



MASTER OF MEDICINE (EMERGENCY MEDICINE)

***Department of Emergency Medicine
School Of Medical Sciences
Universiti Sains Malaysia
Health Campus
16150 Kubang Kerian
Kelantan***

**TRAINING CURRICULUM FOR TRAINEES AND SUPERVISORS
UNIVERSITI SAINS MALAYSIA**

2022

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PART 1 : COURSE OBJECTIVE FOR MASTER OF MEDICINE (EMERGENCY MEDICINE)

A) GENERAL OBJECTIVE

1. To provide training for medical officers who are interested to further their knowledge and skills in the field of emergency medicine. Students will be trained to become an Emergency Physician who can provide a quick and thorough patient management.

B) SPECIFIC OBJECTIVES

1. To provide adequate knowledge and understanding in basic medical sciences (physiology, pathophysiology, pharmacology) in relation to emergency medicine.
2. To provide adequate knowledge and understanding in internal medicine, paediatric, basic surgery, emergency medicine, traumatology, resuscitation, toxicology and disaster medicine.
3. Capable of providing clinical procedures and investigations in the field of emergency medicine.
4. Capable of arriving to the accurate diagnosis swiftly in emergency and trauma cases.
5. Capable of stabilising and resuscitating critically ill patients in shocks and cardiopulmonary arrest and their subsequent management.
6. To have a leadership quality and special interest in disseminating knowledge of emergency medicine.
7. To introduce and improving understanding in medical ethics, the concept of disease and treatment from various perspective.
8. To understand the concept of preventive medicine and epidemiology in relation to emergency medicine and motor vehicle accident.
9. Capable of involving in disaster preparedness and management.
10. To have adequate and updated knowledge in the ever-changing field of emergency medicine.
11. Capable of running researches in the field of emergency medicine.
12. Capable of working as an Emergency Physician who is well trained in emergency management at prehospital and intra-hospital level including rehabilitation of the patient.

PART 2 : CURRICULUM STRUCTURE

A) PHASE 1 CURRICULUM STRUCTURE (YEAR 1)

PHASE	YEAR	LEARNING SCOPE AND ROTATION	ASSESSMENT
I	1	<p style="text-align: center;"><u>TRAINING AND RESPONSIBILITY</u></p> <ul style="list-style-type: none">• Basic medical and surgical science for medical, surgical, and pediatric posting.• Basic emergency medical science with clinical duties at emergency and trauma department <p>Logbook for respective rotation</p>	<p>Continuous assessment</p> <p>Professional Examination Part 1</p>

1. The main objective of Phase I is to provide basic training and enhance understanding in the following cores:
 - a) Anatomy and physiology, particularly respiratory, cardiovascular and neurological system.
 - b) Disease's pathophysiology
 - c) Basic medicine and surgery.
 - d) Basic traumatology
 - e) Basic emergency medicine
 - f) Patient's stabilization and resuscitation
 - g) Pharmacology
2. Students are required to learn and master the methods of physical examinations. They will also be introduced to the concept of 'intervention', patient's stabilization, airway management, resuscitation and medical ethics.
3. At this stage, both incampus or outcampus students are required to do postings and perform clinical duties in;

Medical department	(2 months)
Paediatric department	(2 months)
Surgical department	(2 months)
Ultrasound in Emergency and Critical Care	(1 month)
Emergency department	(5 months)

B) PHASE 2 CURRICULUM STRUCTURE (YEAR 2 AND 3)

PHASE	YEAR	LEARNING SCOPE AND ROTATION	ASSESSMENT
II	2 & 3	<p><u>TRAINING AND RESPONSIBILITY</u></p> <ul style="list-style-type: none"> Clinical works at Department of Obstetrics and Gynaecology, Anaesthesiology, Emergency Department, Orthopaedics, Neuromedicine, and Neurosurgery Elective posting Dissertation (since Year 2 onwards) On-call Research activities and attendance during hospital CPC and conferences <p>Attending courses including Advanced Cardiac Life Support (ACLS), Paediatric Advanced Life Support (PALS), and Malaysian Trauma Life Support (MTLS)</p>	<p>Continuous assessment</p> <p>No professional exam</p>

- The aim of Phase 2 is to expose the students towards different patient related problem, disease complication, and providing swift, accurate and best treatment available. Lifesaving procedures and bedside surgical techniques such as chest tube insertion, airway management, patient stabilisation, and cardiopulmonary resuscitation technique will be taught. Toxicology aspects will also be emphasised.
- In Year 2 and Year 3, students will be allocated at different departments depending on whether they are open or closed system.

Rotation for Year 2 Mmed students :

Open System (outcampus)		Closed System (incampus)	
Orthopaedics	(3 months)	Anaesthesiology	(4 months)
Obstetrics and Gynaecology	(1 month)	Neuromedicine	(2 months)
Neuromedicine	(2 months)	Neurosurgery	(1 month)
Neurosurgery	(1 month)	Emergency Medicine	(5 months)
Emergency Medicine	(5 months)	-	

Rotation for Year 3 Mmed students :

Open system (outcampus)		Closed system (incampus)	
Anaesthesiology	(4 months)	Orthopaedics	(3 months)
Emergency Medicine	(7 months)	Obstetrics and Gynaecology	(1 month)
-		Emergency Medicine	(7 months)

3. Year 3 students can do 1-month elective posting of their choice in emergency medicine related fields such as disaster, toxicology and prehospital care.
4. Students are required to attend life support courses such as ACLS, PALS and MTLs at a certified and recognised training centres.
5. During out of department postings, students are required to be involve in attending medical emergencies in their respective departments especially during on-calls.

C) PHASE II CURRICULUM STRUCTURE (YEAR 4)

PHASE	YEAR	LEARNING SCOPE	ASSESSMENT
II	4	<u>TRAINING AND RESPONSIBILITY</u> <ul style="list-style-type: none"> • Clinical work at Emergency Department • Logbook and coursework Go through Advanced Cardiac Life Support (ACLS)	Continuous assessment Professional Examination Part II

1. Year 4 students are considered “Specialist In Training” and are responsible for the management of patients in Emergency Department. Students are encouraged to make their own decision as a future specialist. However, students will still be supervised by the specialist at Emergency Department, Universiti Sains Malaysia or other recognized institution.
2. The focus of Phase II (Year 4) is to expose the students to the more challenging and detailed aspect in Emergency Medicine. Students are required to obtain a comprehensive knowledge to make an accurate diagnosis, and to be able to perform common clinical procedures or techniques.
3. Students are also required to perform teaching jobs.
4. Students are encouraged to present paperwork, research, and attending conferences.
5. Students are required to undergo Advanced Cardiac Life Support course.
6. Students are expected to familiarize themselves with administration problem, department administration, and current issues for the benefit of patient

PART 3.0 : DISSERTATION

1. Students are required to present their dissertation topics early in their Year 2.
2. Students are expected to start their dissertation progress as early as possible following ethical approval.
3. Students are required to engage in research activities where they will be exposed to a research methodology and data analyzing to produce a dissertation.
4. A supervisor will be appointed to supervise and advise on the dissertation progress.
5. The progress of the students must be reported by the supervisor to the head of the department every six (6) months.
6. Students shall submit a complete dissertation six (6) months before the end of part II to be examined.
7. A satisfactory report is a prerequisite to sit for Part II Examination.



Please scan the QR code to download Dissertation Guide

PART 4.0 : CONTINUING MEDICAL EDUCATION (CME)

1. Weekly department CME will be held every Tuesday.
2. Priority to attend CME will be given to 1st year students who are doing posting in Emergency Department.
3. 1st year students doing posting in other department will be given a day off to attend the CME.
4. Other students are compulsory to attend the CME if they are not in duty.
5. Attendance in CME can be utilized for CPD points.
6. CME Topics :

Cell Physiology	Pain and PSA
Cardiovascular System	Respiratory System
Endocrine System	Renal System
Gastrointestinal System	Neurology
ENT & Ophthalmology Emergencies	Pregnancy & Paediatric Emergencies
Toxicology & Toxinology	Skin & Heat Related Illness
Trauma	Disaster
Prehospital Care	Organizational & Services Management
Hemato-onco Emergency	Medicolegal in Emergency



Please scan the QR code to download a more detailed CME topic

PART 5 : MONITORING AND PROGRESS REPORT

A) SUPERVISOR

1. The school authority will appoint one expert as a supervisor for each student until they completed the program.
2. Experts at government hospitals and other medical institutions may be authorized to supervise students after being approved by the school.
3. During a rotation posting, students will also be appointed posting supervisor for that posting by the respective department.

B) PROGRESS REPORT

1. Supervisor will monitor student progress, and frequent discussion between student and supervisor is encouraged.
2. Students are required to fill in the student progress report form every 6 month and submit it to his/her supervisor.
3. The posting supervisor will also prepare a report on the progress of the student after each posting in a form and forward it to the Emergency Department.

C) LOG BOOK

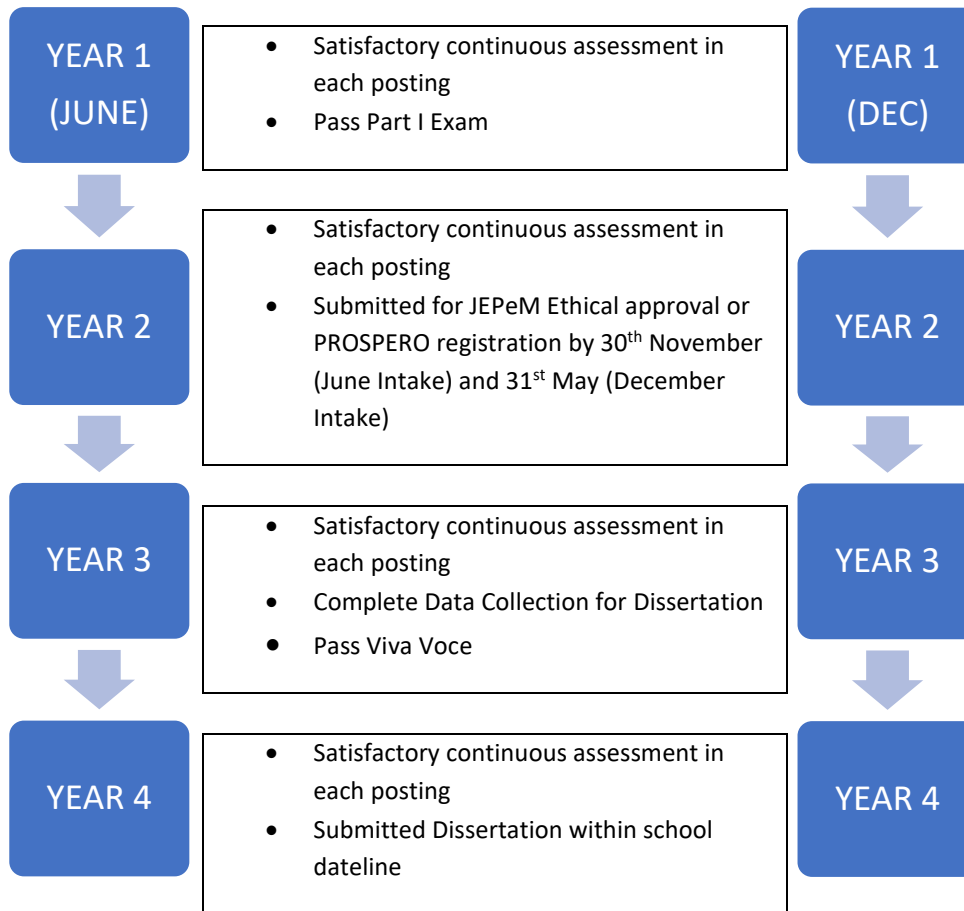
1. Students are required to fill up a log book for each of their posting.
2. This can determine the activities and clinical exercises performed on their own and the expected experience will be achieved.
3. The log book must be submitted to Emergency Department after it is reviewed and signed by posting supervisor.
4. The log book will become a property of the university.



Please scan the QR code to download template for log book

PART 6 : EXAMINATION AND ASSESSMENT

A) CRITERIA FOR YEAR ADVANCEMENT AND PRE-REQUISITES FOR PART I & PART II EXAMINATION



Notes:

- Candidate who fail Viva Voce may sit for a remedial Viva Voce session in 1 month
- Candidate who fail remedial Viva Voce will be extended for six (6) month
- Candidate who not fulfil criteria for year advancement will be automatically extended for six (6) month

B) PRE-REQUISITES FOR PART I & PART II EXAMINATION

- The supervisor's report on attitudes and integrity, attendance, clinical skills and theoretical knowledge must be satisfactory
- Pursuing the designated rotation satisfactorily
- Provide satisfactory log book
- Candidates must pass a continuous assessment component

5. Candidates must submit a full dissertation six (6) month before Part II Exam to be reviewed
6. Accepted full dissertation (after reviewers' correction) is a pre-requisite to sit for Part II Exam
7. Provided below are the format for Part 1 & Part 2 Examinations;

PART 1 EXAMINATION				
Sections	Component	Percentage (%)	Number of questions	Duration (min)
Section A	Theory	100%		
	1. MCQ	70%	100	
	- Paper 1 (Type X)	46.7% (2/3 of 70%)	60	120
	- Paper 2 (Type A/O)	23.3% (1/3 of 70%)	40	100
	2. KFQ	30%	12	120
Section B	Clinical	100%		
	1. Manned OSCE	70%	7	70
	2. Unmanned OSCE	30%	10	60

PART 2 EXAMINATION				
Sections	Component	Percentage (%)	Number of questions	Duration (min)
Section A	Theory	100%		
	1. MCQ	40%		
	- Paper 1 (Type X)	13.3%	20	75
	- Paper 2 (Type A/O)	26.7%	40	120
	2. KFQ	40%	20	120
	3. Essay	20%	4	120
Section B	Clinical	100%		
	OSCE	70%	10	90
	Viva	30%	3	30

PART 7 : SUSPENSION FROM THE COURSE

1. The University Senate has the authority to suspend a student from the course or bar the candidate from taking the exams with or without penalties, following the advice from the school board.

PART 8 : POSTPONEMENT OF STUDY

1. Students may apply for termination of a course with or without penalty for certain reasons acceptable to the senate.
2. The postponement of the study can only be taken two (2) times during the course period and the total period cannot exceed one (1) year.

PART 9: TERMINATION OF STUDY

1. A student may withdraw from the course by making a written request to the Dean of the school through the Head of Department.
2. Students may be disqualified from a course by the University Senate upon recommendation by the School Board if:
 - a) The student's achievement during the course is found to be unsatisfactory by the School Board
 - b) Make mistakes involving discipline that violates the rules of the University or hospital
 - c) Validated malpractice or crime
 - d) Students who fail to register each year without obtaining approval from department
 - e) Students who have failed 3 times for the same examination
 - f) Termination of registration by the Malaysian Medical Council
 - g) The physical and mental health of a student who does not allow him to function effectively or may be harmful to the patient

PART 10 : REGISTRATION AND FEES

1. Students are required to renew registration every 6 months
2. For every semester, renewal of registration is compulsory and online registration can be made through <http://campusonline.usm.my>
3. Pre-registration reference and guideline can be viewed via link <http://www.ips.usm.my/index.php/downloads/onlineRegistrationProcedureCourseRegistration>
4. All payment must be made before the announced due date or students will be penalized for RM200.00

PART 11 : DURATION OF STUDY

1. The minimum duration of program is four (4) years while the maximum duration of program is seven (7) years.
2. However, a relevant student is entitled to a certain degree of leniency in certain cases.
3. A student is eligible for a Master of Medicine (Emergency Medicine) or MMed (Emergency Medicine) upon successful completion of the course and after fulfilling all requirements from school

PART 12 : LEAVE

A) ANNUAL LEAVE

1. Each student entitled 28 days of annual leave every year which equally divided into 2 semesters. Students will have 14 days of leave every semester
2. Any of unused leave on the particular semester cannot be forwarded into the next semester
3. Any emergency leave, or MC (beyond 7 days) will subject to deduction of annual leave.
4. Additional 14 days of maternity leave for female student
5. Application of leave cannot exceed 3 days consecutively unless for certain condition and approved by head of department

B) UNRECORDED LEAVE

1. Each student is entitled 7 days of unrecorded leave annually. This is an extra leave from the annual leave to be used on the purpose of :
 - a) Attending a course as a presenter/speaker/facilitator
 - b) Application must be submitted 7 days before course and letter of invitation must be attached
 - c) All expenses for attending the course must be bare by the student

PART 13 : REFERENCES

References for Master of Medicine (Emergency Medicine):

A) BOOKS

1. Tintinalli's Emergency Medicine: A Comprehensive Study Guide (8th Edition)
By Judith E. Tintinalli, J. Stephan Stapczynski, O. John Ma, Donald M. Yealy, Garth D. Meckler, David M. Cline
2. Guide to the Essentials in Emergency Medicine (2nd Edition)
By Shirley Ooi, Peter Manning
3. Emergency Medicine Secrets (6th Edition)
By Vincent J. Markovchick MD FAAEM FACEP, Katherine A. Bakes MD, Jennie Buchanan MD, Peter T. Pons MD FACEP
4. ATLS Student Course Manual: Advanced Trauma Life Support (10th ed. Edition)
By American College of Surgeons
5. Advanced Cardiovascular Life Support: Provider Manual (2015)
By AHA
6. Advanced Paediatric Life Support: A Practical Approach to Emergencies (6th Edition)
By Advanced Life Support Group (ALSG)
7. Manual of Emergency Airway Management (4th Edition)
By Ron M. Walls, Michael F. Murphy
8. Physiology (6th Edition)
by Linda S. Costanzo
9. Drugs in Anaesthesia and Intensive Care (5th Edition)
By Edward Scarth , Susan Smith
10. Clinical Examination: A Guide to Physical Diagnosis (8th Edition)
By Nicholas J. Talley and Simon O Connor

B) JOURNALS

Any journal related to scope of emergency medicine.

C) ONLINE RESOURCES

1. www.uptodate.com
2. www.wikem.org
3. www.medscape.com
4. www.lifeinthefastlane.com
5. <https://emcrit.org>
6. <https://pulmcrit.org>
7. www.rebelem.com
8. www.aliem.com