomas A., Ph.D. Sellers (2004) Epidemiology for Public Health Practice, Jones & Bartlett Publishers: Sudbury, Massachusetts. 3<sup>rd</sup> edition.
4. Lim Kean Chee, A Review of diseases in Malaysia, Pelanduk Publication (M) Sdn. Bhd, Malaysia, 1993.

##### Assessment Methods

Seminars: 50%  
Final examination: 50%

### **MOGB 6302**

#### **Analysis of Rates and Proportions (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Analyze categorical data and quantitative data
2. Produce linear, logistic, poisson and weibull regression models
3. Perform analysis of survival data

##### 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 Reference

1. David G Kleinbaum, Mitchel Klein. Survival Analysis: A Self-Learning Text. 2nd Edition, Springer 2005
2. A Agresti. An Introduction to Categorical Data Analysis. John Wiley & Sons, Inc., USA. 2007
3. Hosmer, D.W., and Lemeshow, S. Applied Logistic Regression. 2nd Edition. John Wiley & Sons. 2000.



#### Assessment Methods

Continuous assessment (data analysis & reports): 50%

Final examination: 50%

### **MOGB 6303**

#### **Producing Better Evidence (3 Credits)**

##### Learning Outcomes

At the end of this course, the candidate is able to:

1. Perform appropriate data management and analysis of epidemiological datasets
2. Produce a systematic review

##### Synopsis

The objective of this module is to produce valid scientific evidence which can be used to modify policy or management standards. It contains the following three sub modules

The sub-module on data management and analysis of epidemiological datasets will provide intensive instructions in the use of a current statistical package to increase the students' skills in data management and data analyses.

The final sub-module introduces systematic reviews and meta-analyses and is concerned with the use of existing data 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 Reference

1. Evidence-Based Public Health. Ross C Brownson, Elizabeth A Baker, Terry L Leet, Kathleen N Gillespie. Oxford University Press 2003
2. Systematic Reviews in Health Care – Meta-analysis in context. Edited by Matthias Egger, George Davey Smith, Douglas G Altman. BMJ Books 2001
3. Lawrence M Friedman, Curt D Furberg, David L Demets. Fundamentals of Clinical Trials, 3rd edition. Springer-Verlag New York 1998.
4. Lawrence M Friedman, Curt D Furberg, David L Demets. Data Monitoring in Clinical Trials: A Case Studies Approach, 1st edition. Springer-Verlag New York 2005.

#### Assessment Methods

Continuous Assessment (Practical exercises: 20%, Assignment report: 30%)

Final Examination : 50%

### **MOGB 6304**

#### **Advanced Concepts of Biostatistics (3 Credits)**

##### Learning Outcomes

At the end of this course, student is able to:

Perform advanced statistical data analysis using Factor Analysis, Time Series Analysis, discriminant analysis

##### Synopsis

The sub-module on Factor Analysis describes variability among a number of observable random variables in terms of a smaller number of unobservable random variables called factors. Factor analysis is a data reduction technique for identifying the internal structure of a set of variables. Factor analysis includes both component analysis and common factor analysis.

The sub-module on Discriminant Analysis covers the type of scenarios where discriminant analysis can be applied. It exposes the student and helps them grasp the underlying concepts of discriminate analyses. The students should be able to understand, and interpret the results of discriminant analysis and evaluate reports.

The sub-module on Time series Analysis covers the basic knowledge of time series, and introduces some statistical tools and econometric models useful for analyzing time series. This will assist the candidates who wish to learn to estimate models.

#### Main References

1. T Jolliffe. Principal Component Analysis. 2nd Edition. Springer Verlag. New York 2002.
2. Multivariate Data Analysis. 6th Edition. Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL. Pearson Prentice Hall 2006.
3. Bernard Rosner. Fundamentals of Biostatistics. 6<sup>th</sup> Edition. Duxbury Thomson Learning. 2005.
4. Francis X Diebold. Elements of Forecasting. South-Western College Publishing.
5. Spyros Makridakis. Steven Wheelwright. Rob Hyndman. Forecasting Methods and Applications. 3rd edition. John Wiley & Sons.
6. A Agresti. An Introduction to Categorical Data Analysis. John Wiley & Sons, Inc., USA. 2007

#### Assessment Methods

Continuous assessment (data analysis & report): 50%

Final Examination : 50%

### **MOGB6305**

#### **Health Economics (3 Credits)**

#### Learning Outcomes

At the end of the course, the student is able to:

1. Apply economic concepts to the evaluation of performance of a health care system
2. Identify appropriate economic evaluation tool to be applied to different problems of resource allocation, management, evaluation and planning in health services.
3. Critically analyse the 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 Reference

Folland S, Goodman A, Stano M. 2004. *The Economics of Health and Health Care*. New Jersey: Pearson Prentice Hall, 4<sup>th</sup> Edition.

#### Assessment Methods

Continuous assessment (seminar and report of seminar and mid-semester test): 50%

Final examination: 50%

### **MOGB6306**

#### **Law and Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the student is able to:

1. Apply the concept of medical ethics in Doctor-Patient relationship
2. 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

1. Puteri, NJK.: Medical Negligence Law in Malaysia. International Law Book Services, Petaling Jaya, 2003.
2. Puteri, NJK, Abu Haniffa MA. Issues in Medical Law Ethics. Int. Islamic University Malaysia, 2003.
3. Wu, M.A.: The Malaysian Legal System (2<sup>nd</sup> Ed.) Pearson Malaysia Sdn. Bhd., Petaling Jaya, 2002.
4. Suffian, M. An Introduction to the Legal System of Malaysia. Penerbit Fajar, Kuala Lumpur 1988.

#### Assessment Methods

Continuous assessment (seminar): 50%,  
Final Examination: 50%

### **MOGB6307**

#### **Women, Child and Adolescent Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan approach in Women's health
2. Critically appraise definitions and components of Reproductive Health
3. Critically appraise and explain factors affecting foetal, child and adolescent growth and health, as well as health measures that can modify those factors.
4. Critically analyze factors associated with child morbidity and mortality, and the important role of maternal health and behaviour in determining child health status.

#### Synopsis

This course provides an introduction to 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 Reference

1. Cook RJ, Dickens BM, Fathalla MF. 2003. Reproductive Health & Human Rights. Integrating Medicine, Ethics & Law. Oxford University Press, Inc, USA.
2. Wallace HM and Giri K (Eds). 1990. Health Care of Women and Children in Developing Countries. Third Party Publishing Company. Oakland, California
3. Oates K, Currow K, Hu W. 2001. Child Health. A Practical Manual for General Practice. MacLennan & Petty Pty Limited, Australia.
4. Glockler M, Goebel W. 2003. A Guide to Child Health. Floris Books, Poland.
5. Garbino J.P. 2005. Children Health & The Environment. A Resource Manual for the Health Sector. WHO, Geneva.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

### **MOGB6308**

#### **Women's Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan approach to Women's health
2. Critically analyze the definitions and components of Reproductive Health
3. Critically appraise in view of plan, organise, and work in teams, to address current issues relating to maternal mortality and morbidity.

## Synopsis

This course provides an in-depth study of the principles of reproductive health focusing on women. The course will include gender issues and specific illnesses affecting women of all age groups e.g. female cancers, chronic diseases and nutritional issues. Programmes introduced by Ministry of Health will also be discussed.

## Main Reference

1. Andrews G. 2001. (2<sup>nd</sup> Edis). Women's Sexual Health. Harcourt Publishers Limited, China.
2. Cook RJ, Dickens BM, Fathalla MF. 2003. Reproductive Health & Human Rights. Integrating Medicine, Ethics & Law. Oxford University Press, Inc, USA.
3. Wallace HM and Giri K (Eds). 1990. Health Care of Women and Children in Developing Countries. Third Party Publishing Company. Oakland, California

## Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

## **MOGB6309**

### **Child and Adolescent Health (3 Credits)**

## Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise factors affecting foetal, child and adolescent growth and health, as well as health measures that can modify those factors.
2. Recommend population-based approaches to improve the health of children in a community and methods to monitor and evaluate the effectiveness of these interventions.
3. Critically analyse factors associated with child morbidity and mortality, and the important role of maternal health and behaviour in determining child health status.

## Synopsis

The child and adolescent health course will cover concepts of child and adolescent health. Topics include child survival and development, immunization, breast-feeding and the common childhood diseases. Other topics are factors affecting foetal growth, perinatal care, physiological development of adolescents and health promotion strategies among children and adolescents. Common communicable diseases such as ARI and CDD will also be included. An overview of the child and adolescent health programmes implemented in the country will be presented.

## Main Reference

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Oates K, Currow K, Hu W. 2001. Child Health. A Practical Manual for General Practice. MacLennan & Petty Pty Limited, Australia.
3. Glockler M, Goebel W. 2003. A Guide to Child Health. Floris Books, Poland.
4. Garbino J.P. 2005. Children Health & The Environment. A Resource Manual for the Health Sector. WHO, Geneva.
5. McDevitt TM, Ormrod JE. (2<sup>nd</sup> Eds). 2004. Child Development Educating & Working with Children & Adolescents. Pearson Education, Inc. New Jersey.

## Assessment Methods

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

**MOGB6310**  
**Men's Health (3 Credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan approach to Men's health
2. Critically analyze the various influences of behaviour and other psychosocial factors on men's needs and health.
3. Propose strategies to address current health issues faced by men.

**Synopsis**

This course provides an introduction to men's health. Aspects covered are men's behaviour, lifestyle, work, emotional and relational issues related to their health. The differing needs of men through out the lifespan will also be covered. Health issues and health care services available to men will be discussed.

**Main Reference**

1. Wallace HM, Green G and Jaros KJ (2<sup>nd</sup> Eds). 2003. Health and Welfare for the Families in the 21<sup>st</sup> Century. John & Bartlett Publishers Inc, USA.
2. Green LW, Ottoson JM. (Eight Eds). 1999. Community & Population Health. Mc Graw Hill Companies, USA.

**Assessment Methods**

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

**MOGB6311**  
**Elderly Health (3 Credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Critically appraise the public health importance of ageing.
2. Critically analyse the issues and challenges of dealing with elderly population.

**Synopsis**

The Elderly Health course is an introduction to the field of Gerontology. It will help the student to understand the issues related to the health care of the elderly and the importance of the relationship between social state and health for the elderly. It will also examine policies and programme related to health of the elderly.

**Main Reference**

1. WHO Geneva 1995. Epidemiology and Prevention of Cardiovascular Diseases in Elderly People. WHO Technical Series 853. 1995.
2. Proceedings of the International Symposium on Gerontology 1995 – Issues and Challenges of Ageing: Faculty of Medicine, University of Malaya Press. 1995.
3. C.F. Hollander. Growing Old in the Future. Scenarios on Health and Aging 1984 – 2000. Martinus Nijhoff Publishers, Utrecht. 1987.

**Assessment Methods**

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB 6312**

### **Mental Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the concept and scope of mental health and its importance to community medicine.
3. Critically analyze the importance of mental health needs of special population groups
4. Determine the relationship between mental health, culture and religion

#### Synopsis

The Mental Health course will help the student understand the spectrum of mental illness and mental health. Understanding mental health in relation to culture/ illness and religion will enable students to identify health needs of special population groups.

The purpose of the course is to make the students realise that mental health is one of the requirements of a good quality of life and that mental health affects physical health and vice versa.

#### Main Reference

1. Amber Haque. Mental Health in Malaysia – Issues and Concerns: University of Malaya Press. 2001.
2. Community Mental Health For Primary Care – A Training Manual. Ministry of Health Malaysia. 1998.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6313**

### **Medical Demography (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically analyse the demographic transition theory and demographic factors that influence growth rates.
2. Critically analyse the main indices for measuring fertility and reproductively, their uses and limitations.
3. Critically analyse the concept, principles and uses of population pyramids, life table and the meaning of expectation of life.

#### Synopsis

This course will discuss the demography principles and the demography momentum. It will also discuss the importance of life tables and measures of fertility. Issue of family development and its effect on morbidity and mortality will be covered.

#### Main Reference

1. Bobadilla JL, Frank J, Fryka T, Kozano R and Stren C. The Epidemiological Transition and Health Priorities. Health Sector Priorities Review. The World Bank, November 1990
2. Bongaarts J, Potten RG. Fertility Biology and Behaviour. Proximate Determinants of Fertility., 1983.
3. Mosley WH, Bobadilla JL and Jamison DT. The Health Transition : Implications for Health and Policy in Developing Countries. Health Sector Priorities Review. The World Bank, April 1992
4. Newell C. Methods and Models in Demography. Belhaven Press, London, 1988

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6314**

### **Sexual and Reproductive Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the lifespan needs of sexual and reproductive health.
2. Critically analyse the importance of family planning in reproductive health and know the various methods of contraception.
3. Propose strategies in the issues of sexual and reproductive health such as sexual dysfunction, infertility and abortion.

#### Synopsis

This course covers sexual and reproductive health of gender throughout the lifespan. Methods of contraception, available family planning services, infertility, sexual dysfunction and menopause will also be discussed in this course. Programmes and services currently available for reproductive health will be discussed.

#### Main Reference

1. Bongaarts J, Potten RG. Fertility Biology and Behaviour. Proximate Determinants of Fertility., 1983.
2. Fathalla M, Rosenfield A, Indriso C, Sen DK and Ratnam SS (editors). The FIGO Manual of Human Reproduction Volume 3, Reproductive Health Issues, Chapters 1 and 2. The Parthenon Publishing Group, UK, 1990
3. Contraceptive Technology 16<sup>th</sup> Edition. Irvingstone Publication.
4. Senayake P. The Reproductive Revolution. Proceedings of an International Symposium Vienna, June 1994.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

## **MOGB6315**

### **Behavioural Science (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically appraise the different definitions, terminologies and concepts often used in sociology and anthropology.
2. Critically analyze the influence of social factors on health seeking behaviour.
3. Propose strategies to change behaviour in the community.

#### Synopsis

This course provides an introduction to the field behavioural science. Influences of socio-demographic characteristics, equality and social justice on health will be discussed. Illness and culture, violence in the society, deviance and stigma will also be discussed; as well as other aspects such as migration, social capital and social implications genetic diseases.

#### Main Reference

1. Roziah Omar. Health : Bridging the gaps, Social cultural Interpretations of Health; UM Press 2000.
2. Arthur Kleinman. Patients and Healers in the context of culture; an exploration of the borderland between anthropology, medicine and Psychiatry. University of California Press, 1980.
3. Cecil G Helman. Culture, Health and Illness. Wright 2000
4. Conrad P & Kern E (eds). The Sociology of Health & Illness: Critical Perspective. St. Martin's Press, 1994.
5. Taylor RJ, Smiths BH, Von Teijlingen ER. Health and Illness in the Community. Oxford U. Press, 2003.

#### Assessment Methods



Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

**MOGB6316**  
**Health Promotion (3 Credits)**

**Learning Outcomes**

At the end of this course, the candidate is able to:

1. Critically discuss the theories and models of health behaviour.
2. Critically analyze the concept of various methods and approaches of health promotion.
3. Propose strategies on planning, implementation and evaluation of health promotion programs.

**Synopsis**

This course will cover in depth the various models of health behaviour and health communication. Health promotion methods and approaches discussed include detailed planning, needs assessment; implementation and evaluation of health promotion programs.

**Main Reference**

1. Egger G, Spark R, Lawson J and Donovan R. 2002. Health Promotion strategies and methods. Sydney: McGraw-Hill Co Inc.
2. Moodie R and Hume A (eds). 2004. Hands-on Health Promotion. Melbourne: IP Communications.
3. LW Green & MW Kreuter. 2005. Health program planning – an educational and ecological approach. 4<sup>th</sup> edition. New York: McGraw Hill.
4. Tones K and Green J. 2004. Health Promotion Planning and Strategies. London: SAGE Publications.
5. Glanz K, Rimer B.K. & Lewis FM (Editors) 2002. Health Behaviour & Health Education, Theory Research and Practice. San Francisco: Jossey-Bass Publishers. 3<sup>rd</sup> edition.

**Assessment Methods**

Continuous assessment (seminar presentation) : 50%  
Final Examination : 50%

**MOGB6317**  
**Occupational Medicine (3 Credits)**

**Learning Outcomes**

At the end of the course the student will be able to:

1. describe the diseases related to occupational medicine
2. diagnose occupational diseases
3. manage occupational diseases as a Public Health Specialist

**Synopsis**

This course will provide the student with the basic to intermediate knowledge of diseases related to occupational diseases, the methods and the limitation of medical surveillance for these 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 Reference**

1. Current Occupational and Environmental Medicine 4<sup>th</sup> ed. LaDou, Joseph, New York : McGraw-Hill, 2007
2. ABC of Occupational and Environmental Medicine 2<sup>nd</sup> ed. Snashall, David. London: BMJ Books, 2003.
3. Practical Occupational Medicine 2<sup>nd</sup> ed. Agius, Raymond M. New York: Hodder Arnold, 2006.
4. Occupational Safety and Health Act and Regulations. Laws of Malaysia. MDC Publishers Sdn Bhd. Act 514. Kuala Lumpur, Aug, 2003.
5. Occupational Health: Pocket Consultant 5<sup>th</sup> Edition 2008, Aw, Gardner T. Harrington. Blackwell Science

**Assessment Methods**

Continuous Assessment 50%, Final examination 50%



## **MOGB6318**

### **Medical Surveillance and Fitness for Work (3 credits)**

#### Learning Outcomes

At the end of the course the student will be able to:

1. identify the appropriate tests used in medical surveillance
2. analyse and draw conclusions from the medical surveillance results
3. propose appropriate workplace recommendations based on medical surveillance results and evaluate fitness for work

#### Synopsis

This course is complementary to the OM course. The course focuses on the use of clinical diagnostic methods and equipments to access the effect from exposure to occupational hazards. It will also include fitness for work assessment and issues related to rehabilitation and return to work.

#### Main Reference

1. Current occupational & environmental medicine *4th ed.* LaDou, Joseph, New York : McGraw-Hill, 2007.
2. Fitness for Work – The Medical Aspects *3rd ed.* Cox RAF, Oxford University Press 2000.
3. Guidelines on Medical Surveillance. Department of Occupational Safety and Health, Malaysia, 2001.
4. Practical Occupational Medicine *2nd ed.* Agius, Raymond M. New York : Hodder Arnold, 2006.
5. Occupational Safety and Health Act and Regulations. Laws of Malaysia. MDC Publishers Sdn. Bhd. Act 514. Kuala Lumpur. Aug, 2003.

#### Assessment Methods

Continuous assessment 50%, final examination 50%

## **MOGB6480**

### **Research Paper (6 Credits)**

#### Learning Outcomes

At the end of the course, the student is able to:

1. Produce a research report

#### Synopsis

The course takes the candidate through the steps of the research process and provides the candidate a hands-on experience to write a research proposal.

#### Assessment Methods

Submission of research report: 100%

## **MOGR6301**

### **Essentials in Public Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Know and understand the scope of the Public Health sector.
2. Appreciate the importance and the application of skills in the core areas in public health
3. Application of knowledge in demography, statistics and computer applications in public health

#### Synopsis

The course will provide the candidate with introduction to the core areas of public health such as epidemiology, statistics, family health, behavioural sciences, environmental health and health administration. Basic application of computers in public health analysis is also introduced.

#### Main Reference

1. Annual Report 2005, Ministry of Health Malaysia
2. Yadav, H. Notes on Family Health. UM Press, Kuala Lumpur. 2004
3. Yadav, H. Hospital Management. UM Press, Kuala Lumpur. 2006
4. Gordis L. (2004) Epidemiology: WB Saunders Co.: Philadelphia. 3<sup>rd</sup> edition.
5. MJ Campbell, TDV Swinscow. Statistics at Square One, 9<sup>th</sup> Ed. BMJ Publishing Group 1997.  
<http://www.bmj.com/statsbk/>
6. Current Occupational & Environmental Medicine, 4<sup>th</sup> Ed. La Dou, Joseph, New York: McGraw-Hill, 2007

#### Assessment Methods

Continuous Assessment: assignments and seminar (50%)

Final exam (50%)

### **MOGR6302**

#### **Public Health Nutrition (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Critically evaluate methods of nutritional assessment for all age groups
2. Critically discuss the importance of nutrition and health in the life cycle
3. Critically analyze the importance of nutrition in health promotion and disease prevention
4. Propose 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 Reference

1. Diet, nutrition and the prevention of chronic diseases. (2003) WHO Technical Report Series 916. Geneva: WHO
2. The World Health Report – Reducing risks, promoting healthy life. (2002). WHO: Geneva.
3. Mahan & Escott-Stump. (2004) Food, Nutrition & Diet Therapy. 11<sup>th</sup> edition. Philadelphia: Elsevier.
4. Webb, GP. (2002) Nutrition – a health promotion approach. 2<sup>nd</sup> edition. London: Arnold.
5. Lee, RD & Nieman, DC. (2003) Nutritional assessment. Boston: McGraw Hill.

#### Assessment Methods

Continuous assessment (seminar presentation) : 50%

Final Examination : 50%

### **MOGR6303**

#### **Qualitative Inquiry in Public Health (3 Credits)**

#### Learning Outcomes

At the end of this course, the candidate is able to:

1. Produce a research proposal using qualitative research methods
2. Critically appraise quality of qualitative research in the literature
3. Identify ethical issues relating to the conduct of qualitative research

#### 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 Reference

1. Rice PL, Douglas, E. 2002. Qualitative research methods: A health focus. Oxford: Oxford University Press.
2. Green JM, Thorogood N. 2004. Qualitative Methods for Health Research. Sage Publications.
3. Ulin PR, Robinson ET, Tolley EE. 2005. Qualitative Methods in Public Health. San Francisco: Jossey-Bass

#### Assessment Methods

Assignments (reports: 50%)

Submission of a research proposal : 50%

### MOGR6304

#### Health Risk Assessment (3 Credit)

#### Learning Outcomes

At the end of the course, the candidate is able to:

1. know 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 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.

#### Assessment Methods

Continuous assessment 50%, final examination 50%

#### Master of Public Health Programme Schedule

Semester 2	▪ Seven core courses each of three credit hours, totalling twenty one (21) credit hours.	Examination
Semester 1	▪ One core course of four (4) credit hours.	End of Semester 1
	▪ Five elective courses each of three credit hours, totalling fifteen (15) credit hours.	End of Semester 2
	or	
	▪ Three elective courses each of three credit hours, totalling nine (9) credit hours and one elective course that leads to a Research Paper of six (6) credit hours.	
		Registration (Admission 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 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 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 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 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:

Components		Description	Allocation of Marks (Maximum)
A.	MQGN6102	MCQ Multiple Choice Questions Paper	100
B.	MQGN6121	Vica Voce	100
C.	MQGN6126	OSCE Objective Structured Clinical Examination	100
D.	MQGN6127	OSPE Objective Structured Practical Examination	100
Total			<u>400</u>

(b) Part II Examination

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

Components	Description	Allocation of Marks (Maximum)
A. Written		
MQGN6236	Paper 1 MCQ	100
MQGN6237	Paper 2 MCQ	100
B. MQGN6266	Film Reporting	100
C. MQGN6250	Viva Voce	100
	Total	<u>400</u>

(c) Final Examination

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

Components	Description	Allocation of Marks (Maximum)
A. MQGN6371	Case Studies Report	100
B. MQGN6372	Research report	100
C. MQGN6374	Viva Voce	100
D. MQGN6373	Rapid Film reporting	100
	Total	<u>400</u>

(7) 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

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

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.

(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 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 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.

(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 the same components and shall be assessed and graded in the same manner as prescribed for the Final Examination.
- (iii) A candidate who has passed one or more of the components of the Final 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 has failed in the Final Examination.
- (v) A candidate whose research report and/or case studies 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 and/or case studies report for re-examination. A candidate who fails to submit his research report and/or case studies report by the end of the prescribed period for re-examination shall be deemed to have failed the research report and/or the case studies report.
- (vi) A candidate shall be permitted to resubmit the research report and/or case studies report for re-examination either singly or jointly on not more than two occasions.
- (vii) 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.

## 11. Award of Degree

No candidate shall be recommended for the award of the Degree of Master of Radiology unless he 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 -

- (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-

- (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**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>Advanced training in all aspects of Diagnostic Radiology, Imaging Technique and Interventional Radiology</li> </ul>	Final Examination
<b>S T A G E  II</b>	Year 3 Year 2	<ul style="list-style-type: none"> <li>Training in all aspect of Diagnostic Radiology, Imaging Technique and Interventional Radiology</li> </ul>	Part II Examination
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>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.</li> </ul>	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 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 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
- (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;
  - (b) the Final Examination.
- (2) No candidate shall be permitted to sit for the Part I Examination unless he has –
- (a) satisfactorily completed the continuous assessments prescribed by the Department; and
  - (b) submitted his 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 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 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 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:

Component		Description	Allocation of Marks (Maximum)
A. Written			
MTGP6101	Paper 1	Multiple Choice Questions	150
MTGP6102	Paper 2	Short Answer Type Questions	150
MTGP6126	Practical	Objective Structural Practical Examination	<u>200</u>
Total			<u>500</u>
B. MTGP6121		Clinical	<u>500</u>
Grand Total			<u>1000</u>

(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			
MTGP6236	Paper 1	Essay	100
MTGP6237	Paper 2	Short Answer Type Questions	100
MTGP6238	Paper 3	Multiple Choice Questions	100
MTGP6286	Practical	Objective Structured Practical Examination	<u>200</u>
Total			500
B. Clinical			
MTGP6243		Clinical	400
MTGP6250		Viva Voce	<u>100</u>
Grand Total			<u>1000</u>

(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

50% or more of the marks for each component.

The theory examination will be held 4 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 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 will be held 4 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 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 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 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 –

- (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**

<b>S T A G E  II</b>	Year 4	(a) Rotational postings in specialised Rehabilitation Medicine disciplines and disciplines related to Rehabilitation Medicine.	Final Examination
	Year 3	(b) Research report.	
	Year 2	(c) Assignments.	
	(36 months)	(d) The keeping of log book by the candidate to document tasks undertaken.  (e) Continuous assessments as prescribed by the Department.	
<b>S T A G E  I</b>	Year 1 (12 months)	(a) Basic and Applied Sciences of Rehabilitation Medicine.	Part I Examination
		(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	
			Registration (Entrance Evaluation)



**Name of Programme :** Master of Sports Medicine  
**Faculty :** Faculty of Medicine

### 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; and
- (b) assignments.

#### (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 Management, Ethics and Special Population;
- (c) assignments;
- (d) the keeping of a log book by the candidate to document tasks undertaken; and
- (e) research.

## **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 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 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 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 has submitted his assignments one month before the Part I Examination.
- (3) No candidate shall be permitted to sit for the Final Examination unless he 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) to submit a satisfactory published research paper or research report six months before the Final Examination and log book two 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:

Component	Description	Allocation of Marks (Maximum)
<b>A. Written</b>		
MTGO6104	One Best Answer	<u>200</u>
	Total	200
<b>B. Written</b>		
MTGO6105	Short answer Type Questions 1	200
MTGO6106	Short Answer Type Questions 2	200
<b>Clinical</b>		
MTGO6107	Objective Structured Clinical Examination	200
<b>Viva Voce</b>		
MTGO6121	Anatomy	50
MTGO6122	Physiology	50
MTGO6123	Pathology, Microbiology and Pharmacology	50
MTGO6124	Principles of Surgery and General Medicine	<u>50</u>
	Total	800
	<b>Grand Total</b>	<b><u>1000</u></b>

(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)
<b>A. Written</b>		
MTGO6236	Essay Questions	100
MTGO6237	Short Answer Type Questions	200
	Total	300
<b>B. Clinical</b>		
MTGO6243	Long Case	100
MTGO6244	Short Cases	200
MTGO6245	Objective Structured Clinical Examination	200
<b>Viva Voce</b>		
MTGO6250	Principles of Sports Medicine	50
MTGO6251	Principles of Sports Rehabilitation	50
MTGO6252	Principles of Exercise Testing and Exercise Prescription	50
MTGO6253	Principles of Sports Emergency	50
	Total	700
<b>Grand Total</b>		<b><u>1000</u></b>

(6) 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

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) There is no limit to the number of attempt in the Final Examination if it is still within the seven years of the maximum study period, from the date of registration to the University.
  - (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.
- (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 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 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 -

- (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**

<b>S T A G E  II</b>	Year 4	(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;	Final Examination
	Year 3	(b) advanced training in areas of Sports Management, Ethics and Special Population;	
	Year 2 (36 months)	(c) assignments;	
		(d) the keeping of a log book by the candidate to document tasks undertaken;	
<b>S T A G E  I</b>		and	Part I Examination
		(e) research	
	Year 1 (12 months)	Basic Sciences related to Sports Medicine and any other clinical discipline in relation to Sports Medicine	Registration (Entrance Evaluation)

**Name of Programme :** Master of Surgery  
**Faculty :** Faculty of Medicine

### 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 general surgical sub-specialties, namely Colorectal, Upper GI, Hepatobiliary, Breast, Endocrine and Vascular;
  - (b) submission of a research project
- (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 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 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 every six months for assessment by the Department in the Faculty responsible for the candidate's programme of study.
- (3) A candidate is required to submit his research report not later than three months before the Final Examination.
- (4)

## **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 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) Submission a research report that has been assessed as of sufficient standard not later than three months before the Final Examination.
- (5) A candidate may be exempted from the Part I Examination if he has passed:
- (a) Section A of 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
 or
  - (b) Section B and C of the 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
- (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:

Component	Description	Allocation of Marks (Maximum)
<b>A. Written</b>		
MSGD6101 Paper 1	Essay Questions	300
MSGD6102 Paper 2	Multiple Choice Questions	200
MSGD6103 Paper 3	Multiple Choice Questions	200
	<b>Total</b>	<b>700</b>
<b>B. Viva Voce</b>		
MSGD6121	Anatomy	100
MSGD6122	Physiology and Principles of Surgery	100
MSGD6123	Pathology (including Medical Microbiology)	100
	<b>Total</b>	<b>300</b>
	<b>Grand Total</b>	<b>1000</b>

A candidate who obtains less than 50% of 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 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)
A. Written		
MSGD6236	Paper 1	180
MSGD6237	Paper 2	180
	Total	<u>360</u>

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 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
	Principles of Surgery (including critical care) 2	40
MSGD6251	Surgical Pathology	40
MSGD6252	Operative Surgery	<u>40</u>
	Total required to pass component	<u>160</u>
C. Clinical		
MSGD6243	Long case 1	30
	Long case 2	<u>30</u>
	Total required passing component:	<u>60</u>
MSGD6244	Short cases	<u>90</u>
	Total required to pass component:	<u>90</u>

(6) 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; and
- (ii) A minimum mark of 45% in each viva; and
- (iii) At least two vivas with a mark of 50% or more

(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 each section of component C, i.e. the long and short case must be passed individually

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 not 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.
- (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-Examination. 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 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 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 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 Surgery  
Programme Schedule**

<b>S T A G E  III</b>	Year 4	<ul style="list-style-type: none"> <li>▪ (24) months in General Surgery including rotating through general surgical sub-specialties, namely Colorectal, Upper GI, Hepatobiliary, Breast, Endocrine and Vascular;</li> </ul>	Final Examination
	Year 3		
<b>S T A G E  II</b>	Year 2	<ul style="list-style-type: none"> <li>▪ (12) months of rotation in surgical specialties;</li> <li>▪ 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.</li> </ul>	
<b>S T A G E  I</b>	Year 1	<ul style="list-style-type: none"> <li>▪ General Surgery (6 months)</li> <li>▪ Accident and Emergency (3 months)</li> <li>▪ Orthopaedic Surgery or any surgery – related elective posting (3 months)</li> </ul>	Part I Examination (At the end of the first six months of Stage I)  Registration (Entrance Evaluation)

**Name of Programme :** Master of Medical Science  
**Mod :** By Research  
**Faculty :** Faculty of Medicine

**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**

The qualification for admission into the Degree programme of study are as follows:

- (1) The degrees of Bachelor of Medicine and Bachelor of Surgery or the degree of Bachelor of Dental Surgery of the University; or
- (2) The Bachelor of Science in the relevant field of the University and a CGPA of not less than 3.0 (or its equivalent); or
- (3) An equivalent qualification approved by the Senate from time to time; and
- (4) Evidence of adequate training and ability to undertake the Degree programme of study; and
- (5) 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 two (2) semester
- (2) The minimum duration of study shall be eight (8) semester

**4. Structure of Programme**

- (1) 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) Where the Faculty deems it necessary a candidate may be required to follow or follow and pass such course or course(s) as determined by the Faculty.

**5. Course Registration**

Except where he 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.

**Name of Programme :** Master of Medical Science  
**Mode :** By Coursework and Research  
**Faculty :** Faculty of Medicine

### 1. Classification of Programme

The Master of Medical Science by Coursework and Research 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 credit hours for the whole programme of study.

### 2. Entry Requirements

The qualification for admission into the Degree programme of study are as follows:

- (a) The degrees of Bachelor of Medicine and Bachelor of Surgery or the degree of Bachelor of Dental Surgery of the University; or
- (b) The Bachelor of Science in the relevant field of the University and a CGPA of not less than 3.0 (or its equivalent); or
- (c) An equivalent qualification approved by the Senate from time to time; and
- (d) Evidence of adequate training and ability to undertake the Degree programme of study; and
- (e) 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) semester
- (2) The minimum duration of study shall be eight (8) semester

### 4. Structure of Programme

- (1) The Master of Medical Science programme by coursework and research comprises fifty six (56) credit hours and consists of two parts, namely:
  - (a) Part I consisting of six core courses totalling sixteen (16) credit hours;
  - (b) Part II involving research leading to the submission of a dissertation totaling forty (40) credit hours.
- (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 are provided in List 1.
- (6) 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 credit hours in any semester except -
  - (a) in the final semester of his programme of study where he may register for less than the number of credits hours 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 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 has conducted research for at least one semester after registering for Part II of this programme.
- (2) A candidate shall submit his dissertation for examination within the period of candidature.

### List 1

#### List 1: Core Courses (Module Physiology)

Code	Title	Credit Hours
MWGN6108	Human Physiology I	3
MWGN6107	Human Physiology II	3
MQGQ6112	Biostatistics	3
MWGN6109	Advance Medical Physiology	3
MWGN6170	Seminars and Literature Review I	2
MWGN6173	Seminars and Literature Review II	2

Subject to change from time to time

**MWGN 6108**  
**Human Physiology I (3 credits)**

**Learning Outcomes**

At the end of the course, students are be able to:

1. Use knowledge pertaining to the discipline of Physiology regarding core topics and cardiovascular and respiratory systems
2. Apply practical skills for research purposes in the discipline of Physiology
3. Perform social skills and responsibility toward fellow humans and animals in the discipline of 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 Semester 1 is taught based on core subjects and system blocks, namely:

- Cell transport and membrane potentials
- Blood
- Muscle contractions and functions
- Physiology of the cardiovascular system
- Physiology of the respiratory

**Main Reference**

1. Textbook of Medical Physiology, 12th Edition. A C Guyton and J E Hall, Elsevier Saunders, Philadelphia, 2011.
2. Review of Medical Physiology, 23rd Edition. W.F. Ganong, McGraw-Hill, New York 2011
3. Rosnah Ismail, Raji Subramanian, Lam Sau Kuen and Ruby Husain, eds, (2006) Learning Physiology Through Practicals. University of Malaya Press.

**Assessment Methods**

Continuous Assessment : 30%

Final Examination : 70%

**MWGN 6107**  
**Human Physiology II (3 credits)**

Learning Outcomes

At the end of the course, students are able to:

1. Use knowledge pertaining to the discipline of Physiology regarding gastrointestinal, renal, endocrine and reproductive systems and neurophysiology
2. Apply practical skills for research purposes in the discipline of Physiology
3. Perform social skills and responsibility toward fellow humans and animals in the discipline of 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 Semester 2 is taught based on system blocks, namely:

- Gastrointestinal system
- Renal system
- Endocrine system
- Reproductive system
- Neurophysiology

Main Reference

1. Textbook of Medical Physiology, 12th Edition. A C Guyton and J E Hall, Elsevier Saunders, Philadelphia, 2010.
2. Review of Medical Physiology, 23rd Edition. W.F. Ganong, McGraw-Hill, New York 2011
3. Rosnah Ismail, Raji Subramanian, Lam Sau Kuen and Ruby Husain, eds, (2006) Learning Physiology Through Practicals. University of Malaya Press.

Assessment Methods

Continuous Assessment : 30%

Final Examination : 70%

**MWGN 6109**  
**Advanced Medical Physiology (3 credit hours)**

**Learning Outcomes**

At the end of the course, students are able to:

1. Use knowledge pertaining to the discipline of Physiology in unique settings
2. Apply practical skills for research purposes in the discipline of Physiology
3. Perform social skills and responsibility toward fellow humans and animals in the discipline of Physiology

**Synopsis**

Current and research information on: Hearing and balance, Vision, Neuropeptide, Pain, Locomotion, Exercise Physiology, Cardiovascular System, Blood Volume/Pressure Regulation, Hormone Receptor Mechanisms, Ion Channel Physiology, EEG, Neurotransmitters and Endocrine Functions, High altitude and diving physiology

**Main Reference**

1. Textbook of Medical Physiology, 12th Edition. A C Guyton and J E Hall, Elsevier Saunders, Philadelphia, 2010.
2. Review of Medical Physiology, 23rd Edition. W.F. Ganong, McGraw-Hill, New York 2011
3. Rosnah Ismail, Raji Subramanian, Lam Sau Kuen and Ruby Husain, eds, (2006) Learning Physiology Through Practicals. University of Malaya Press.

**Assessment Methods**

Continuous Assessment: 50%

Final examination: 50%

**MQGQ 6112**  
**Biostatistics (2 credit hours)**

Learning Outcomes

At the end of this course, students are able to:

1. Use knowledge pertaining to biostatistical methods
2. Solve problems in a scientific manner

Synopsis

Basics of statistical data analysis: Characterizing data and measurements, data screening and transformation. Descriptive statistics, shapes of distributions, application of graphical methods. Elementary statistical inference. Regression analysis, logistic regression. Analysis of variance.

Main References

1. Dawson B, Trapp RG, Basic & Clinical Biostatistics. 4<sup>th</sup> ed. LANGE Basic Science: 2004.
2. Daniel WW, Biostatistics: A Foundation for Analysis in the Health Sciences. 9<sup>th</sup> ed. John Wiley & Sons: 2008.
3. Glantz SA. Primer of Biostatistics. 7<sup>th</sup> ed. McGraw-Hill: 2011.

Assessment Methods

Continuous Assessment : 40%  
Final Examination : 60%

**MWGN 6170**  
**Seminar and literature review I (2 credit)**

Learning Outcomes

At the end of the course, students are able to:

1. Develop ability to gather current information in the discipline of Physiology pertaining to core topics and cardiovascular and respiratory systems
2. Use skills for information management and lifelong learning in the discipline of Physiology

Synopsis

Students are trained to search the literature and prepare reviews of current topics. They are also required to make oral presentations and submit concise written reports of the topics they have presented.

Main Reference

1. Textbook of Medical Physiology, 11<sup>th</sup> Edition. A C Guyton and J E Hall, Elsevier Saunders, Philadelphia, 2006.
2. Human Physiology. Davies, A., Blakeley, A. G. H. and Kid, C. Churchill Livingstone, London. 2001
3. Review of Medical Physiology, 22<sup>nd</sup> Edition. W.F. Ganong, McGraw-Hill, New York 2005
4. Current medical journals

Assessment Methods

Continuous assessment: 100%

**MWGN 6173**  
**Seminar and literature review II (3 credit)**

Learning Outcomes

At the end of the course, students are able to:

1. Develop ability to gather current information in the discipline of Physiology pertaining to gastrointestinal, renal, endocrine and reproductive systems and neurophysiology
2. Use skills for information management and lifelong learning in the discipline of Physiology

Synopsis

Students are trained to search the literature and critique reviews of current topics. They are also required to make oral presentations and submit concise written reports of the topics they have presented.

Main Reference

1. Textbook of Medical Physiology, 11th Edition. A C Guyton and J E Hall, Elsevier Saunders, Philadelphia, 2006.
2. Human Physiology. Davies, A., Blakeley, A. G. H. and Kid, C. Churchill Livingstone, London. 2001
3. Review of Medical Physiology, 22nd Edition. W.F. Ganong, McGraw-Hill, New York 2005
4. Current medical journals

Assessment Methods

Continuous assessment: 100%

1. To be registered as a candidate for the Doctor of Medicine, a candidate must:
  - (a) be a graduate of at least two years standing in medicine and surgery of this University, or of another approved University; or
  - (b) possess such other qualifications and experience as the Senate may specially approve.
2. To supplicate for the degree of Doctor of Medicine, a candidate shall submit a thesis 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;
3. A candidate may be awarded the degree of Doctor of Medicine provided that he has:
  - (a) satisfied the Board of Examiners for the degree of Doctor of Medicine; and
  - (b) paid all the prescribed fees.

#### **Regulations VII, Part 2**

1. Each candidate for the degree of Doctor of Medicine, before registering for the degree must send to the Registrar a written application stating the degrees and/or other qualifications which he has obtained and the details of the scope of his work and the subject of the proposed thesis.
2. Each application shall in the first instance be referred to the Committee on Postgraduate Medical Education of the Faculty which shall advise the Faculty on the acceptance or otherwise of the application and on the membership of the Ad Hoc Committee to be appointed to study the suitability of the subject matter and the practicability of the proposed investigation. The Faculty shall then make its recommendations to the Senate regarding the application.
3. The Faculty shall, at the same time, appoint a senior staff member to act as adviser to the candidate during the period of his candidature. The adviser shall be available for consultation on all phases of the work and on the preparation of the thesis, including editorial advice. Before the submission of the thesis, the adviser shall report to the Faculty on the work and upon the thesis. The candidate shall maintain regular contact with the adviser and shall submit annual progress report to the Dean, through the adviser. On the basis of these reports and the adviser's comments, the Faculty may advise the Senate on the continuance or otherwise of the candidature and the Senate shall in its discretion act accordingly.
4. In the event of the candidate's subject of research being in a field in which no full-time member of the staff of the University is available to act as adviser, the Faculty may appoint as joint advisers some other person and a staff member of the University.
5. A person whose application is approved by the Senate shall register as a candidate for the degree and shall renew his registration each academic year during his candidature.
6. A candidate may not submit this thesis earlier than 24 months nor later than 5 years after the date of his initial registration except with the approval of the Senate. A candidate shall give at least 3 months' notice in writing to the Registrar of his intention to submit his thesis for Examination.
7. Where the candidate is not a graduate of the University, he shall be required to fulfil a residential requirement of at least 12 months. Where the candidate is not a graduate of the University but who is a full-time staffs of the University, he shall be deemed to have fulfilled the residential requirement if he has put in 12 months of resident service during the period of his candidature. In the event that he resigns from the services of the University before completing 12 months of

resident service, he shall be required to put in residential requirement for such period to supplement the resident service to make it a total of 12 months.

8. The thesis must be based upon original work and must provide evidence of a significant advancement in the special field of knowledge. The thesis must embody a sufficient survey of the literature to indicate the relationship of the research to previous work and shall include a critical assessment of this relation and the advances made. A candidate may not submit as his thesis, work for which a degree has already been conferred in this or any other University, but he shall not be precluded from incorporating any part of such work, provided that in this thesis, he clearly indicates the part of the work which has been so incorporated. A candidate may in addition submit such other published works as he desires provided it has not already been submitted for a degree in any University.

- (7) Each candidate is required to submit the notice of submission of research thesis to the Assistant Registrar (Postgraduate Programmes) at least three months before the actual date of submission.

The submission has to be completed during the term of candidature. Five soft bound preliminary copies of the thesis to be examined should be submitted to the Postgraduate Secretariat together with the form of submission to the Dean of the Faculty.

Copies of the thesis must be typewritten in double spacing or printed on paper of A4 size except for drawings and maps on which no restriction is placed. A margin of 4 centimetres is to be left on the left hand side. The thesis must be accompanied by a declaration by the candidate that the work has been done and the thesis composed by himself. When preparing the thesis for submission, the candidate is to refer to the Guide to the Preparation of Research Reports, Dissertations and Theses produced by the Institute of Postgraduate Studies, University of Malaya.

The thesis should not exceed 100,000 words (excluding footnotes, appendices, tables and diagrams), except where specific permission to exceed this length has been given by the University senate. A candidate wishing to exceed the prescribed length may apply to the University senate for permission through his advisor. Any such application must indicate why it is not possible for the candidate to adhere to the prescribed length, and must be made at least three months before the submission of the thesis for examination.

Three hardbound copies of the final thesis should be submitted to the Postgraduate Secretariat after corrections or amendments (if any) have been made, together with the final submission form.

The colour of the covers for both softbound and hardbound copies of the thesis should be dark red or maroon and made from Rexene. The title of the thesis or an abbreviation thereof and the name of the author should be printed in block (upper case) letters on the spine.

Copies of the thesis, whether approved or not for the degree shall become the property of the University.

Each candidate must lodge with the Registrar 5 copies of his thesis embodying the results of his research together with 5 copies of a summary not exceeding 500 words in a suitable form for publication.



**UNIVERSITIES AND UNIVERSITY COLLEGES ACT 1971**

**CONSTITUTION OF THE UNIVERSITY OF MALAYA 1997**

**UNIVERSITY OF MALAYA (DOCTOR OF PUBLIC HEALTH) RULES 2012**

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**ARRANGEMENT OF RULES**

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**UNIVERSITIES AND UNIVERSITY COLLEGES ACT 1971**

**CONSTITUTION OF THE UNIVERSITY OF MALAYA 1997**

**UNIVERSITY OF MALAYA  
(DOCTOR OF PUBLIC HEALTH) RULES 2012**

In exercise of the powers conferred under section 31 and subsection 32(1) of the Constitution of the University of Malaya 1997 [P.U. (A) 107], the Board of Directors of the University of Malaya makes the following rules:

**PART I  
INTRODUCTION**

**Name, commencement and application**

1. (1) These Rules may be cited as the **University of Malaya (Doctor of Public Health) Rules 2012** and shall come into force in the academic session **2012/2013**.
- (2) These Rules shall apply to all candidates of the Doctor of Public Health admitted in the academic session **2012/2013** and thereafter.

**Interpretation**

2. In these Rules, unless the context otherwise requires—

"academic session" means the period of study for a programme of study comprising two normal semesters including special semesters;

"academic year" means a period of twelve months duration, the dates for the commencement and the end of which shall be determined by the University;

"calendar year" means a period of time the duration of which is twelve months;

"candidate" means a person who has registered for the Degree programme of study;

"Committee of Examiners" means the committee established in the Faculty for the purpose of considering and assessing the examination results of a candidate pursuant to any regulations made under these Rules;

"Constitution" means the Constitution of the University of Malaya;

"consultant" means a person who is not a member of the academic staff of any university appointed by the Faculty to assist in the supervision of a candidate in his programme of study;

"co-supervisor" means a person appointed by the Faculty from amongst its academic staff who has left the services of the University and whose supervisory services are still required to enable his candidate to complete the programme of study, and may include a duly appointed academic staff from another university;

"course" means a unit of education or training conducted over a prescribed period of time;

"Dean of the Faculty" means the Dean of the Faculty of Medicine of the University;

"Degree" means the degree of Doctor of Public Health of the University;

"Department" means the Department of Social and Preventive Medicine of the Faculty;

"examination room" means the premises for the conduct of an examination for a course or courses;

"external examiner" means a person who is not a full-time or part-time teacher of the University appointed by Senate to examine a course for the Degree programme of study or thesis of a candidate;

"Faculty" means the Faculty of Medicine of the University;

"Head of Department" means the head of the Department of the Faculty;

"internal examiner" means a person who is a full-time or part-time teacher of the University appointed by the Faculty to examine a course, a part of a course or thesis of a candidate;

"internship course" means a compulsory attachment undertaken by a candidate for a period of time and in any organisation as may be determined by the Department;

"invigilator" means an invigilator and includes a chief invigilator appointed by the Dean of the Faculty to invigilate an examination of the Degree programme of study;

"normal semester" means Semester I or Semester II as provided in the Semester Schedule;

"place of study" means the University including any other place approved by the University;

"programme of study" means a group of courses, training and research or a combination of such courses, training and research that are planned and offered for purposes of fulfilling the requirements for the award of the Degree;

"Registrar" means an officer of the University under subsection 13(1) of the Constitution;

"semester" means a period in an academic session and comprises normal semesters and special semesters;

"Senate" means one of the University Authorities established under subsection 20(1) of the Constitution;

"supervisor" means a person appointed by the Faculty from amongst the academic staff of the University and includes an Emeritus Professor or an Adjunct Professor of the University, post-doctoral researcher or research fellow to supervise a candidate in his programme of study;

"thesis" means the written product from research undertaken in respect of the Degree programme of study;

"University" means the University of Malaya.

"Vice-Chancellor" means the chief executive and academic officer of the University appointed under subsection 12(1) of the Constitution.

## PART II

### PROGRAMME OF STUDY AND ADMISSION REQUIREMENTS

#### Programme of study

3. The programme of study shall be named the Doctor of Public Health which is a programme of study comprising two parts (Part 1 and Part 2). Part 1 consists of courses including an internship course and Part 2 consists of research that leads to a thesis. Except where prior written approval has been obtained from the Dean of the Faculty, a candidate must successfully complete Part 1 before embarking on Part 2.

#### Admission requirements

4. (1) The minimum qualifications for admission into the Degree programme of study are as follows:
- (a) A Master of Public Health degree; or
  - (b) A Bachelor of Medicine or Dentistry; and
- evidence of adequate training and ability to undertake the Degree programme of study.
- (2) Notwithstanding subrule (1), in special cases and subject to the approval of the Senate, the Faculty may at its discretion admit any candidate who possesses qualifications other than those provided for above.
- (3) The admission of any candidate shall be at the discretion of the Faculty. Provided always in certain circumstances the Dean of the Faculty may, on the recommendation of the Deputy Dean responsible for postgraduate programme and the Head of the Department, admit a candidate who fulfils the following qualifications:
- (a) A Master's degree in the relevant field with a CGPA of not less than 3.7 (or its equivalent), whichever is relevant; or
  - (b) A Master's degree with a CGPA from 3.2 to 3.69 and a Bachelor's degree with a CGPA of not less than 3.0; or
  - (c) A Master's degree with a CGPA from 3.2 to 3.69 and a Bachelor's degree with a CGPA from 2.5 to 2.99 who fulfill at least one of the criteria below:
    - (i) Have work related experience; or
    - (ii) Have publications in related field; or
    - (iii) Fully sponsored
    - (iv) University of Malaya graduates.
- OR
- (d) A Master's degree with a CGPA from 3.2 to 3.69 and a Bachelor's degree with a CGPA from 2.10 to 2.49 can be considered if he fulfils the criteria below:
    - (i) University of Malaya graduates; AND
    - (ii) Have work related experience of not less than 5 years OR have published at least one publication in refereed journals in related field.

- (4) Notwithstanding subrule (1), the Faculty may consider for direct admission of a candidate to Part 2 of the Degree programme of study who fulfils the following qualifications:
- (a) A Master of Public Health degree in a Speciality with a CGPA of not less than 3.0 or an equivalent qualification; or
  - (b) A Master's degree with distinction in a relevant field of Public Health.
- (5) Candidates admitted under subrule (4) are subjected to a monitoring of their progress and are required to make a presentation on the progress of their research in a seminar two semesters from the date of initial registration.

### **PART III**

#### **REGISTRATION**

##### **Registration as a candidate**

5. (1) A person who has been offered a place by the University to pursue the Degree programme of study and who accepts the said offer is required to register in accordance with the University of Malaya (Degree of Doctor of Public Health) Regulations **2012**.
- (2) Subject to subrule (3), a person registered pursuant to subrule (1) is a student of the University and shall be known as a candidate of the Degree programme of study. The name of the said candidate shall be entered into the University's register of students until such time as the candidate shall have completed successfully his programme of study and the Senate has confirmed that the said candidate is qualified to be conferred the Degree or, for any specific reasons, as the candidate shall have lost his status as a student of the University, whichever is the earlier.
- (3) Every candidate who is registered for the programme of study shall register on a continuous basis with the University.
- (4) Any candidate who fails to continue to register as required with the University shall cease to be a student and his name shall be deleted from the register of students.
- (5) Notwithstanding subrule (1) and subject to subrule (3), the Senate may at any time terminate the registration of any candidate if in the opinion of the Senate the candidate for any academic reasons as may be determined by the Senate, is not able to continue his programme of study and the name of the said candidate shall be deleted from the register of students and the candidate shall henceforth cease to be a student of the University.

### **PART IV**

#### **PAYMENT**

##### **Fees and other payments**

6. A candidate shall pay all prescribed fees and other payments as may be prescribed under the University of Malaya (Degree of Doctor of Public Health) Regulations 2012.

##### **Right to vary fees and other payments**

7. The University has the absolute right to vary the prescribed fees and other payments without prior notice to the candidate.

## PART V

### DURATION OF PROGRAMME OF STUDY

#### Duration of programme of study

8. A candidate shall commence and end his programme of study within the prescribed period.

#### Minimum and maximum duration

9. (1) The minimum period for the Degree programme of study is **six (6) normal semesters and one (1) special semester** unless otherwise approved by the Senate.
- (2) The maximum period for the Degree programme of study is **twelve (12)** semesters.
- (3) Notwithstanding subrules (1) and (2) in certain circumstances the Dean of the Institute of Postgraduate Studies or an officer as may be determined by the University may extend the period of candidature beyond the maximum period as prescribed in subrule (2) provided that such extension shall not exceed two semesters.

## PART VI

### STRUCTURE OF PROGRAMME OF STUDY

#### Structure of programme of study

10. The candidate shall be required to follow the Degree programme of study based on the structure of the programme of study as may be prescribed in any regulations made under these Rules.

## PART VII

### LANGUAGE REQUIREMENTS

#### Bahasa Malaysia requirement

11. (1) A candidate who is a Malaysian citizen shall be required to possess at least a pass in Bahasa Melayu or Bahasa Malaysia at the level of *Sijil Pelajaran Malaysia* or a Level III in the *Sijil Kecekapan Bahasa Malaysia* or a Level III in the *Sijil Intensif Bahasa Malaysia* of the University or an equivalent level before being conferred the Degree.
- (2) A candidate who is not a Malaysian citizen shall be required to attend at a satisfactory level a bahasa Malaysia course that is conducted by the University before being conferred the Degree unless he possesses at least a pass in Bahasa Melayu or Bahasa Malaysia at the level of *Sijil Pelajaran Malaysia* or Level III in the *Sijil Kecekapan Bahasa Malaysia* or Level III in the *Sijil Intensif Bahasa Malaysia* of the University or a bahasa Malaysia course recognised by the University.
- (3) Notwithstanding subrules (1) and (2), the bahasa Malaysia requirement may be waived for a candidate who has attended a course of study conducted in the national language at a local Institution of Higher Education.

#### English language requirement

12. (1) A candidate who is not a Malaysian citizen and who possesses a degree or degrees from a university or an institution of higher education where the medium of instruction is not the English language for that degree or degrees as the case may be must —
- (a) obtain a score of 550 paper-based total, a score of 213 for computer-based total or a score of 80 for internet-based total for the *Test of English as a Foreign Language* (TOEFL);

- (b) obtain a band of 6 in the *International English Language Testing System* (IELTS).
- (2) If a candidate does not possess the qualifications as specified under paragraphs 1(a) and (b), the candidate must attend any English language course and pass any English language test as prescribed by the Senate before he commences the writing of his thesis.
- (3) Notwithstanding subrules (1) and (2), the Faculty may impose, based on the requirements of the Degree programme of study—
  - (a) a higher level of English language proficiency for candidates who are not Malaysian citizens;
  - (b) a minimum level of English language proficiency for candidates who are Malaysian citizens; or
  - (c) a minimum English language requirement as a condition for admission into the Degree programme of study.

## PART VIII EXAMINATIONS

### Examinations

- 13. There shall be examinations for the Degree programme of study subject to the regulations in the University of Malaya (Degree of Doctor of Public Health) Regulations 2012.

## PART IX GRADUATION

### Graduation requirements

- 14. The Degree shall be conferred on a candidate who has —
  - (1) fulfilled all the requirements of these Rules and any regulations made thereunder;
  - (2) satisfied the Committee of Examiners and been recommended by it to be conferred the Degree and approved by the Senate; and
  - (3) paid all his fees and other payments as prescribed by the University.

## PART X GENERAL

### Admission of auditing student

- 15.
  - (1) An auditing student is any person who has been approved to follow any course that is offered in the Degree programme of study, whether or not for the purpose of obtaining credit. Such student shall not be a student of any programme of study of the University.
  - (2) The admission of any auditing student shall be at the discretion of the Dean of the Faculty.



**Termination of candidature**

16. The Senate shall have the power to terminate the candidature of any candidate who is found to have submitted forged or false information in connection with his application for admission into the University.

**Power of the Senate to make regulations**

17. The Senate shall make any regulations for the purpose of carrying into effect or enforcing the provisions of these Rules.

**Exemptions**

18. Notwithstanding anything contained in these Rules and any regulations made thereunder, the Senate may exempt the application of any provisions of these Rules.

**Compliance with University's Statutes, rules and regulations**

19. Every candidate shall be subject to the Universities and University Colleges Act, 1971, the Constitution of the University of Malaya, all other Statutes, rules and regulations currently applicable in the University including the University of Malaya (Discipline of Students) Rules 1999.

Made on \_\_\_\_\_

Chairman  
University of Malaya Board of Directors

**UNIVERSITIES AND UNIVERSITY COLLEGES ACT 1971**

**CONSTITUTION OF THE UNIVERSITY OF MALAYA 1997**

**UNIVERSITY OF MALAYA  
(DOCTOR OF PUBLIC HEALTH) REGULATIONS 2012**

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**ARRANGEMENTS OF REGULATIONS**

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**PART II  
APPLICATION FOR ADMISSION**

2. Advertisement and application

**PART III  
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## **SCHEDULE**

**UNIVERSITIES AND UNIVERSITY COLLEGES ACT 1971**

**CONSTITUTION OF THE UNIVERSITY OF MALAYA 1997**

**UNIVERSITY OF MALAYA  
(DOCTOR OF PUBLIC HEALTH) REGULATIONS 2012**

In the exercise of the powers conferred by rule 17 of the University of Malaya (Degree of Doctor of Public Health) Rules 2012, the Senate makes the following regulations:

**PART I  
INTRODUCTION**

**Name, commencement and application**

1. (1) These Regulations may be cited as the **University of Malaya (Doctor of Public Health) Regulations 2012** and shall come into force in the academic session **2012/2013**.
- (2) These Regulations shall apply to all candidates of the Doctor of Public Health admitted in the academic session **2012/2013** and thereafter.

**PART II  
APPLICATION FOR ADMISSION**

**Advertisement and admission**

2. (1) The Degree programme of study of the University shall be advertised from time to time.
- (2) Admission into the Degree programme of study shall be made using the prescribed application forms and in accordance with any prescribed procedures.
- (3) Applications for admission into the Degree programme of study shall reach the Institute of Postgraduate Studies of the University or any centres as may be determined by the University. Where the University has prescribed the closing date for applications for admission to the Degree programme of study, such applications for admission shall be submitted on or before the prescribed closing date.

**PART III  
REGISTRATION**

**Initial registration**

3. (1) A candidate of the Degree programme of study shall register for his programme of study not later than two weeks from the date of commencement of the semester for the programme of study to which he has been offered admission.
- (2) If a candidate does not register within the stipulated period or any approved deferment, the offer of admission to the Degree programme of study shall lapse automatically.
- (3) In certain circumstances, the Dean of the Institute of Postgraduate Studies or any officer as may be designated by the University, on the recommendation of the Dean of the Faculty may allow a candidate to defer his initial registration to the following semester.

### **Registration of courses**

4. (1) A candidate for the Degree programme of study shall attend such programme in accordance with the structure of the programme of study as may be prescribed in Schedule 1 to these Regulations.
- (2) A candidate shall register for such courses as may be prescribed in Schedule II to these Regulations for the Degree programme of study attended by him.
- (3) A candidate is given a period of two weeks from the date of the commencement of his semester to complete his registration of courses. Any candidate who does not complete the registration of courses within this period shall not attend the said courses.
- (4) Notwithstanding the provisions of subregulation (3), a candidate may in special cases or on the recommendation of the Dean of the Faculty, be allowed to register late or backdate his registration if the candidate has fulfilled eighty percent of class attendance for the relevant semester for the relevant course. The candidate shall pay a fine at a prescribed rate as well as other prescribed fees for that course.

### **Renewal of candidature**

5. (1) A candidate of the Degree programme of study shall renew his candidature not later than two weeks from the date of commencement of the relevant semester.
- (2) The failure of a candidate to renew his candidature within the period prescribed under subregulation (1) shall cause his candidature to lapse unless the candidate has been granted approval to register late. The candidate shall pay a fine at a prescribed rate as well as other prescribed fees for that course.

### **Concurrent registration**

6. (1) Subject to subregulations (2), (3) and (4), a candidate shall not register concurrently for any programme of study that will lead to the award of any degree in this University or any other university or institution.
- (2) A Faculty may permit a candidate to register concurrently for any programme of study that will lead to the award of a degree in this University or other university or institution provided that —
  - (a) the candidate has submitted his thesis for examination; and
  - (b) the programme of study is not the same as the programme of study he(c)has registered for at the University.
- (3) Where the University conducts a programme in cooperation with another university or institution that will lead to the award of a degree, a candidate may be permitted to register concurrently.
- (4) A candidate may with the approval of the Dean of the Faculty register and attend at any time such in-service training programme at the request of his employer provided that such programme is for a period of not more than one year.
- (5) Subject to subregulations (2), (3) and (4), any candidate found to be in breach of subregulation (1) may have his candidature terminated without refund of any fees and other payments that have been paid.

### **Attendance in programme of study**

7. (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.

## Withdrawal

8. (1) The following provisions shall apply to any withdrawal from any course:

- (a) "A withdrawal from any course" means withdrawal from one or more courses in any semester. Notwithstanding that, a candidate is subject to any prescribed minimum credit hours for any normal semester.
- (b) A candidate may withdraw from a course not later than the seventh week of lectures of any normal semester or the second week of lectures of the special semester. Such candidate shall not be liable to pay any fees and his course record shall be expunged.
- (c) A candidate who withdraws from any course after the second week of lectures but before the seventh week of lectures of any normal semester shall be liable to pay all the prescribed fees and shall be given the grade W for the course concerned.
- (d) A candidate shall not withdraw from any course after the seventh week of lectures of any normal semester or after the second week of lectures of any special semester unless otherwise permitted by the Dean of the Institute of Postgraduate Studies or an officer as may be designated by the University pursuant to a written application by the candidate made through the Dean of the Faculty.
- (e) An application to withdraw will only be considered on the basis of emergencies supported by relevant documentary evidence or on medical grounds supported by a medical report issued by a registered medical officer.
- (f) Where the application is allowed, the course concerned shall be given the Grade W. All prescribed fees shall remain liable to be paid.
- (g) Where the application is not allowed, the candidate shall be required to continue with his candidature with respect to the course concerned. A candidate will be given the Grade F if he does not attend the course and does not sit for the examination that is held at the end of the semester concerned.
- (h) No candidate is permitted to withdraw from a course on any or all of the following grounds:
  - (i) The performance of the candidate is not satisfactory for any of the courses;
  - (ii) Insufficient preparation for the course concerned; or
  - (iii) Dissatisfaction with any of the courses.
- (i) A candidate is not permitted to withdraw from any of the courses once the examination period has commenced.

- (2) The following provisions shall apply in relation to any withdrawal from a semester:

- (a) "Withdrawal from a semester" means withdrawal from all registered courses or programme of instruction or research for the semester concerned. The

candidate is only permitted to withdraw from any semester after he has attended the programme of study for at least one semester. The Faculty may in certain circumstances permit the candidate to withdraw from any semester.

- (b) Any application for withdrawal from a semester may be approved by the Faculty provided it is received before 12.00 noon on the Friday of the seventh week of the semester concerned.
  - (c) Any candidate whose application to withdraw from a semester is approved before 12.00 noon on the Friday of the seventh week of the semester —
    - (i) shall not be required to pay any course fees; and
    - (ii) the registration record of the semester concerned shall be expunged.
  - (d) A candidate is not permitted to withdraw from a semester after 12.00 noon on the Friday of the seventh week unless otherwise approved by the Deputy Vice-Chancellor concerned on an application made in writing by the candidate through the Dean of the Faculty. An application on the grounds of emergency will only be considered if supported by relevant documentary evidence or on medical grounds if supported by a medical report that is issued by a registered medical officer.
  - (e) If the application is approved, the course concerned shall be given Grade W. The prescribed fees remain liable to be paid.
  - (f) If the application is not approved, the candidate shall be required to continue with his candidature for the semester concerned.
  - (g) A candidate is not permitted to withdraw once the examination period has commenced.
  - (h) The maximum period a candidate may be permitted to withdraw from a semester is four normal semesters for the duration of the period of candidature whether on a continuous basis or otherwise, except with respect to the last semester of the candidature.
  - (i) Except for medical reasons that are supported by medical report from a registered medical officer, the period of withdrawal shall be counted as part of the maximum period of candidature.
- (3) The following provisions shall apply in relation to any withdrawal from the Degree programme of study:
- (a) Any application to withdraw from the Degree programme of study shall be made in writing through the Dean of the Faculty to the Dean of the Institute of Postgraduate Studies or such officer as may be determined by the University; and
  - (b) Any decision with respect to a withdrawal from the Degree programme of study shall be final.

## **PART IV**

### **PAYMENT**

#### **Fees and other payments**

9. (1) A candidate shall pay all fees and other payments due to the University at the time of initial registration or at the time of renewal of candidature except where he has been exempted from any fee or payment or both fee and payment.
- (2) A candidate who intends to pay any fee or other payments to the University by instalments shall apply to do so using the prescribed forms obtainable from the Institute of Postgraduate Studies or any other centres as may be determined by the University.
- (3) A candidate who fails to pay any fee or other payments or any part thereof or any payment due to the University shall not be permitted to sit for any examination of the Degree programme of study.

## **PART V**

### **STRUCTURE OF PROGRAMME OF STUDY**

#### **Offer and completion of courses**

10. (1) The Faculty shall determine the courses that it wishes to offer in any semester. A new course may be offered if it fulfils the required conditions and has been approved by the Senate.
- (2) Every course offered shall be taught, completed and examined in one semester. Only specific courses that have obtained the prior approval of the Senate may be conducted for more than one semester.
- (3) The total credit hours for the coursework component of the Degree programme of study shall be as determined by the Faculty and the Senate.

#### **Change in field of research**

11. A candidate may submit an application in accordance with prescribed procedures to change his field of research. Any change in the field of research is subject to the approval of the Faculty.

#### **Transfer of Credit**

12. (1) Transfer of credit" means the transfer of credit hours that are similar to the grade obtained for a course taken by a candidate after his admission into the Degree programme of study.
- (2) In the transfer of credit, the credit hour that has been obtained together with the grade and the grade point for the course concerned shall be taken into account in the calculation of the candidate's GPA and CGPA. The approval for the transfer of credit, among other things, is subject to the following conditions:
  - a) The course for which the transfer of credit is applied has at least seventy-five percent of overlap with the course that is offered at this University;
  - (b) The grade or grade point obtained for the course concerned is not less than B or 3.0; and
  - (b) The course for which the transfer of credit is applied shall be a course from a programme of study that is equivalent to the Degree programme of study.



### **Exemption of credit**

13. (1) "Exemption of credit" means the exemption from registration and attendance of a course that is prescribed for the Degree programme of study as approved by the Senate. The approval for the exemption of credit is subject to the following conditions:
- (a) The course for which exemption of credit is applied was taken by the candidate before his admission into the Degree programme of study;
  - (b) The course for which exemption of credit is applied shall have at least seventy-five percent of overlap with the course that is offered by this University;
  - (c) The grade or grade point obtained for the course concerned is not less than B or 3.0; and
  - (d) The course for which the transfer of credit is applied shall be a course from a programme of study that is the equivalent to the Degree programme of study.
- (2) A course that has been approved for exemption of credit shall be awarded Grade K and the credit hour shall not be taken into account in the calculation of the GPA and CGPA.
- (3) In certain circumstances, a course that has not been approved for transfer of credit may be considered for exemption of credit subject to the conditions under subregulation (1).

### **Application for transfer and exemption of credit**

14. (1) An application for transfer or exemption of credit shall be made using the relevant form that can be obtained from the Faculty. The completed form shall be submitted to the Dean of the Faculty not later than the Friday of the fifth lecture week of the normal semester together with -
- (a) the payment of the processing fees at a rate that has been determined. Such fee is non-refundable;
  - (b) the syllabus and marking scheme of the course for which application for which transfer or exemption of credit is made; and
  - (c) a copy of the transcript.
- (2) The maximum credit hours that can be transferred and exempted shall not exceed one third of the total credit hours of the component of the Degree programme of study.
- (3) The candidate shall be informed in writing of the result of his application for transfer or exemption of credit.

## **PART VI SUPERVISION**

### **Supervision and progress of candidature**

15. (1) The Faculty shall appoint a supervisor for each candidate. For a candidature requiring more than one supervisor, the Faculty may appoint additional supervisors who shall have equal status as the first appointed supervisor. The supervisor shall carry out his role and responsibilities as may be determined by the University.
- (2) An Adjunct Professor of the University, a post-doctoral researcher or a research fellow may be appointed by the Faculty as the supervisor of a candidate provided that an additional supervisor from among the academic staff of the University is appointed to supervise jointly the said candidate.

- (3) The Faculty may appoint a joint supervisor for any candidate subject to the agreement of the said staff and the Faculty.
- (4) The Faculty may appoint a consultant for any candidate. For the purpose of this regulation, the term “consultant” shall be used for the appointment of an external expert who is not from among the academic staff.
- (5) The supervisor, joint supervisors (if any) and consultant (if any) shall be appointed before the initial registration of the candidate or at any other time as may be necessary. The Faculty has the right to increase, reduce or change any supervisor, joint supervisors or consultant from time to time as may be deemed necessary by the University.
- (6) A candidate shall be required to submit a progress report at the end of each semester to his supervisor in accordance with the prescribed procedure. The appointed supervisor, joint supervisors and consultant shall evaluate the progress report that has been submitted to the Dean of the Faculty through the Head of Department.
- (7) A candidate whose progress is satisfactory shall be recommended for a continuance of his candidature. A candidate whose candidature is not satisfactory shall have his candidature terminated by the Senate.

## PART VII THESIS

### Determination of title of thesis

16. The title of the thesis shall be submitted to the Faculty for approval when the candidate submits his notice of submission of thesis under regulation 18 of these Regulations.

### Language of thesis

17. The thesis shall be written in the English language. In certain circumstances, the Faculty may allow a thesis to be written in bahasa Malaysia.

### Submission of thesis

18.
  - (1) A candidate shall submit his thesis for examination within the period of candidature. The period that is taken for the examination of the thesis and any period for corrections or further work on the thesis as may be required by the Committee of Examiners shall not be regarded as part of the maximum period of the candidate’s 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.
  - (3) A candidate shall submit in print format of at least **four (4) printed copies and two (2) electronic copies** of his thesis or such numbers as may be determined by the Faculty for examination. The thesis shall be—
    - (a) prefaced by —
      - (i) an abstract that does not exceed five hundred words in bahasa Malaysia and English; and
      - (ii) a declaration of the originality of the writing in accordance with a format as may be determined by the University;

- (b) typed and printed in double spacing on A4 size paper except for drawings or maps for which there is no size limitation. A margin of four centimetres shall be left on the left-hand side; and
  - (c) bound in rexine red soft cover with the title or an abbreviation thereof and the name of the author printed in block letters on the spine and the cover.
- (4) A thesis shall not exceed a hundred thousand words except otherwise determined by the Senate.
- (5) Notwithstanding the provisions of subregulation (4), the following are not included in the limitations:
  - (a) Footnotes or endnotes, appendices, tables and diagrams; and
  - (b) Reproductions or translations of any texts. The candidate's own comments or criticisms shall be subject to the said limitations.
- (6) A candidate who wishes to exceed the number of words specified shall apply to the Faculty at least three months before the date of submission of his thesis for examination, and provide reasons for his inability to adhere to the prescribed length.
- (7) A candidate shall not submit as his thesis any work including idea, writing, data or any creation of any other person or work that has already been submitted for a degree in this or any other university or institution, but he shall not be precluded from incorporating any part of any such work into his thesis provided that in his thesis he indicates clearly that part of the work that has been so incorporated.
- (8) A candidate may submit any contribution that has been printed and published independently or conjointly for the advancement of his subject. A conjoint work must be accompanied by a statement showing clearly the candidate's contribution to the work. The statement must be signed by his collaborator.
- (9) A candidate shall not plagiarize any idea, writing, data or creation of any other person. For the purpose of this subregulation and subregulation 30(9), plagiarism includes—
  - (a) any act of taking an idea, writing, data or creation of another person and claiming that the idea, writing, data or creation is his own product or creation; or
  - (b) any attempt to promote or any act of promoting, in any form, that he is the originator or creator of any idea, writing, data or creation which in fact has been taken from another source.
- (10) A candidate who is found to have plagiarised his thesis may be subject to disciplinary action under the University of Malaya (Discipline of Students) Rules 1999.
- (11) Any thesis submitted for examination shall be in accordance with the regulations and procedures prescribed under these Regulations or any amendments thereof as may be made from time to time. The Dean of the Faculty may reject any thesis not submitted in accordance with any prescribed regulations and procedures.
- (12) Any approved thesis or part thereof that is subsequently published shall state clearly that it was submitted for the Degree of Doctor of Public Health of the University. In the course of his candidature, a candidate may with the approval of his supervisor publish any papers of his work during his candidature provided due reference is made to the University in all such papers.
- (13) A thesis whether approved or otherwise for the award of the Degree including any intellectual property rights therein shall vest in and remain the property of the University.

The University reserves the right to restrict or limit for such period as may be required for the purpose of protecting or obtaining intellectual property rights, the publication, disclosure or use of or any dealings with the following:

- (a) Thesis;
  - (b) Result or product of the research leading to the thesis concerned; or
  - (c) Both of the above.
- (14) After the examination of the thesis and the final result of the candidate's thesis, the candidate shall submit to the University—
- (a) three copies of the thesis in print format bound in rexine red hard copy with a title or an abbreviation thereof and the name of the author printed in block letters on the spine and cover; and
  - (b) an electronic copy in accordance with the prescribed format.

## **PART VIII**

### **EXAMINATIONS**

#### **Number and scope of examinations**

19. (1) The number and scope of examinations shall be determined under these Regulations as may be approved by the Senate on the recommendation of the Faculty.
- (2) The examination in any course and thesis may incorporate written tests, orals, practicals and clinicals in any form as well as other assessment methods as may be approved by the Senate on the recommendation of the Faculty.
- (3) The Committee of Examiners may at its discretion require a candidate to sit for any additional examination that is deemed necessary for the assessment of his thesis.

#### **Committee of Examiners**

20. A Committee of Examiners shall be appointed for each examination or part thereof of the Degree programme of study. Separate Committees of Examiners shall be required for the coursework component and the research component as follows:
- (1) The coursework component
- (a) The membership of the Committee of Examiners shall comprise the following as approved by the Senate:
    - (i) The Dean of the Faculty as Chairman;
    - (ii) The Chairman of the Faculty's Higher Degree Committee or the Deputy Dean in charge of postgraduate programmes of the Faculty where the Deputy Dean is not the Chairman of the Faculty's Higher Degree Committee;
    - (iii) A professor appointed by the Faculty;
    - (iv) The Head of Department;
    - (v) The coordinator of the field concerned who is responsible for any of the course or programme of study not within the Department/Faculty;

- (vi) The external examiner concerned; and
  - (vii) Any examiner who is a full-time teacher or any other person appointed by the Faculty.
- (b) The quorum for the meeting of the Committee of Examiners is the Chairman and one-third of the members of the Committee of Examiners.
  - (c) A part-time teacher of the University may be invited to attend a meeting of the Committee of Examiners.
  - (d) Members of the Committee of Examiners shall not delegate to any other person who are not members of the Committee of Examiners to represent him in any meeting of the Committee of Examiners.
  - (e) The Registrar or his representative shall be the secretary of the meeting of the Committee of Examiners.
  - (f) In the event of an emergency, the Vice-Chancellor may appoint any full-time teacher of the University as a member of the Committee of Examiners on condition the appointment is reported to the Senate as soon as possible.
  - (g) The functions of the Committee of Examiners are as follows:
    - (i) To consider the examination results in accordance with the marking scheme as provided under paragraph 24(1)(c) below and to determine the candidates who have passed or failed an examination;
    - (ii) To recommend to the Senate that the candidates who have failed the examination in any course be permitted to repeat the course and to retake the examination for the course concerned or not be permitted to retake the examination or to be readmitted into the Degree programme of study; and
    - (iii) To report to the Senate on any matters in connection with the quality or conduct of an examination.
- (2) The research component
- (a) The membership of the Committee of Examiners shall comprise the following —
    - (i) The Dean of the Faculty as Chairman;
    - (ii) A representative of the Senate appointed by the Senate;
    - (iii) The Chairman of the Faculty's Higher Degree Committee or the Deputy Dean in charge of postgraduate matters of the Faculty where the Deputy Dean is not the Chairman of the Faculty's Higher Degree Committee;
    - (iv) The Head of Department; and
    - (v) Three examiners with expertise in the field concerned of whom at least two are external examiners appointed by the Senate.
  - (b) The quorum for the meeting of the Committee of Examiners shall be at least four including an examiner and the representative of the Senate.
  - (c) Where the Dean of the Faculty is the supervisor or examiner of the thesis of the candidate concerned, the chairman of the Committee of Examiners may be one

of the professors in the field concerned or the Dean of the Institute of Postgraduate Studies or such officer as may be determined by the University.

- (d) Where the Dean of the Faculty or the Chairman of the Higher Degree Committee or the Deputy Dean responsible for postgraduate studies or the Head of Department is the supervisor for the candidate concerned, he shall attend the meeting of the Committee of Examiners on the invitation of the Committee of Examiners and not as a member thereof.
- (e) Except as otherwise provided under paragraph (2)(c), where the Dean of the Faculty or the Dean of the Institute of Postgraduate Studies or such officer as may be determined by the University for any reasons is not able to perform his duties as the chairman of the Committee of Examiners, the Deputy Dean who is responsible for postgraduate matters or the Deputy Dean of the Institute of Postgraduate Studies or such officer as may be determined by the University may perform the duties of the Dean as the chairman of the Committee of Examiners with the approval of the Vice-Chancellor.
- (f) A member of the Committee of Examiners shall not delegate to any other person who is not a member of the Committee of Examiners to represent him in any meeting of the Committee of Examiners except with the written approval of the Vice-Chancellor.
- (g) The Registrar or his representative shall be the secretary of the meeting of the Committee of Examiners.
- (h) The supervisor may be invited to attend the meeting of the Committee for the purpose of advising on matters under discussion but he does not have the right to participate in the consideration and the results of the examination of the candidate's thesis.
- (i) The Committee of Examiners shall consider the examiners' reports with regard to the thesis of a candidate, conduct viva voce and arrive at a decision regarding the level of achievement of the thesis in accordance with the provisions of these Regulations in its recommendation to the

Senate. The Committee of Examiners shall also report to the Senate on any matter concerning the standard or conduct of an examination

### External examiner

21. External examiners shall be appointed for the Degree programme of study as follows:

- (1) For the coursework component:
  - (a) At least one external examiner shall be appointed by the Faculty.
  - (b) As far as possible, an external examiner shall be appointed from an academic staff from outside the University who is qualified, experienced and possesses the expertise that is related to the Degree programme of study.
  - (c) An Emeritus Professor or an Adjunct Professor of the University cannot be appointed as an external examiner.
  - (d) An external examiner shall—
    - (i) examine and evaluate the examination question papers and examination answer scripts and report his comments or recommendations to the Dean of the Faculty;

- (ii) where it is provided in the letter of appointment, visit the Faculty for such period of time as may be determined by the Faculty to meet with the teachers and candidates in the Faculty, assess the teaching and research facilities, evaluate the quality of the examinations, attend the meeting of the Committee of Examiners and if necessary, conduct a seminar for the teachers and candidates in the Faculty; and
  - (iii) assess and evaluate in general, the structure and curriculum of the Degree programme of study and submit a report to the Vice-Chancellor and the Dean of the Faculty.
- (2) For the research component:
  - (a) At least two external examiners shall be appointed by the Senate to examine the candidate's thesis. In the event no suitable teacher of the University can be appointed as an internal examiner, another external examiner may be appointed to perform the duties of the internal examiner.
  - (b) An external examiner is normally appointed from among academic staff outside the University who is qualified, experienced and possesses expertise relating to the area of research of the candidate's thesis. In special circumstances, an expert in the field concerned from outside the University who is not an academic staff may be appointed as an external examiner.
  - (c) An external examiner who is appointed shall not have close family ties with the candidate.
  - (d) An Emeritus Professor or an Adjunct Professor cannot be appointed as an external examiner.
  - (e) Subject to paragraph (b), a former full time teacher may be appointed as an external examiner provided he has left the services of the University for a period of not less than five years from the date of appointment as an external examiner.
  - (f) A graduate of the University who is a former student of a candidate's supervisor may be appointed as an external examiner provided that the graduate had completed his studies at the University for the period of not less than five years from the date of his appointment as an external examiner.
  - (g) In the event of an emergency, the Vice-Chancellor may appoint an external examiner to examine the thesis of a candidate provided that the Faculty shall report the appointment to the Senate as soon as possible.
  - (h) An external examiner appointed to examine a thesis of a candidate shall submit a report in the prescribed format as soon as possible but not exceeding two months from the date the thesis was delivered to him. The Faculty may recommend to the Senate to substitute an external examiner who has not carried out his duties satisfactorily with another external examiner.

#### **Internal examiner**

- 22. (1) Subject to subregulation (4), The Faculty shall appoint—
  - (a) a full time or part time teacher of the University as an internal examiner for the coursework component; and
  - (b) a full time teacher of the University to examine the thesis of a candidate.



- (2) An internal examiner appointed to examine a thesis must as far as possible possess the qualifications, experience and expertise related to the area of research of the candidate's thesis.
- (3) A full time teacher of the University shall not be appointed as an internal examiner for the thesis of a candidate who has close family ties with him.
- (4) A tutor cannot be appointed as an internal examiner to examine any course or thesis. Notwithstanding that, a tutor may with the consent and under the supervision of the course examiner, assist in the examination of a course.
- (7) In the case of an emergency, the Dean of the Faculty may appoint an examiner for any course provided that the said appointment is reported to the Faculty as soon as possible.
- (6) An internal examiner appointed to examine the thesis of a candidate shall prepare and submit his report in the prescribed format within a period not exceeding two months from the date the thesis was delivered to him. The Faculty may substitute an internal examiner who has not carried out his duties satisfactorily with another internal examiner.

### **Consultant**

23. Where a consultant has been appointed to assist with the supervision of a candidate, the Faculty may require the consultant to prepare and submit a report with regard to the thesis. The consultant's report shall be tabled at the meeting of the Committee of Examiners for the examination of the thesis of the candidate concerned.

### **Examination assessment**

24. (1) The method of assessment for the coursework component shall be as follows:
  - (a) The method of assessment of a course shall depend on the learning outcomes and course content. The contributory ratio or weight of an assessment method in the final total marks for a course shall be determined by the Faculty and shall be approved by the Senate.
  - (b) Attendance in class
    - (i) A candidate shall attend all classes. It is the responsibility of each lecturer to inform the candidate of the consequences of failure to attend classes. It is the responsibility of a candidate to ensure that the lecturer is informed early of his non-attendance of class. The lecturer is required to keep records of class attendance and report on any non-attendance exceeding twenty percent to the office of the Dean of the Faculty.
    - (ii) Any candidate who has less than eighty percent of class attendance for a course in a semester without any acceptable reasons or without obtaining prior approval of the lecturer concerned may be barred from sitting for the final examination for the course concerned in a semester by the Dean of the Faculty. Where a candidate is barred from sitting for the final examination of a course for a semester he shall be informed in writing by the Dean of the Faculty at least one week before the commencement of the semester examination concerned.
    - (iii) Any candidate who is barred from sitting for the final examination in a semester shall be given a zero mark for the final examination of the course concerned.



(c) Marking scheme

- (i) The assessment for the examination for the coursework component shall be based on the following marking scheme:

Mark	Grade	Grade Mark	Meaning
80-100 75-79	A A-	4.0 3.7	Excellent
70-74 65-69	B+ B	3.3 3.0	Pass
60-64 55-59 50-54	B- C+ C	2.7 2.3 2.0	Conditional Pass
45-49 40-44 35-59 <35	C- D+ D F	1.7 1.5 1.0 0	Fail

- (ii) For the purpose of this paragraph, a Conditional Pass means a pass in the course concerned if the CGPA is 3.0 or greater in the semester the course is taken.
- (iii) Grade I is given when —
- (A) a candidate did not take the final examination for any course in a semester on medical or compassionate grounds and the grade is recommended by the Committee of Examiners; or
- (B) a portion of the candidate's course requirements has not been completed due to reasons beyond the candidate's control that may be accepted by the Committee of Examiners concerned.
- (iv) In situation (A), the candidate is permitted to take the examination for the course concerned without being required to attend the course again. In situation (B), the candidate is permitted to complete the relevant portion of the course at the first opportunity in the following semester.
- (v) In both situations (A) and (B), the candidate must register to attend the course concerned when offered in the immediate following semester. However, no fees will be imposed for the registration of the course concerned and the credit hours concerned shall not be taken into account in the number of credit hours that can be registered in a semester.
- (vi) A candidate shall be given a zero mark for the final examination for the course or the portion of the course requirement concerned if he did not—

- (A) register and take the final examination for the course concerned when it is offered in the immediate following semester; or
  - (B) where applicable, did not complete that portion of his course requirements at the first opportunity in the following semester.
- (vii) The mark that is obtained in the final examination of the portion of the course requirement for a course as mentioned above shall be added to the mark for the course that is given a Grade I in order to obtain the actual grade for that course.
- (viii) A candidate who is given a Grade I for a course shall not be permitted to repeat the course under any circumstances until the Grade I is dropped.
- (ix) Other than the grades as shown in the marking scheme and in subparagraph (i) and Grade I in subparagraph (iii), the following grades may also be given to a candidate for courses attended by him —
- (A) Grade K, given for courses that are approved for the exemption of credit.
  - (B) Grade P, given for courses that are conducted over more than one semester.
  - (C) Grade S, given for courses for which the candidate's performance is graded as satisfactory.
  - (D) Grade U., given for courses for which the candidate's performance is graded as unsatisfactory.
  - (E) Grade R, given for courses registered by the candidate for auditing only. No credit hour value is given for this grade.
  - (F) Grade W, given for course or courses from which a candidate has withdrawn officially during the semester.
  - (G) Grade W1, given where a candidate has withdrawn officially from a semester.
  - (H) Grade W2, given where a candidate has withdrawn officially from a University..
  - (I) Grade UW, given for any course for which a candidate has not been attending and has not withdrawn officially in a semester.
- (d) Determination of academic performance
- (i) The academic performance of a candidate in a semester is indicated by the GPA and CGPA. The GPA is determined by dividing the total grade points obtained by the total credit hours taken in a semester.

The following is an example of how the GPA is determined:

Course	Grade	Grade Point	Credit Hour	Credit Hour x Grade Point
K1	A	4.0	4	4x4.0=16.0

K2	C+	2.3	3	3x2.3= 6.9
K3	F	0.0	3	3x0.0= 0.0
K4	C	2.0	3	3x2.0= 6.0
Total			<u>13</u>	<u>28.9</u>
				GPA $\frac{28.9}{13} = 2.22$

The CGPA is determined by dividing the total grade points obtained by the total credit hours taken from the first semester to the current semester.

- (ii) The grade points and credit hours that are obtained for courses registered in a semester shall be included in the calculation of the GPA and CGPA for that semester.
  - (iii) The credit hours for a course with grade C-, D+, D or F shall be included in the calculation of the GPA and the CGPA for the semester concerned. However, courses with these grades shall not be given any credit hour values. The grade UW shall be converted to grade F at the end of the semester concerned and be taken into account in the determination of the GPA and CGPA.
  - (iv) Grade I or P for a course shall be taken into account in the determination of the GPA and CGPA when the final grade for that course is obtained in the following semester concerned.
  - (v) Grades K, R, S, U, W, W1 and W2 shall not be taken into account in the determination of the GPA and CGPA.
  - (vi) Credit hour values shall be given for courses with grades A, A-, B+, B, B-, C+, C, K and S. No credit hour values shall be given for courses with Grades C-, D+, D, F, R, U, UW, W, W1 and W2. For courses that must be passed with at least Grade B, the credit hour value shall be given where the candidate achieves at least Grade B for the courses concerned.
- Courses with Grades I and P shall be given the credit hour values when the final grades for the courses other than Grades C-, D+, D, F and U, are obtained in the following semester.
- (vii) Where a candidate has repeated a course, the mark and grade that are taken into account in the determination of the CGPA shall be the better mark and grade achieved by the candidate.
  - (viii) Any candidate who has been imposed a sentence under rules 6 or 8 of the University of Malaya (Students' Discipline) Rules 1999 shall be given a zero mark for the answer script concerned unless the Senate decides otherwise.
- (e) Minimum requirements of study
- (i) To fulfill the minimum requirements of study at the University, a candidate must obtain a GPA and CGPA of not less than 3.0 for each semester until the end of his studies.

- (ii) The Faculty shall determine before the first semester of each academic session and inform the candidate early the courses he must pass with the specific minimum grades.
- (iii) For courses that are required to pass with specific minimum grades, the candidate shall repeat any course with a grade that is less than the minimum grade so as to attain the minimum grade within the maximum period of his candidature. A candidate who attains a grade less than the required minimum pass grade after three attempts for a course for which the minimum grade is required shall be terminated from his programme of study.
- (iv) Subject to the provisions of subparagraphs (ii) and (iii) and the maximum period of his candidature, a candidate who obtains a CGPA of 3.0 and above in a semester—
  - (A) may maintain Grade B-, C+ or C that he has attained for any course; or
  - (B) may repeat to improve that grade that has been attained in any course.
- (v) A candidate who obtains a CGPA of less than 3.0 in a semester—
  - (A) may not maintain Grade B-, C+ or C that he has attained in any course until the candidate has attained a CGPA of 3.0 and above in the following semester; and
  - (B) shall repeat any course in the following semester to raise his CGPA to 3.0 and above subject to the maximum period of his candidature.
- (vi) Subject to the provisions of subparagraph (iv), a candidate who obtains a GPA of less than the required minimum for his programme of study shall be placed on an Academic Probationary Period in the following normal semester. That period shall continue and shall end when the candidate has attained the required minimum GPA in the following normal semester. Any candidate who is placed on an Academic Probationary Period for more than two consecutive normal semesters shall be terminated from his programme of study.
- (vii) A candidate who obtains a GPA or CGPA of less than 2.0 in two consecutive normal semesters shall be terminated from his programme of study.
- (viii) For the purpose of subparagraphs (vi) and (vii), only the normal semester for which the candidate has registered, attended and sat for the examination for the course concerned shall be taken into account.
- (ix) Where a candidate is placed on an Academic Probationary Period in a semester, the Dean of the Faculty shall issue a warning to the candidate and inform him of the status of his progress. The warning shall contain a clear statement of what is deemed as “satisfactory progress” and what the candidate needs to achieve it.
- (x) Where a candidate is terminated from his programme of study, the notice of termination shall be sent to the candidate by the Dean of the Faculty where the candidate is registered for his programme of study.

- (2) The method of assessment for the research component shall be as follows:
- (a) The method of assessment shall be by examination of the thesis and a viva voce with respect to the thesis concerned.
  - (b) A thesis shall be examined, evaluated and recommended by each examiner as to whether it be —
    - (i) awarded a Pass or a Fail;
    - (ii) referred for corrections without re-examination; or
    - (iii) referred for further work and be submitted for re-examination.
  - (c) No mark or grade shall be awarded in the examination of a thesis.
  - (d) The candidate shall be required to attend a viva voce with respect to his thesis. The Committee of Examiners has the power to determine the method of conducting a viva voce with respect to the thesis of a candidate. The Committee of Examiners may, if necessary, invite a teacher of the University who has the experience and expertise related to the area of research of the candidate to attend the meeting of the Committee of Examiners and the viva voce of the candidate concerned.
  - (e) The Committee of Examiners shall after considering the reports of the examiners, the candidate's thesis and viva voce, decides and recommends that the thesis of the candidate concerned —
    - (i) has achieved sufficient academic merit to be awarded the Degree without any corrections;
    - (ii) has achieved sufficient academic merit to be awarded the Degree subject to the candidate making corrections within six months without any re-examination;
    - (iii) be referred for further work within a period of between six to **twelve (12)** months as may be determined by the Committee of Examiners and be submitted for re-examination before the expiry of the stipulated period; or
    - (iv) has not achieved sufficient academic merit and the candidate has failed in the examination of his thesis.
  - (f) Notwithstanding subparagraph (e)(iii), further work for a period exceeding **twelve (12)** months shall only be recommended by the Committee of Examiners in special circumstances and based on the reports of the examiners concerned.
  - (g) For the purpose of these Regulations, "further work" means revision and re-writing the thesis including further research with respect to the topic of the research concerned. "Re-examination" means the re-evaluation of the thesis of the candidate by the Committee of Examiners after further work.
  - (h) A candidate referred for further work may be required by the Committee of Examiners to attend a viva voce with regard to his thesis for the second time.
  - (i) The results of the meeting of the Committee of Examiners shall be based on the reports of the examiners and the performance of the candidate during the viva voce and as far as possible be arrived at unanimously. Where no results can be reached unanimously, an additional examiner may be appointed to assist the Committee of Examiners in making a decision.

- (j) The corrections and re-examination of a thesis shall be as follows:
- (i) A candidate required to make the corrections as provided under subparagraph (2)(e)(ii) above shall submit his thesis before the expiry of the period stipulated for the said corrections. Where the candidate fails to do so, he shall be presumed to have failed the examination of his thesis except in special circumstances where the Dean of the Faculty has approved an extension of the stipulated period by a period of not more than ninety days.
  - (ii) A candidate required to make the corrections as provided under subparagraph (2)(e)(iii) above shall submit his thesis before the expiry of the period stipulated for the said corrections. Where the candidate fails to do so, he shall be presumed to have failed the examination of his thesis except where the Senate, on the recommendation of the Committee of Examiners has approved an extension of the stipulated period. For the purpose of this paragraph, the extension shall begin a day after the expiry of the stipulated period for further work.
  - (iii) A thesis that has been resubmitted for examination shall be sent to all the examiners concerned for re-examination and a new report shall be prepared by each examiner and submitted to the Committee of Examiners for its consideration.
  - (iv) The Committee of Examiners shall after considering the examiners' reports, the candidate's thesis and viva voce (if any), decide and recommend whether the thesis of the candidate be awarded a Pass or a Fail. Where the thesis has not achieved sufficient academic merit to be awarded the degree of Doctor of Public Health, the Committee of Examiners shall recommend that a Master's in the relevant field be awarded after being satisfied that the thesis of the candidate has achieved sufficient merit to be awarded a Master's degree.
  - (v) Subject to the provisions of subparagraphs (2)(b)(iii) and (2)(e)(iii) above no candidate shall be permitted to submit his thesis for re-examination more than once.
  - (vi) A candidate required to resubmit his thesis for re-examination shall continue with his registration as a candidate and pay the registration fees concerned.

### **Special examination**

25. In specific circumstances, the Senate may upon the recommendation of the Faculty, approve a special examination for a candidate who is unable to sit for an examination for a course due to extraordinary reasons. A candidate who has been approved to sit for a special examination shall take the examination before the second week of the following semester.

### **Marks and grades management**

26. (1) After the final examination at the end of each semester for a course, the examiner shall submit the course marks and grades to the Dean of the Faculty or the Head of Department, who shall check and decide whether the marks and grades need to be re-assessed. The original marks and grades and the marks and grades, where applicable, from the outcome of the re-assessment shall be discussed at the departmental level to obtain the final marks and grades which shall then be reported to the Committee of Examiners through the Dean of Faculty. The final marks and grades shall be as approved by the Committee of Examiners concerned.

- (2) The final grade of a course after the final examination at the end of each semester shall be displayed by the examiner on the Faculty notice board.
- (3) The Institute of Postgraduate Studies or such centre as may be determined by the University is responsible for keeping the official records of a candidate and for issuing to each candidate—
  - (a) the results of the examinations for his programme of study; and
  - (b) the academic record at the end of his programme of study.

#### **Admission as a candidate for examination**

27. A candidate shall not be permitted to take an examination in any course or submit any thesis for examination unless —
  - (a) he has registered as a candidate for the course or courses which are prescribed for the Degree programme of study at the time of taking the examination or has registered as a candidate for the Degree programme of study at the time of submitting the thesis for examination, as the case may be;
  - (b) he has paid the prescribed fees; and
  - (c) where required, the Dean of the Faculty has certified that the candidate has satisfactorily attended the required course or courses concerned.

#### **Withdrawal from examination**

28. (1) A candidate who intends to withdraw from the examination of any course that he has registered for in a semester shall submit a written notice giving reasons for the withdrawal to the Dean of the Faculty at least two weeks before the commencement of the examination period scheduled for that semester.
- (2) No candidate is permitted to withdraw from the examination of a course when the examination period that has been scheduled for the semester concerned has commenced unless otherwise permitted by the Dean of the Faculty on the basis of extraordinary reasons that are supported by documentary evidence.
- (3) No candidate may withdraw from an examination of a thesis where the thesis has already been submitted for examination.
- (4) Where a candidate has withdrawn from the examination for all the courses for which he has registered in a semester, that semester shall be counted as part of the maximum period of his candidature. The Senate may on the recommendation of the Faculty approve, on the basis of extraordinary reasons submitted by the candidate that the semester concerned shall not counted as part of the maximum period of the candidature of the candidate.

#### **Absence from examination**

29. (1) A candidate who has registered and attended a course shall take the examination for that course if he has not withdrawn or been barred from the examination concerned.
- (2) A candidate who did not take the whole or part of the examination for the course shall notify the Dean of the Faculty in writing giving reasons for his absence. The letter must be forwarded within seven days from the date of the examination for the course concerned and must be accompanied by—



- (a) a medical report from a registered medical officer where the absence from an examination is due to medical reasons; or
  - (b) a report from the district officer or government officer concerned where the reasons for the absence from an examination is due to compassionate reasons.
- (3) The letter from the candidate together with the reports as mentioned in subregulation (2) above shall be tabled at the meeting of the Committee of Examiners and the Committee of Examiners shall recommend whether the candidate should be given Grade I or Grade F or a special examination for the course concerned.
- (4) The Committee of Examiners cannot under any circumstance consider any request from a candidate who has not sat for the examination of a course after the Committee of Examiners has met to determine the results for that course.
- (5) A candidate who falls ill at the time he is sitting the examination for a course must report to the chief invigilator or any invigilator who shall then arrange for the candidate to be examined immediately by the University Student Health Doctor. The Doctor's report and the report of the chief invigilator or the invigilator regarding the incident shall be forwarded as soon as possible to the Dean of the Faculty but not later than seven days from the date of the examination for the course concerned.
- (8) A candidate who does not take the whole or the part of an examination for a course for which he is registered without reasons acceptable to the Committee of Examiners shall be given a zero mark for the whole or the part of the course.
- (7) Where the candidate is required by the examiner or the Dean of the Faculty to submit an assignment or any written work for a course within a prescribed period and where the candidate fails to do so, he shall be deemed to have failed the assignment or written work unless the examiner or the Dean of the Faculty has granted an extension of the period for the submission of the assignment or written work.

### **Conduct of examination**

- 30.
  - (1) No candidate may be permitted to present himself for an examination for a course later than thirty minutes after the start of the examination for that course. In special circumstances, the chief invigilator may permit a candidate who arrives later than thirty minutes to sit for the examination for the course if the chief invigilator is satisfied with the reason and evidence provided by the candidate. The reason provided by the candidate shall be recorded by the chief invigilator in his examination report and shall be presented together with the evidence provided by the candidate at the meeting of the Committee of Examiners.
  - (2) A candidate who is late in presenting himself for the examination of a course and who is permitted to sit for the examination under subregulation (1) shall not be given any extra time for the examination.
  - (3) No candidate is permitted to leave the examination room until thirty minutes after the commencement of an examination or fifteen minutes before the end of an examination.
  - (4) A candidate who is permitted by the chief invigilator or invigilator to leave the examination room for a specific reason must be observed from the time he leaves the examination room until he re-enters the examination room.
  - (5) No candidate shall—
    - (a) take any book, paper, document, picture or other things, except those authorized by the examiner, into or out of an examination room, or receive any book, paper, document, picture or other things from any other person while in the examination room except that a candidate may, while he is in the



examination room, receive from the invigilator such books, papers, documents, pictures or other things which have been recommended by the examiner or Committee of Examiners, and authorized by the Vice-Chancellor;

- (b) write or have it written by another person, any information or diagram which may be relevant to the examination he is sitting for, on his hand or any other part of his anatomy, or on his apparel or clothing;
  - (c) communicate with any other candidate during an examination by whatever means; or
  - (d) cheat or attempt to cheat or conduct himself in a manner which can be construed as cheating or attempting to cheat in an examination while the examination is being conducted.
- (6) No person is permitted to smoke in any examination room during an examination.
- (7) The chief invigilators and the invigilators shall be appointed from full-time teachers in the number and for the period of the examination as required by the Vice-Chancellor or by an officer authorized by the Vice-Chancellor. A full-time teacher who is appointed as chief invigilator or invigilator shall carry out the invigilation duties as prescribed:
- (a) A chief invigilator or invigilator shall report to the Vice-Chancellor if in the opinion of the chief invigilator or the invigilator, a situation has arisen during an examination for a course that—
    - (i) requires the cancellation or postponement of the examination;
    - (ii) has caused the examination to be conducted in an improper manner; or
    - (iii) has caused the examination to be unfair to any candidate.
  - (b) Where an incident such as mentioned in subparagraph (i) has been reported to the Vice-Chancellor, the Vice-Chancellor can take any action deemed appropriate including directing that a new examination be held for the course concerned and where necessary, report his decision to the Senate.
- (8) Where the Vice-Chancellor has reason to believe that the contents of any examination paper or any information relating thereto or work done in relation to an examination may have become known before the date and time of the examination to any person other than the examiners or the Committee of Examiners or any person given authority by the Registrar, he can direct a suspension or cancellation of the examination paper or examination and replace it with a new examination paper or examination.
- (9) A candidate who is found to have plagiarized his assignments or any written work that is part of the assessment for a course may be subject to disciplinary action under the University of Malaya (Discipline of Students) Rules 1999.

### **Examination results**

31. (1) The report of the Committee of Examiners for any final examination that qualifies the candidate concerned to the award of the Degree shall be tabled before the Senate for its approval.
- (2) The registration number and identity of the candidate concerned for any course shall not be revealed to the examiner except in a meeting of the Committee of Examiners that is held to determine the results of the examination of the candidate concerned.
- (3) The examination marks that are given to the candidate for any course, procedure and conduct of the meeting and report of the Committee of Examiners shall be confidential

and not revealed to anyone who is not a member of the Committee of Examiners or the Senate.

- (4) Notwithstanding anything that is stated in subregulation (2), the examiner of a course may inform the candidate concerned of the grade for an individual course before the meeting of the Committee of Examiners on condition the grade that is revealed is subject to the confirmation of the Committee of Examiners and the approval of the Senate. The examination results may be made known to the candidate after the meeting of the Committee of Examiners on condition that any results that are announced are subject to the approval of the Senate.

## **PART IX**

### **GRADUATION**

#### **Award of Degree**

32. A candidate shall fulfil the following requirements for the purpose of graduation:

- (1) Fulfil the requirements of the coursework component, that is—
  - (a) achieve a final CGPA 3.0 and above;
  - (b) complete the number of credit hours as may be prescribed for his programme of study. From the total number of credit hours that is required for graduation, at least two thirds of the total number of credit hours that has been obtained must be from courses conducted by the University; and
  - (c) fulfil the requirements of the Faculty, if any; and
- (2) Fulfil the requirements of the research component, that is,—
  - (a) achieve a Pass in the examination of his thesis;
  - (b) pass the viva voce as may be held; and
  - (c) fulfil other requirements, if any, as may be determined by the Faculty; and
- (3) Fulfil the language requirements as may be determined for his programme of study.

#### **Award of distinction for thesis**

33. A thesis qualifies to be awarded a distinction if—

- (1) a distinction is recommended in the reports of all the examiners;
- (2) it is recommended by the Committee of Examiners; and
- (3) it is completed and submitted by the candidate for examination:
  - (a) not more than **ten (10)** normal semesters from the date of initial registration of the candidate concerned; or
  - (b) not more than **eight (8)** normal semesters from the date of initial registration if the candidate was admitted directly to Part 2.

## **PART X**

### **APPEAL**

#### **Appeal for review of examination results of course**

34. (1) A candidate who is not satisfied with his examination results can appeal for a review of his results. The appeal must be made within two weeks from the official date of announcement of his examination results. For the purpose of this paragraph, the “official date of announcement” shall be the date recorded in the examination result slip that is sent to the candidate.
- (2) A payment at the prescribed rate shall be imposed for the processing of an appeal for the review of examination results. The payment shall not be refunded, regardless of the outcome of the appeal.
- (3) The appeal should be made on a prescribed form that can be obtained from the Institute of Postgraduate Studies or such centre as may be determined by the University or from the Faculty concerned. The completed form together with a copy of the receipt of the payment for the appeal must be forwarded to the Dean of the Faculty.
- (4) The form for an appeal shall not be accepted if it is:
- (a) submitted after the period mentioned in subregulation (1);
  - (b) incomplete; or
  - (c) submitted without the payment receipt.

#### **Appeal to continue with studies**

35. (1) A candidate whose candidature has lapsed due to failure on his part to renew his candidature may submit an appeal to continue with his studies. The appeal shall be made in a prescribed form that can be obtained from the Institute of Postgraduate Studies or such centre as may be determined by the University or Faculty.
- (2) The approval to activate any candidature may be given only if not more than two semesters have elapsed at any one time, subject to there being a balance of the period of candidature. The candidate whose appeal has been approved must pay a fine according to a rate as may be determined by the University.
- (3) A candidate whose maximum period of candidature is nearing its end but who still needs time to complete his thesis may submit an appeal for an extension of his maximum period of candidature. The said appeal must be made during the last semester before his candidature lapses and must be made using the prescribed form which can be obtained from the Institute of Postgraduate Studies or any centre as may be determined by the University or the Faculty.
- (4) An extension of the maximum period of candidature may be granted for only one semester at any time. Notwithstanding the provisions of this subregulation, the extension of the maximum period that can be approved for any candidate shall not be more than two semesters.
- (5) A candidate who has failed the examination of his thesis and is not satisfied with the said result may submit an appeal in writing to the Deputy Vice-Chancellor concerned within six months from the date of the letter of notification of his examination results.

- (6) The appeal of the candidate shall be considered by the Deputy Vice-Chancellor concerned together with the Dean of the Institute of Postgraduate Studies or such officer as may be determined by the University. Where the appeal does not merit consideration, the candidate shall be informed that his appeal has been rejected. Where the appeal merits consideration, the Deputy Vice-Chancellor concerned shall submit the appeal to the Senate for consideration whether—
- (a) to affirm the decision of the Committee of Examiners;
  - (b) to appoint an additional examiner to examine the candidate's thesis; or
  - (c) appoint a new Committee of Examiners to consider the results of the candidate and submit a recommendation to the Senate.
- (7) A candidate for the Degree programme of study who has failed the coursework component and is not satisfied with the said results may submit an appeal in writing to the Dean of the Faculty within one month from the date of the announcement of the official results of the examinations. For the purpose of this paragraph, the "date of the official announcement" shall be the date that is stated on the examination results slip that is sent to the candidate.
- (8) The Dean of the Faculty on the recommendation of the Faculty shall submit the candidate's appeal to the Senate for approval.

## **PART XI**

### **READMISSION TO THE DEGREE PROGRAMME OF STUDY**

#### **Readmission to the Degree programme of study**

36. (1) A candidate who has withdrawn from the Degree programme of study may apply for admission to the Degree programme of study or any other higher degree programmes of the University.
- (2) A candidate whose candidature has lapsed by reason of failure on his part to renew his candidature or the expiry of his maximum period of candidature may apply to readmit to the Degree programme of study subject to the condition that he attends a course of study in a different field and is supervised by a different supervisor.
- (3) A candidate whose candidature is terminated because he has failed in his examination or on grounds other than failing in his examination shall not be readmitted into the Degree programme of study or any other higher degree programmes of study of the University.

## **PART XII**

### **GENERAL**

#### **Power of the Senate**

37. The Senate has the power to make, repeal or amend any regulations governing the Degree programme of study as provided under these Regulations. Any new regulations repeal or amendment to the said regulations shall be made known to the candidates before the commencement of the candidate's academic session.

#### **Auditing courses**

38. (1) A candidate may register to audit any course after obtaining the approval of the lecturer in charge of the said course and the dean of the faculty where the candidate is auditing the course.
- (2) The dean of the faculty where the candidate is auditing the course shall certify that the candidate has fulfilled the minimum 80% attendance to qualify the candidate for a Grade R for the course for which he is auditing and which shall be noted as such in the transcript.
- (3) An auditing candidate is not required to sit for the examination for the course concerned. Where the candidate has sat for the examination, after approval from the dean of the faculty where the candidate is auditing the course concerned, the actual grade shall be noted and if the candidate fails, the Grade R will be noted on the transcript. Any grade that is noted shall not be taken into account in the calculation of the GPA/CGPA.
- (4) In certain circumstances and subject to the provisions of the Degree programme of study concerned, the course audited can be regarded as fulfilling a pre-requisite of the course or a pre-requisite of the Degree programme of study.

#### **Non-graduating students**

39. The Dean of the Faculty has the power to admit any student as a non-graduating student subject to the following conditions:
- (1) Not more than one calendar year if he is conducting research or not more than one academic session if he is attending a course; and
- (2) The total number of courses that can be taken by a non-graduating students is not more than two-thirds of the total maximum credit hours stipulated for a candidate of the Degree programme of study in any one semester.

Made on ..... by the Senate of the University of Malaya

## UNIVERSITY OF MALAYA (DEGREE OF DOCTOR OF PUBLIC HEALTH) REGULATIONS 2012

### SCHEDULE I (Subregulation 4(1))

#### Structure of the Programme of Study of the Degree of Doctor of Public Health

1. The Degree of Doctor of Public Health programme of study with a total of **84** credit hours comprises the two following parts:
  - (1) Part 1 which consists of courses with a total of 24 credit hours includes—
    - (i) One Compulsory Core Course of three credit hours;
    - (ii) One Compulsory Internship Course of six credit hours;
    - (i) Two Compulsory Professional Area Core Courses of three credit hours each; and
    - (ii) Three Professional Specialization Courses of three credit hours each; and
  - (2) Part 2 which consists of research that leads to a thesis of **60** credit hours.
2.
  - (1) A candidate must successfully complete Part 1 before he is allowed to proceed to Part 2.
  - (2) **A candidate shall attain a minimum Grade B in the Compulsory Core Course.**

**UNIVERSITY OF MALAYA (DOCTOR OF PUBLIC HEALTH) REGULATIONS 2012**

**SCHEDULE II  
(Subregulation 4 (2))**

**List of Courses**

**Compulsory Core Course**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hour</b>
MOHX 7101	Research Protocol Development	3

**Compulsory Internship Course**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hour</b>
MOHX 7180	Professional Internship	6

**Professional Area Core Courses**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hour</b>
MOHX 7102	Essentials of Epidemiology in Public Health	3
MOHX 7103	Health Policy and Leadership	3

**Professional Specialization Courses**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hour</b>
<b>(1) Area : Health Services Management</b>		
MOHX 7301	Human Resource Planning and Management	3
MOHX 7302	Health Law and Ethics	3
MOHX 7303	Health Economics	3
MOHX 7304	Health Logistics Management	3
MOHX 7305	Quality in Health	3
<b>(2) Area : Family Health</b>		
MOHX 7306	Women's Health	3
MOHX 7307	Child and Adolescent Health	3
MOHX 7308	Lifetime Health	3
MOHX 7309	Nutrition and Lactation Management	3
MOHX 7310	Society, Behaviour and Health	3
<b>(3) Area : Environmental Health</b>		
MOHX 7311	Environmental Pollution	3
MOHX 7312	Food Technology and Health	3
MOHX 7313	Waste Management	3

MOHX 7314	Human Factor and Ergonomics	3
MOHX 7315	Disability Assessment	3
MOHX 7316	Occupational Lung Diseases	3
MOHX 7317	OSH Management Systems	3
<b>(5) Area: Epidemiology in Health</b>		
MOHX 7318	Advanced Epidemiology	
MOHX 7319	Clinical Epidemiology	3
MOHX 7320	Epidemiology of Communicable Diseases	3
MOHX 7321	Epidemiology of Non Communicable Diseases	3
<b>(6) Area : Biomedical Statistics</b>		
MOHX 7322	Analysis of Rates and Proportions	3
MOHX 7323	Statistical Computing	3
MOHX 7324	Introduction to Meta-Analysis	3
MOHX 7325	Principles of Clinical Trials	3
MOHX 7326	Factor Analyses	3
MOHX 7327	Time Series	3
MOHX 7328	Qualitative Methods in Health Research	3
MOHX 7329	Critical Readings and Special Topics in Epidemiology	3
MOHX 7330	Nutritional Epidemiology	3



## **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.

/nfzl/Update 10.8.2015

NO	CODE		MASTERS' PROGRAMMES	YEAR OFFERED	YEAR							1970 - 2014			GRAND TOTAL
	Admission	Programme			1970-2009	2010	2011	2012	2013	2014		M'sian	International		
1	M01	MGG	Obstetrics and Gynaecology	1987/1988	119	4	7	9	6	11		145	11		156
2	M02	MGE	Anaesthesiology	1987/1988	157	18	15	13	18	26		239	8		247
3	M03	MGH	Paediatrics	1988/1989	53	11	10	7	18	9		103	5		108
4	M04	MGF	Internal Medicine	1988/1989	87	14	24	26	5	13		155	14		169
5	M05	MGC	Psychological Medicine	1973/1974	87	6	5	9	7	5		115	4		119
6	M06	MGM	Radiology	1992/1993	106	19	14	13	15	13		172	8		180
7	M07	MGD	Surgery	1989/1990	104	15	11	13	21	9		161	12		173
8	M08	MGL	Ophthalmology	1992/1993	78	10	8	9	9	12		118	8		126
9	M09	MGI	Orthopaedic Surgery	1989/1990	129	16	9	12	7	13		173	13		173
10	M10	MGK	Otorhinolaryngology - Head & Neck Surgery	1992/1993	67	7	8	6	10	6		89	15		104
11	M11	MGA	Pathology	1973/1974	106	8	11	12	16	6		151	8		159
12	M12	MGJ	Family Medicine	1989/1990	58	4	9	12	12	14		107	2		109
13	M13	MGB	Public Health	1973/1974	599							1970 - 2011			
												420	179		
		SPECIALITY	Public Health (Hospital Management)	1998/1999	0	0						0	0		0
			Public Health (Epidemiology)	1998/1999	19	1	1					19	2		21
			Public Health (Family Health)	1998/1999	22	2	0					20	4		24
			Public Health (Health Services Management)	1998/1999	18	0	0					16	2		18
			Public Health (Occupational Health)	1998/1999	21	4	1					26	0		26
	MGR	Medical Science in Public Health	1997/1998	97							34	63		97	

NO	CODE		MASTERS' PROGRAMMES	YEAR OFFERED	YEAR						1970 - 2014		GRAND TOTAL
	Admission	Programme			1970-2009	2010	2011	2012	2013	2014	M'sian	International	
	M13	MGX	Public Health (Semester System)	2009/2010	-	30	33	33	20	22	86	52	138
14		MGY	Science in Public Health (Semester System)	2009/2010	-	6	6	3	7	7	17	12	29
15	M14	MGO	Sports Medicine	1996/1997	10	3	1	3	4	3	24	0	24
16	M15	MGP	Rehabilitation Medicine	1997/1998	29	2	3	9	11	5	58	1	59
17	M16	MGV	Emergency Medicine	2005/2006	2	5	7	17	17	16	41	23	64
18	M19	MGT	Clinical Oncology	2003/2004	6	3	7	3	3	3	25	0	25
19	M20	MGU	Paediatric Surgery	2005/2006	1	1	5	1	3	4	13	2	15
20		MGQ	Medical Physics	1997/1998	41	6	3	6	5	7	64	4	68
21		MGS	Medical Science in Clinical Pathology*	2000/2001	27	6	4	6	7	0	0	50	50
22		SPECIALITY	Medical Science in Clinical Pathology (Histopathology)*	2003/2004	12	1	2	4	1	2	0	22	22
23			Medical Science in Clinical Pathology (Forensic Pathology)*	2003/2005	1	0	0	0	0	0	0	1	1
24			Medical Science in Clinical Pathology (Medical Microbiology)*	2003/2006	5	0	1	0	2	0	0	8	8
25			Medical Science in Clinical Pathology (Haematology)*	2003/2007	6	3	3	0	3	4	0	19	19
26		MGW	Nursing Science	2006/2007	5	6	8	23	17	15	67	7	74
27		MGN	Medical Science		161	19	37	29	47	34	300	27	327
<b>DOCTORATE DEGREE</b>													
28		MHB	Doctor of Medicine		32	1	0	2	1	0	36	0	36
29		MHA	Doctor of Philosophy		65	10	13	18	37	27	118	52	170
30		MHC	Doctor of Public Health	2009/2010	0	0	0	0	5	2	7	0	7
<b>TOTAL</b>					<b>2330</b>	<b>241</b>	<b>266</b>	<b>299</b>	<b>334</b>	<b>289</b>	<b>3121</b>	<b>638</b>	<b>3759</b>

Notes :

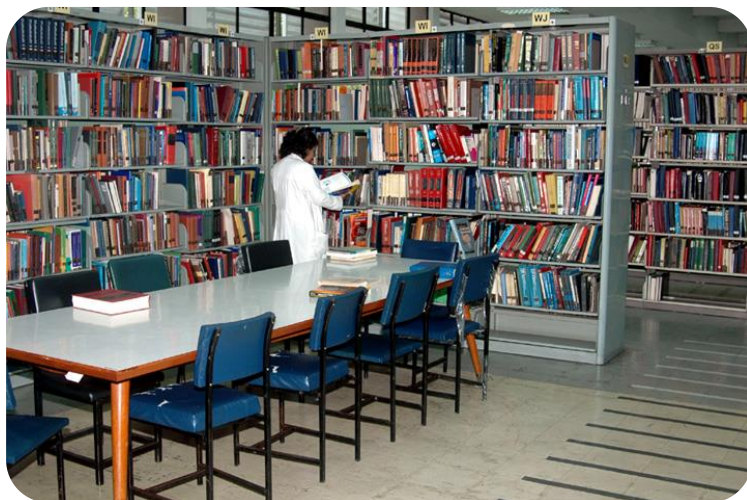
\*

Programmes offered for International candidates only.

Update:7.5.15

- |    |  |
|----|--|
| 1  | TAN SRI DANARAJ MEDICAL LIBRARY                      |
| 2  | IMAGING LABORATORY                                   |
| 3  | BIOMEDICAL IMAGING DEPARTMENT                        |
| 4  | MULTIDISCIPLINARY LABORATORIES                       |
| 5  | CLINICAL SKILLS LABORATORY                           |
| 6  | COMPUTER LABORATORIES                                |
| 7  | MEDICAL ILLUSTRATION AND MULTIMEDIA DEVELOPMENT UNIT |
| 8  | ANATOMY RESOURCE                                     |
| 9  | CENTRAL PATHOLOGY MUSEUM                             |
| 10 | UNIVERSITY BOOK STORE (MEDICAL)                      |

## **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 – 1530 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>.



## **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.





## **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.

- |    |                              |
|----|------------------------------|
| 1  | ACCOMODATION                 |
| 2  | STUDENT SCHOLARSHIP AND LOAN |
| 3  | STUDENT HEALTH SERVICES      |
| 4  | STUDENT COUNSELING SERVICES  |
| 5  | UNIVERSITY BOOK STORE        |
| 6  | PEKANSISWA                   |
| 7  | SHOPS                        |
| 8  | BANKING SERVICES             |
| 9  | MAIN LIBRARY                 |
| 10 | SPORTS AND RECREATION        |
| 11 | MOSQUE                       |
| 12 | ANNUAL PLANNER & NOTES       |

## **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 12<sup>th</sup> 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.

### **PEKANSISWA (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.

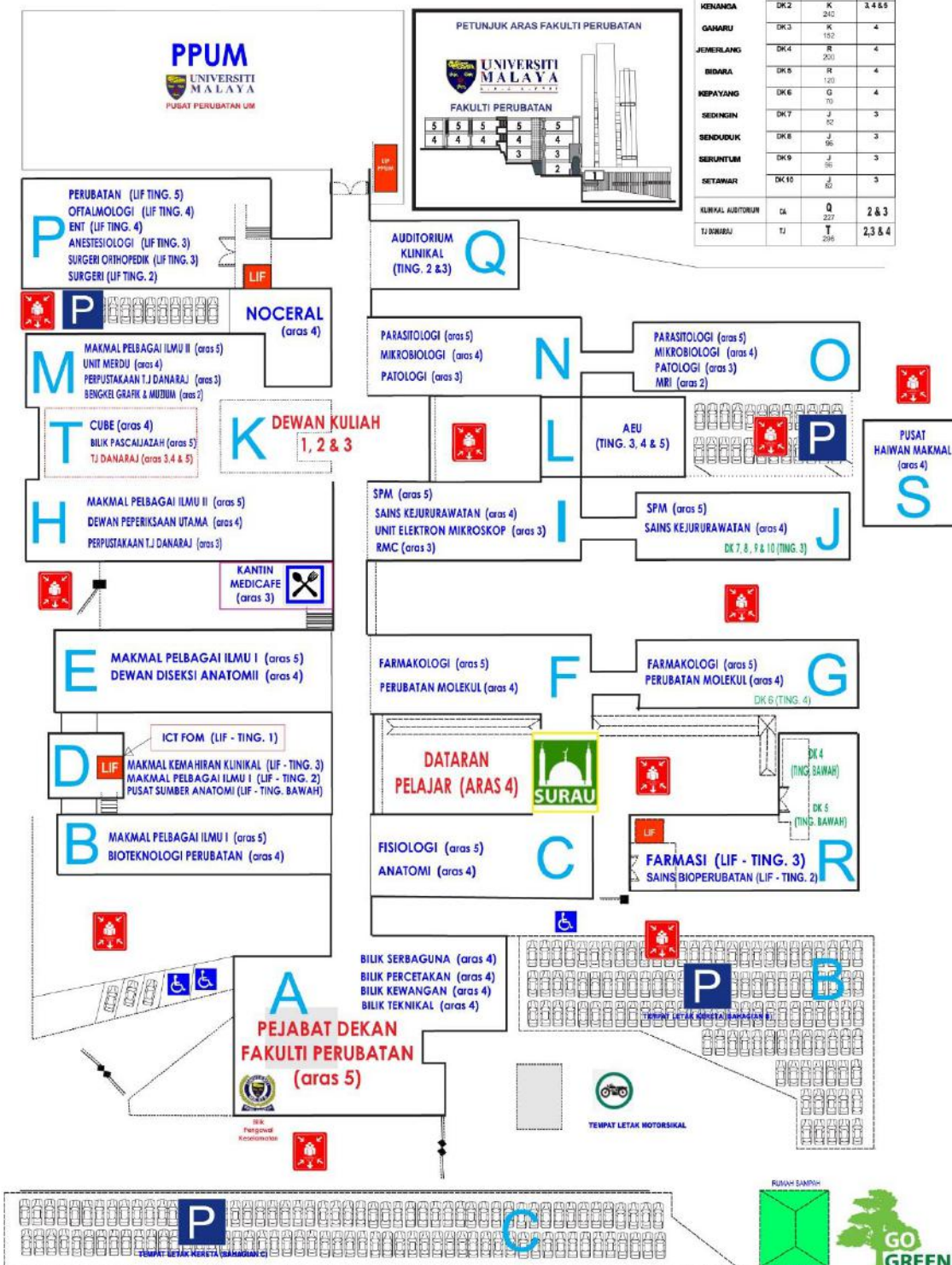
### **SHOPS - PHARMACY, FRUITSHOP & FLORIST**

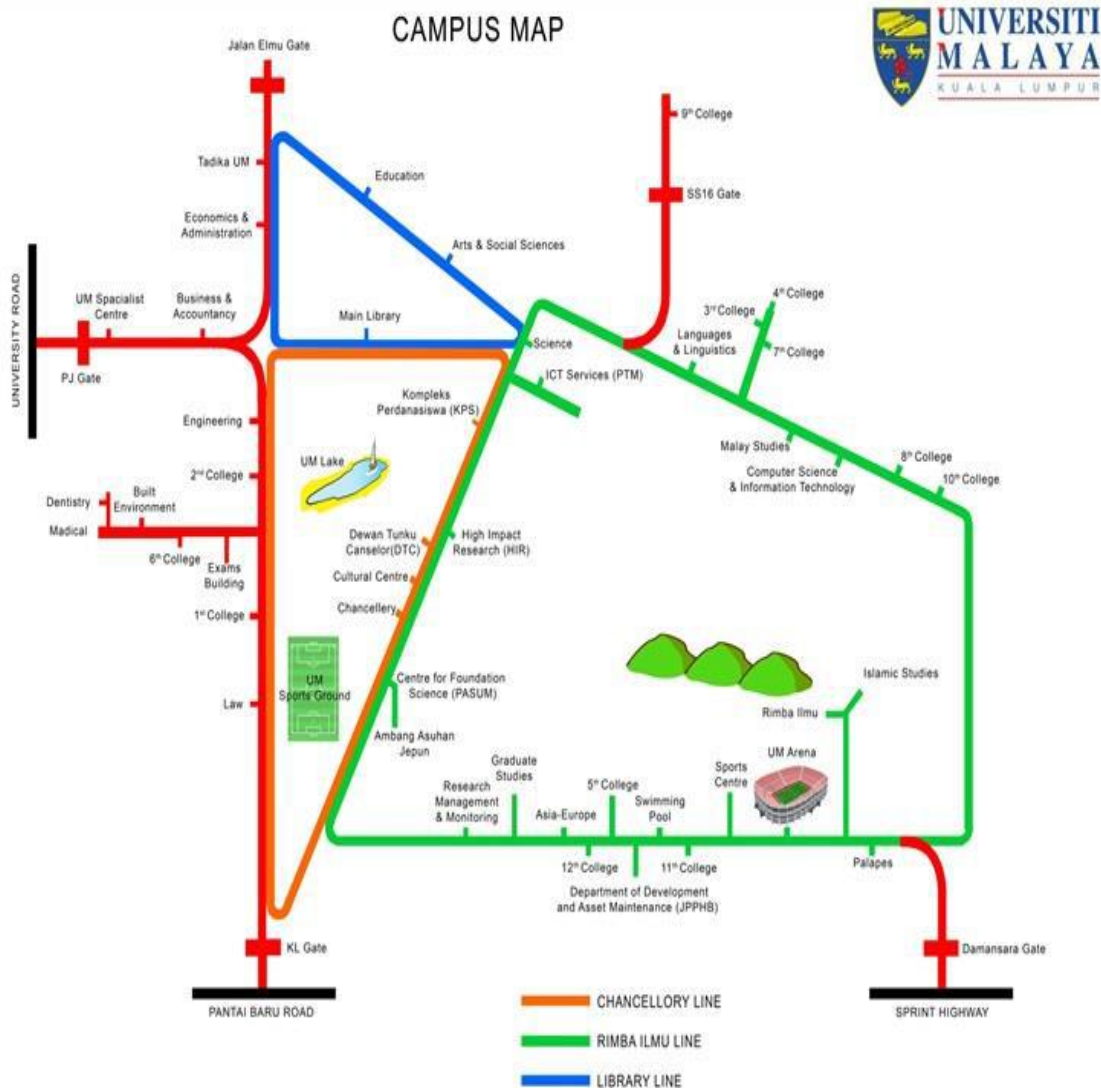
These shops are available on the first and ground floor of the main hospital block.

### **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.







JULY 2014

Prepared by : Mohd Salehuddin Md Tin











*THANK YOU*  
PREPARED BY;

**ICT SECTION [MULTIMEDIA & IT], DEAN OFFICE.  
POSTGRADUATE SECTION, DEAN OFFICE**

**FACULTY OF MEDICINE  
UNIVERSITI MALAYA**