



UNIVERSITI  
KEBANGSAAN  
MALAYSIA  
*The National University  
of Malaysia*

# PANDUAN PRASISWAZAH



**FAKULTI PERUBATAN UKM**  
Ijazah Doktor Perubatan  
SESI 2017 - 2018



PANDUAN PRASISWAZAH  
Fakulti Perubatan  
Sesi Akademik 2017-2018





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### Sesi Akademik 2017-2018

**Fakulti Perubatan**  
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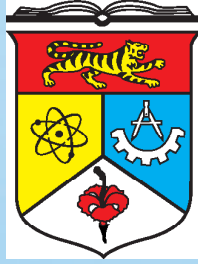




*Universiti Kebangsaan ini merupakan  
puncak dari usaha kita ke arah  
memenuhi tuntutan dan aspirasi rakyat  
yang ingin melihat bahawa bahasa ibunda  
mempunyai kedaulatan dan kedudukan  
yang sewajarnya di dalam usaha  
memenuhi keperibadian nasional*



(Ucapan Tun Abdul Razak di Konvokesyen Pertama UKM, 1973)



## Lambang

Universiti Kebangsaan Malaysia (UKM) ialah sebuah perisai yang berpetak empat. Setiap petak mengandungi gambar dan warna latar yang berlainan dengan membawa maksud tertentu. Gambar yang didapati dalam petak tersebut ialah seperti yang berikut :

- \* Seekor harimau berwarna kuning yang gagah sedang menyerang ke arah kanan berlatar warna merah.
- \* Simbol atom berlatar warna kuning.
- \* Simbol teknologi berlatar warna biru.
- \* Sekuntum bunga raya berwarna merah berlatar warna putih.

## Buku

Buku melambangkan ilmu pengetahuan, iaitu peranan utama UKM sebagai institusi pengajian tinggi dan penyelidikan.

## Perisai

Perisai bererti keteguhan. Keteguhan yang dimaksudkan ialah kemampuan UKM memainkan peranan sebagai institusi pengajian tinggi di negara ini.

## Harimau

Harimau melambangkan keberanian dan kegagahan. Harimau mencerminkan masyarakat Malaysia yang berteraskan kebudayaan Melayu. Harimau garang menggambarkan kesediaan dan keupayaan UKM mara memerangi kejahatan, kejahatan dan kepalsuan.

## Atom dan Teknologi

Simbol atom dan teknologi melambangkan konsep pembangunan negara yang berlandaskan sains dan teknologi moden. UKM sebagai institusi ilmu bertanggungjawab mengeluarkan tenaga mahir dalam semua bidang untuk memenuhi keperluan pembangunan negara.

## Bunga Raya

Bunga raya adalah bunga kebangsaan Malaysia. Lima kelai ranggi melambangkan lima prinsip Rukun Negara yang dihayati dan sentiasa dipelihara oleh rakyat Malaysia.



# Kandungan

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## **Kata Alu-aluan**

Assalamualaikum wbt. and Salam Sejahtera

Bagi pihak seluruh warga Universiti Kebangsaan Malaysia (UKM), saya mengucapkan Tahniah dan Selamat Datang kepada para pelajar yang terpilih untuk melanjutkan pengajian ke peringkat ijazah sarjanamuda di universiti kebanggaan negara ini. UKM sangat berbangga menerima kehadiran saudara saudari sebagai warga barunya.

UKM sentiasa mendukung inisiatif kerajaan membangunkan modal insan kelas pertama yang cemerlang dalam semua aspek bagi membolehkan para pelajar dan siswazahnya bersaing di pelbagai peringkat, kebangsaan dan antarabangsa. Justeru, program yang dirangka melalui Fakulti, Institut, kolej kediaman, pusat perkhidmatan, aktiviti berpersatuan dan ko-kurikulum menjurus ke arah pembangunan modal insan yang boleh menerajui kemajuan negara.

Saya yakin dengan segala infrastruktur dan kemudahan yang baik dan lengkap di UKM, akan membentuk proses pengajaran dan pembelajaran terkehadapan dengan menjadikan komponen penyelidikan sebagai landasan, sesuai dengan status UKM sebagai universiti penyelidikan. Suasana pembelajaran yang kondusif dan pelbagai telah dirangka agar para pelajar berupaya memperoleh pengalaman yang dapat mematangkan saudara saudari untuk membina jati diri dan sahsiah terpuji sebagai pelengkap kepada model pembangunan modal insan komprehensif.

Sebagai warga baru universiti, marilah memahami, menghayati dan bergerak sederap dengan Falsafah, Wawasan dan Misi UKM serta sentiasa menjaga nama baik universiti. Saya berharap saudara saudari menjadikan UKM sebagai wadah *Mengilham Harapan, Mencipta Masa Depan* yang mendorong untuk terus maju dalam semua perencanaan dan penerokaan kehidupan pada masa mendatang.

Sekian.

A handwritten signature in black ink, appearing to be 'S. Ghazali', written in a cursive style.

**Prof. Dato' Seri Dr. Noor Azlan Ghazali**  
Naib Canselor  
Universiti Kebangsaan Malaysia



# TARIKH AKADEMIK 2017-2018

## IJAZAH DOKTOR PERUBATAN

[Tahun 1]

SEMESTER I		
TARIKH	MINGGU	AKTIVITI
26 Ogos – 03 Sept	1	Pendaftaran & Minggu Mesra Pelajar (MMP)
4 – 10 Sept 2017	1	Kem PPD
11 Sept – 15 Okt 2017	5	Sesi Pembelajaran
16 – 22 Okt 2017	1	CUTI PERTENGAHAN SEMESTER I/CUTI PERAYAAN
23 Okt - 07 Jan 2018	11	Sesi Pembelajaran
08 – 14 Jan 2018	1	CUTI ULANGKAJI
15 - 28 Jan 2017	2	<b>PEPERIKSAAN AKHIR SEMESTER I</b>
29 Jan – 11 Feb 2018	2	CUTI AKHIR SEMESTER I

SEMESTER II		
TARIKH	MINGGU	AKTIVITI
12 Feb – 04 April 2018	8	Sesi Pembelajaran
09 – 15 April 2018	1	CUTI PERTENGAHAN SEMESTER II
16 April – 10 Jun 2018	8	Sesi Pembelajaran
11 – 17 Jun 2018	1	CUTI ULANGKAJI
18 Jun – 01 Julai 2018	2	<b>PEPERIKSAAN AKHIR SEMESTER II</b>
02 - 29 Julai 2018	4	CUTI ULANGKAJI SEMESTER I & II
30 Julai - 12 Ogos 2018	2	<b>PEPERIKSAAN (U) SEMESTER I &amp; II</b>
<b>JUMLAH MINGGU</b>	<b>50</b>	

Catatan :

31 Ogos 2017	<i>Khamis</i>	Hari Kebangsaan
01 September 2017	<i>Jumaat</i>	Hari Raya Haji
16 September 2017	<i>Sabtu</i>	Hari Malaysia
21 September 2017	<i>Khamis</i>	Awal Muharam
18 Oktober 2017	<i>Rabu</i>	Deepavali
01 Disember 2017	<i>Jumaat</i>	Maulidur Rasul
25 Disember 2017	<i>Isnin</i>	Krismas
01 Januari 2018	<i>Isnin</i>	Tahun Baru
31 Januari 2018	<i>Rabu</i>	Thaipusam
01 Februari 2018	<i>Khamis</i>	Hari Wilayah
16 -17 Februari 2018	<i>Jumaat - sabtu</i>	Tahun Baru Cina
01 Mei 2018	<i>Selasa</i>	Hari Pekerja
29 Mei 2018	<i>Selasa</i>	Wesak
02 Jun 2018	<i>Sabtu</i>	Keputusan Yang Dipertuan Agong
15 - 16 Jun 2018	<i>Jumaat - sabtu</i>	Hari Raya Puasa
22 Ogos 2018	<i>Rabu</i>	Hari Raya Haji
31 Ogos 2018	<i>Jumaat</i>	Hari Kebangsaan

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## Falsafah, Wawasan, Misi dan Matlamat UKM

### **Falsafah**

Paduan antara iman kepada Allah dengan ilmu yang bermanfaat serta gabungan antara teori dan amal adalah dasar utama bagi perkembangan ilmu, proses pembinaan masyarakat terpelajar dan pembangunan Universiti.

### **Wawasan**

UKM bertekad menjadi Universiti terkehadapan yang mendahului langkah masyarakat dan zamannya bagi membentuk masyarakat dinamis, berilmu dan berakhlak mulia.

### **Misi**

Menjadi Universiti terpilih yang memartabatkan bahasa Melayu serta mensejagatkan ilmu beracuan budaya kebangsaan.

### **Matlamat**

Untuk menjadi pusat keilmuan yang terkehadapan, berteknologi dan berdaya saing yang memartabatkan bahasa Melayu sebagai pusat bahasa ilmu, membangun masyarakat dinamis dan berakhlak mulia, mengantarabangsakan citra dan sumbangan UKM bagi masyarakat sejagat, menjana teknologi yang bermanfaat kepada masyarakat.

## **Imbasan Sejarah Universiti Kebangsaan Malaysia**

Cetusan pertama gagasan perlunya pendidikan tinggi untuk orang Melayu muncul dalam Mesyuarat Majlis Raja-raja pada 1903. Za'ba, seorang cendekiawan, menulis berkenaan gagasan tersebut dalam akhbar Lembaga Melayu pada 1917. Gerakan pemikiran, perdebatan serta tekad golongan cendekiawan Melayu untuk menubuhkan sebuah universiti dan menggunakan bahasa Melayu sebagai bahasa pengantar di institusi pengajian tinggi bermula pada 1923 apabila Abdul Kadir Adabi, seorang lagi cendekiawan Melayu mengemukakan memorandum gagasan tersebut kepada DYMM Sultan Kelantan. Namun demikian, pemikiran dan tekad tersebut tidak dapat berkembang dan terlaksana kerana wujudnya berbagai-bagai halangan dan rintangan oleh tekanan kolonialisme.

Mulai 1957 hingga 1967, perjuangan untuk penubuhan universiti kebangsaan menjadi semakin bersemarak sebagai memenuhi tuntutan dan semangat kemerdekaan bangsa dan negara. Sehubungan itu, pada 1968 cendekiawan Melayu telah membentuk sebuah jawatankuasa penaja yang berperanan merancang penubuhan sebuah universiti kebangsaan. Pelbagai forum budaya dan politik diadakan bagi mendapat sokongan kerajaan dan rakyat untuk mewujudkan sebuah institusi pengajian tinggi yang memartabatkan bahasa Melayu sebagai bahasa pengantar dalam semua bidang pangajian dan keilmuan. Perjuangan yang tidak pernah luput itu mencapai kejayaan dengan penubuhan Universiti Kebangsaan Malaysia (UKM) pada 18 Mei 1970 yang memulakan operasi pertamanya di Lembah Pantai Kuala Lumpur. Kumpulan pertama pelajar prasiswazah seramai 192 orang dan dua (2) orang siswazah mula mendaftar di tiga buah fakulti iaitu Fakulti Sains, Fakulti Sastera dan Fakulti Pengajian Islam.

Pada 1974, UKM menubuhkan UKM Kampus Sabah di Kebun Kawang, Papar. Nama Kebun Kawang kemudiannya ditukar kepada Limauan oleh Tun Datu Mustapha Datu Harun yang ketika itu sebagai Ketua Menteri Sabah. Kampus yang menempatkan Fakulti Sains dan Sumber Alam ini berpindah ke Bukit Padang, Kota Kinabalu pada 1980. Seterusnya berpindah ke Menggatal, Tuaran pada 1990 bersama Fakulti Sains Pembangunan yang asalnya ditempatkan di Kampus Induk Bangi. Dengan penubuhan Universiti Malaysia Sabah pada 1994, UKM Kampus Sabah ditutup secara rasminya pada 1996 dan kedua-dua fakulti berkenaan dipindahkan ke Kampus Induk Bangi, Selangor.

Sejak 45 tahun penubuhannya, UKM telah menghasilkan 170,112 graduan prasiswazah dan siswazah. Universiti ini terus berkembang pesat sebagai sebuah universiti awam terkehadapan yang kini mempunyai tiga belas (13) fakulti dan tiga belas (13) institut kecemerlangan penyelidikan. UKM juga mempunyai entiti yang beroperasi secara komersial, iaitu UKM Holdings Sdn. Bhd. dan UKM Technology Sdn. Bhd. sebagai satu pendekatan dalam mengkomersilkan dan memasyarakatkan kepakaran yang dimiliki di samping menjana kewangan Universiti.

Kampus induk UKM di Bangi yang memulakan operasinya pada 1977 mempunyai keluasan 1,096.29 hektar. Kampus Induk Bangi menempatkan sembilan (9) fakulti, dan sebelas (11) institut penyelidikan. Selain itu, UKM juga mempunyai sebuah kampus di Jalan Raja Muda Abdul Aziz, Kuala Lumpur dengan keluasan 20 hektar yang menempatkan Fakulti Sains Kesihatan, Fakulti Pergigian, Fakulti Farmasi dan Institut Telinga, Pendengaran dan Pertuturan (I-HEARS). Manakala Pusat Perubatan UKM (PPUKM) yang mempunyai keluasan 22.3 hektar di Cheras, Kuala Lumpur menempatkan Fakulti Perubatan, Hospital Canselor Tunku Muhriz dan Institut Perubatan Molekul (UMBI).

Berasaskan kecemerlangan dalam bidang penyelidikan lebih empat dekad, UKM dipilih sebagai salah sebuah universiti penyelidikan di Malaysia pada 2006. Proses pemantapan bidang penyelidikan disusuli dengan pengwujudan projek-projek tertumpu di bawah dua belas (12) nic yang dikenali iaitu Cabaran Membina Negara Bangsa; Pembangunan Lestari Wilayah; Tenaga Keterbaharuan; Teknologi Kesihatan & Perubatan; Perubahan Iklim; Nanoteknologi & Bahan Termaju; Kepelbagaian Biologi dalam Pembangunan Bioteknologi; Informatik Isian; Penyelidikan Ekonomi, Kewangan dan Perniagaan; Pendidikan dan Peradaban; Politik dan Keselamatan; dan Penyelidikan Transformasi Luar Bandar.

Universiti juga adalah penerima Anugerah Kualiti Perdana Menteri 2006 dan memperolehi status Swa-Akreditasi tahun pada 2010 dan diberi status Universiti Autonomi pada Januari 2012. Penganugerahan ini adalah pengiktirafan bagi kecemerlangan UKM dalam bidang akademik dan tadbir urus. UKM melestarikan kecemerlangannya melalui Pelan Strategik UKM 2000-2020 (PS2020).

Kini, UKM memberi tumpuan terhadap enam (6) Bidang Keberhasilan Utama yang dijangka terus melonjakkannya lebih tinggi. Tumpuan tersebut adalah Graduan Beraspirasi Kebangsaan, Berkompeten, Berdaya Saing dan Inovatif; Penyelidikan dan Inovatif yang Berimpak Tinggi; Perkongsian Pintar dan Keterlibatan Strategik; Sumber Manusia dan Institusi Cemerlang; Penjanaan Kekayaan Secara Optimum dan Strategik; dan Prasarana dan Persekitaran Ilmu yang Kondusif.

Bagi memastikan roh perjuangan para pelopor UKM terus subur dan segar, kesedaran terhadap sejarah penubuhan dibugar secara berterusan. Menginsafi bahawa UKM adalah institusi harapan masyarakat, seluruh warga universiti sama ada warga kerja mahupun pelajar diimbau supaya menyelami dan memahami keperluan rakyat menerusi persoalan yang berlegar dalam kehidupan bernegara selaras dengan peranan UKM sebagai Pendaulat Amanah Negara. Namun ini tidak menghadkan jangkauan universiti terhadap segenap perkembangan malah pergolakan yang berlaku di peringkat antarabangsa. Universiti yang memiliki pelbagai kepakaran merentas disiplin diyakini berupaya melangkaui garis psikologi yang membolehkannya beraksi tangkas dalam arena global serta sama-sama memberi jawapan dan penyelesaian permasalahan yang menghambat kehidupan sejagat. .

## **Pentadbiran Fakulti**

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MBBS (IMU), MRCP (UK)

Dr. Khoo Ching Soong  
MD (Hons), MRCP (UK), MRCPS (Glasg)

Dr. Ng Chen Fei  
MD (UKM), MRCP(UK), MRCPS (Glasg)

Dr. Lydia Kamaruzaman  
MBChB (Manchester,UK), DrIntMed. (UKM)

## **JABATAN PERUBATAN KECEMASAN**

### **Ketua Jabatan**

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MD(UKM), MEMed(UKM)

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MBBCh BAO(Ireland), MEMed(UKM)

Dr. Emilia Mokhtar Rasali  
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Dr. Tan Toh Leong  
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Dr. Muhamad Munawar Mohamed Hatta  
MBBS(IIUM), MEMed(UKM)

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MBBCHBAO (UCD), DrEmMed (UKM)

Dr. Mohd Hisham Bin Mohd Isa  
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### **Ketua Jabatan**

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Prof Dr. Noor Azah Abd Aziz  
MD (USM), MMed (Fam Med), MPhil (UK)

Prof Dr. Khairani Omar  
MD (UKM), MMed (Fam Med) (UKM), Adol Health (Melbourne), Cert. Learning Disability (USA)

Prof Madya Dr. Noorlaili Mohd Tauhid  
MD(UKM), MMed (Fam Med)(UKM) , PhD (Australia)

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MBBS (Jaipur), MMed (Fam Med)(UKM), GDFPD(NUS)

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Dr. Zuhra Hamzah  
MBBS (UM), MMed (Fam Med) (UKM)

Dr. Saharuddin Ahmad  
MD (UKM) MMed (Fam Med) (UKM)

Dr. Syahnaz Mohd Hashim  
MBBch BAO (Ireland), MMed (Fam Med) (UKM)

Prof Madya Dr. Hizlinda Tohid  
MB ChB (Manchester), MMed (Fam Med) (UKM)

Dr. Tan Chai Eng  
MD (UKM), MMed (Fam Med) (UKM)

Dr. Mohd Fairuz Ali  
MBBS (W.Aus), MMed (Fam Med) (UKM)

Dr. Ezura Madiana Md. Monoto  
MBBS (IIUM), MMed (Fam Med) (UKM)

Dr. Teh Rohaila Jamil  
MB BCh BAO (Ireland), MMed (Fam Med) (UKM)

## **JABATAN PSIKIATRI**

### **Ketua Jabatan**

Prof. Dr. Marhani Midin  
MBBCh.BAO(Dublin), M.Med. Psych(UKM), MIMH(Australia)

### **Pensyarah**

Prof. (Klinikal) Dr. Hatta Sidi  
DipSHC(Australia), MBBS(Malaya), M.Med. Psych(UKM)

Prof. (Klinikal) Datin Dr. Rosdinom Razali  
MD(UKM), M.Med. Psych(UKM)

Prof. Madya Dr. Azlin Baharudin  
MD(UKM), M.Med. Psych(UKM)

Prof. Madya Dr. Nik Ruzyanei Nik Jaafar  
MBBCh BAO(Ireland), M.Med. Psych(UKM)

Prof. Madya Dr. Wan Salwina Wan Ismail  
MBBS(Adelaide), M.Med. Psych(UKM), Adv.M.Ch.Ado.Psych.(UKM)

Prof. Madya Dr. Fairuz Nazri Abdul Rahman  
MBChB(Glasgow), M.Med. Psych(UKM)

Prof. Madya Dr. Chan Lai Fong  
MD(UKM), M.Med. Psych(UKM)

Prof. Madya Dr. Suriati Mohamed Saini  
MBBS(Adelaide), M.Med. Psych(UKM)

Prof. Madya Dr. Suzaily Wahab  
MD(UKM), M.Med. Psych(UKM)

Dr. Tuty Iryani Mohd Daud  
MBBS(Adelaide), M.Med. Psych(UKM)

Dr. Hazli Zakaria  
MBBS(Adelaide), M.Med. Psych(UKM)

Puan Raynuha A/P Mahadevan  
BA(Hons.)(UKM), M.A.(Clin. Psych)(UKM)

Dr. Shalisah Sharip  
BA(Hons.)(UKM), M.A.(Clin. Psych)(UKM), P.hD (University of Newcastle Australia)

## **Pensyarah Pelatih**

Dr. Farah Deena Abdul Samad  
MD(UPM)



## **JABATAN RADIOLOGI**

### **Ketua Jabatan**

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MD(UKM), MMed.(Radiology)(UKM)

Prof. Madya Datin Dr. Shahizon Azura Mohamed Mukari  
MBChB(Glasgow), MMed.(Radiology)(UKM)

Prof. Madya Dr. Rozman Zakaria  
MBBS (Queensland), MMed.(Radiology)(UKM)

Prof. Madya Dr. Suraya Aziz  
BMed.Sc., BMBS(Nottingham), MMed.(Radiology)(UKM)

Dr. Fazalina Mohd Fadzilah  
MBBCh,BAO(Ireland), MMed.(Radiology)(UKM)

Dr. Norzailin Abu Bakar  
MBBCh,BAO (Ireland), MMed.(Radiology)(UKM)

Dr. Kew Thean Yean  
BMed.Sc., BMBS(Nottingham), MMed.(Radiology)(UKM)

Dr. Rizuana Iqbal Hussain  
MBBS(Bangalore), MMed.(Radiology)(UKM)

Dr. Sharifah Majedah Syed Idrus Alhabshi  
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Prof. Madya Dr. Faizah Mohd Zaki  
MD(UKM), MMed.(Radiology)(UKM)

Dr. Syazarina Sharis Osman  
MBBS(Malaya), MMed.(Radiology)(UKM)

Dr. Nik Azuan Nik Ismail  
MBBcH, BAO(Ireland), MMed.(Radiology)(UKM)

Prof Madya Dr. NurYazminYaacob  
MBChB(Otago), MMed.(Radiology)(UKM)

Dr. Mohamed Ariff Jaafar Sidek  
BSc.(USA), Dip Edu, MSc.(UK), Ph.D(UK)

Dr. Erica Yee Hing @ Wong  
MBBS(Malaya), Dr Rad(Radiology)(UKM)

Prof. Madya Dr. Radhika Sridharan  
MBBS(Malaya), MMed.(Radiology)(UKM)

Dr. Nurul Shahida Sahidan  
MD (UNIMAS)

Dr. Mohd Imree Azmi  
MBChB (Manchester)

Profesor Dato' Dr. Fuad Ismail  
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Dr Hanani Abdul Manan  
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Dr. Nur Fai'zah Ab Muin  
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## **JABATAN SURGERI**

### **Ketua Jabatan**

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### **Pensyarah**

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Lt. Kol (PA) Prof. Dato' Dr. Zulkifli Md. Zainuddin  
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Dr. Soon Bee Hong  
MD(UKM)

Dr. Ishamuddin Ismail  
MS(UKM)

Dr. Mohamad Aznan Shuhaili  
MS(UKM), MD(UM)

Dr. Lenny Suryani Safri  
MS(UKM)

Dr. Reynu Rajan  
MS(UKM)

Dr. Fatimah Mohd Nor  
MS Plastik (USM), MD (USM)

### **Pensyarah Pelatih**

Dr. Nabil Mohammad Azmi  
MD(Cyberjaya)

Dr. Hisham Arshad b. Dr Habeebullah Khan  
MD(Manipal University)

Dr. Adzim Poh Yuen Wen  
MD(UKM)

Dr. Siti Muyassarah Rusli  
MD(UKM)

## **Penerangan Mengenai Fakulti**

### **Fakulti Perubatan**

#### **Latar Belakang**

Fakulti Perubatan telah ditubuhkan pada 30 Mei 1972 dengan Dekan pertama Dato' Dr. Amir Abas. Tujuan penubuhan Fakulti ini adalah untuk memberi peluang kepada pelajar-pelajar aliran kebangsaan mengikuti kursus perubatan dan dapat melahirkan ramai doktor-doktor Melayu dan tempatan. Fakulti ini memulakan kursus pra-perubatan di Fakulti Sains UKM Jalan Pantai Baharu, Kuala Lumpur pada Mei 1973 dengan pengambilan seramai 44 orang pelajar (39 lelaki dan 5 perempuan). Kursus perubatan praklinikal bermula pada bulan Mei 1974 di bangunan sementara Fakulti Perubatan di Jalan Raja Muda Abdul Aziz dalam Kompleks Hospital Kuala Lumpur. Pada 27 Februari 1975, Menteri Kesihatan Tan Sri Lee Siok Yew telah mengisytiharkan Hospital Kuala Lumpur sebagai Hospital Pengajar Fakulti Perubatan UKM bagi latihan tahun klinikal.

Pada awal penubuhannya, Fakulti Perubatan telah mendapatkan khidmat tenaga pengajar pinjaman dari Indonesia untuk pengajaran praklinikal dan dari negara-negara Commonwealth untuk pengajaran klinikal sementara menunggu pensyarah-pensyarah pelatih UKM kembali dari latihan perubatan di luar negara. Peperiksaan Ikhtisas Akhir Ijazah Doktor Perubatan yang pertama telah diadakan pada 19 hingga 31 Mac 1979 dan daripada 42 orang pelajar yang mengambil peperiksaan, 37 daripadanya telah lulus dan dikurniakan Ijazah Doktor Perubatan. Ini merupakan detik gemilang bagi Fakulti Perubatan khususnya dan UKM amnya kerana telah berjaya mengeluarkan graduan pertama Ijazah Doktor Perubatan. Fakulti juga telah memulakan program sarjana kepakaran perubatan mulai sesi 1981/82 bermula dengan Sarjana Surgeri (Surgeri Am) dan Sarjana Surgeri (Ortopedik) dan diikuti dengan Sarjana Sains Perubatan dan Doktor Falsafah.

Pada awal 1990, Fakulti bercadang menubuhkan hospital pengajarnya sendiri dan pada 2 November 1993 pembinaan Hospital UKM (HUKM) telah dimulakan di tapak seluas 23 hektar di Jalan Tenteram, Bandar Tun Razak, Cheras. Pada 1 Julai 1997 HUKM telah siap dan memulakan operasinya. Pejabat Dekan dan jabatan-jabatan klinikal telah berpindah ke kompleks HUKM sementara jabatan-jabatan praklinikal masih mendiami kampus Jalan Raja Muda Abdul Aziz dan pelajar-pelajarnya menginap di Kolej Tun Dr. Syed Nasir, Jalan Temerloh, Kuala Lumpur; sementara pembelajaran Tahun III, IV, dan V dilakukan di HUKM dan pelajar-pelajarnya menginap di Kolej Tun Dr. Ismail. HUKM mempunyai keluasan lantai 200,000 meter persegi, kos pembinaannya bernilai RM 327,822,000.00 dan boleh menampung 1054 katil pesakit. Fakulti juga menawarkan program-program kejururawatan seperti Sarjanamuda Kejururawatan Dengan Kepujian, Diploma Kejururawatan dan Diploma Lanjutan Kebidanan. Fakulti juga telah mengorak langkah dengan menawarkan program Sarjana Kepakaran Lanjutan seperti Sarjana Lanjutan Dermatologi, Sarjana Lanjutan Kardiologi dan Sarjana Lanjutan Psikiatri Kanak-kanak dan Remaja. Sehingga kini, Fakulti Perubatan telah melahirkan 4423 orang doktor perubatan dan lebih 2100 orang pakar klinikal.

## **Visi**

Untuk menjadi hab akademik perubatan yang terkehadapan dan berdaya saing berteraskan ilmu, inovasi dan pasukan profesional perubatan yang berdedikasi dalam membentuk masyarakat yang sihat dan bermaklumat.

## **Misi**

Untuk memberi pendidikan dalam penyediaan profesional perubatan dan perkhidmatan bermutu tinggi berteraskan penyelidikan dalil perubatan, inovasi dan kepekaan sosial.

## **Objektif**

Program ini dijalankan dengan tujuan untuk melahirkan doktor yang mahir dalam bidangnya. Semasa melaksanakan khidmat utamanya untuk memenuhi keperluan dan tuntutan kesihatan Malaysia, doktor ini akan berupaya :

1. Menggunakan pengetahuan, kemahiran dan memperlihatkan sikap yang diperlukan dengan cekap dan bijaksana.
2. Menceburi mana-mana bidang pengkhususan perubatan yang dipilihnya.
3. Bertugas di mana-mana situasi (hospital, pusat kesihatan dan lain-lain) yang berkenaan.
4. Mengenalpasti dan menganalisis masalah-masalah kesihatan pada tahap individu, keluarga dan masyarakat serta menyelesaikan masalah-masalah ini melalui peningkatan kesihatan pada tahap individu, keluarga dan masyarakat serta menyelesaikan masalah-masalah ini melalui peningkatan kesihatan, pencegahan, penyembuhan dan pemulihan semula dengan menggunakan sumber dengan cermat dan berkesan.
5. Menunjukkan kepekaan terhadap nilai-nilai agama dan moral, adat resam dan tradisi masyarakat serta menghormatinya di mana pun mereka bertugas.
6. Memimpin dan berperanan sebagai ahli pasukan kesihatan yang berkesan.
7. Menerima hakikat bahawa pendidikan perubatan adalah suatu proses yang berterusan seumur hidup.

# IJAZAH DOKTOR PERUBATAN



## 1. CURRICULUM STRUCTURE

The curriculum structure is based on 8 broad outcome domains :

- i. Clinical Skills.
- ii. Scientific Foundation.
- iii. Professional Values & Attitude.
- iv. Population Health.
- v. Critical Thinking.
- vi. Information Management.
- v. Communication Skills.
- vii. Entrepreneurship Skills

## 2. PROGRAMME EDUCATIONAL OBJECTIVES

The objective of this programme is to produce **doctors** who are able to:

1. apply their knowledge and skills in an effective and judicious manner whilst demonstrating an attitude that is appropriate and desirable.
2. function effectively in any healthcare setting (hospitals, healthcare centres, etc.)
3. recognize and analyze health problems at the level of the individual, family and community; and solve these problems through health promotion, disease prevention, treatment and rehabilitation, using the available resources in a cost-effective manner.
4. demonstrate sensitivity towards religious, moral, cultural and traditional values of the community they serve.
5. lead and play an effective role in the healthcare team.
6. pursue any field of specialization of their choice.
7. accept the principle of life-long learning.

## 3. GENERAL OBJECTIVE

This curriculum is designed to train students to apply knowledge and skills effectively in a holistic and professional manner expected of a doctor. It also prepares them to be leaders in the field of medicine in both the local context and the global arena.

## 4. PROGRAMME LEARNING OUTCOMES

By the end of the course students will demonstrate :

1. the ability to apply knowledge and clinical skills to practice safely and competently.
2. a scientific critical approach to problem solving and decision-making.
3. the ability to work collaboratively within a multi-professionals team with integrity and enthusiasm and to assume a leadership role when appropriate.
4. the ability to lead and collaborate with other health professionals in health promotion and disease prevention.
5. a caring attitude and sensitivity to the needs of self, patients and their families, colleagues and the community.
6. the ability to adopt a holistic approach to patient management.
7. effective communication and social skills.
8. ethical, spiritual and moral principles and abide by legal requirements.
9. competency in information and communication technology and its management.
10. the appropriate teaching skills and willingness to educate patients, their families, the community and colleagues.
11. a commitment to life long learning.

## 5. COURSE STRUCTURE

### 5.1 Faculty

#### Year 1

##### *Semester I*

FFFF1113	Cellular Biomolecules
FFFF1213	Tissues of Body
FFFF1333	Membranes & Receptor
FFFF1412	Metabolism
FFFF1813	Personal & Professional Advancement IA

##### *Semester II*

FFFF1312	Human Genetics
FFFF1244	Infection & Immunity
FFFF1223	Mechanisms of Diseases
FFFF1424	Musculoskeletal System
FFFF1521	Clinical Science IB
FFFF1622	Medicine & Society I
FFFF1822	Personal & Profesional Advancement 1B

**Year 2***Semester I*

FFFF2113	Blood & Lymph
FFFF2214	Cardiovascular System
FFFF2313	Respiratory System
FFFF2433	Urinary System
FFFF2511	Clinical Science IIA
FFFF2613	Medicine & Society II
FFFF2812	Personal & Professional Advancement IIA

*Semester II*

FFFF2125	Gastrointestinal & Hepatobiliary System
FFFF2242	Endocrine System
FFFF2325	Neuro Sciences
FFFF2443	Reproductive System
FFFF2522	Clinical Science IIB
FFFF2822	Personal & Professional Advancement (PPA) IIB

**Year 3**

FFFF3119	Internal Medicine I
FFFF3129	Surgery I
FFFF3618	Medicine & Society III
FFFF3816	Personal & Professional Advancement (PPA) III
FFFF3115	Family Medicine
FFFF3512	Radiology I

**Elective**

FFFF3922	Elective Posting
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**Year 4***Semester I*

FFFF4118	Psychiatry
FFFF4127	Paediatrics I
FFFF4212	ORL-HNS
FFFF4229	Orthopaedics
FFFF4322	Ophthalmology
FFFF4422	Anaesthesiology
FFFF4823	Personal and Professional Advancement (PPA) IV
FFFF4812	Special Study Module I
FFFF4822	Special Study Module II

FFFF4911 Forensic Pathology I  
FFFF4921 Forensic Pathology II  
FFFF4618 Obstetrics & Gynaecology I  
FFFF4622 Radiology II

### **Year 5**

FFFF5522 Family Medicine  
FFFF5119 Surgery II  
FFFF5212 Emergency Medicine  
FFFF5227 Paediatrics II  
FFFF5329 Internal Medicine II  
FFFF5419 Obstetrics & Gynaecology II  
FFFF5823 Personal & Professional Advancement (PPA) V  
FFFF5816 Special Study Module III (Data Collection, Analysis & Report Writing)  
FFFF5911 Forensic Pathology III

## **5.2 CITRA UKM**

### **Year 1**

#### ***Semester I***

*LMCW2173 Hubungan Etnik*  
*LMCE1012/ Academic Communication I*  
*LMCE1022 Academic Communication II*

#### ***Semester II***

*LMCE2042 Workplace Communication III*

### **Year 2**

#### ***Semester I***

*LMCW2163 Tamadun Islam & Tamadun Asia*

#### ***Semester II***

*LMCE3031 Professional Written Communication*

*\*LMCW2922 Kemahiran Insaniah (Kursus ini boleh diambil pada mana-mana semester dalam tempoh pengajian Tahun 1 hingga Tahun 2)*

## **Struktur Pendidikan CITRA**

Pelajar baru yang mula mendaftar Semester I Sesi Akademik 2015-2016 perlu lulus dan melengkapkan :

### **Program Profesional**

- 30 unit kredit kursus pendidikan Citra untuk tujuan pengijazahan bagi pelajar Program Profesional iaitu melibatkan Fakulti Undang-Undang, Fakulti Sains Kesihatan, Fakulti Farmasi, Fakulti Pergigian, Fakulti Kejuruteraan dan Alam Bina, Fakulti Perubatan dan Fakulti Ekonomi dan Pengurusan (Program Perakaunan)

Kursus Pendidikan Citra terbahagi kepada dua (2) komponen iaitu :

- Kursus Wajib Universiti - 10 kredit
- Kursus Citra Universiti - 20 kredit (Program Profesional)  
- 30 kredit (Program Bukan Profesional)

Kursus Wajib Universiti - Taraf kursus adalah CW dan kursus ini ditawarkan oleh Pusat Citra Universiti. Pelajar perlu lulus dan melengkapkan 10 kredit. Kursus Citra Wajib adalah :

- \*LMCW1022 - Asas Keusahawanan dan Inovasi (2 kredit)
- \*LMCW2163 - Tamadun Islam dan Tamadun Asia (3 kredit)
- \*LMCW2173 - Hubungan Etnik (3 kredit)
- \*LMCW2922 - Kemahiran Insaniah (2 kredit)

Kursus Citra Universiti - Taraf kursus adalah C1 - C6. Pelajar perlu melengkapkan keperluan kredit minimum mengikut domain seperti rajah di bawah :

	<b>Domain Citra</b>	<b>Program Bukan Profesional (Kredit Minimum per domain)</b>	<b>Program Profesional (Kredit Minimum per domain)</b>
Citra 1	Citra Etika, Kewarganegaraan & Ketamadunan	4 Kredit	4 Kredit
Citra 2	Citra Bahasa, Komunikasi & Literasi	4 Kredit	4 Kredit
Citra 3	Citra Kepimpinan, Keusahawanan & Inovasi	2 Kredit	2 Kredit
Citra 4	Citra Peradaban Kuantitatif & Kualitatif	2 Kredit	2 Kredit
Citra 5	Citra Kekeluargaan, Kesihatan & Kehidupan	2 Kredit	2 Kredit
Citra 6	Citra Sains, Teknologi & Kelestarian	2 Kredit	2 Kredit

## 5.1 Year 1

### General Objectives

By the end of Year 1, students should be able to :

1. explain the structures and functions of biomolecules, cell tissues, human genetics, endocrine changes and metabolism in relation to basic pathological process of common diseases and principles of drug action.
2. differentiate among the various pathogens and their interactions with the host's immunity.
3. apply the principles of history taking, basic life support, aseptic techniques & universal precaution in clinical practice.
4. explain the concepts and principles of community health and its management, related health care services and the effects of globalization on health care.
5. demonstrate skills in problem solving, decision-making, self-management, and teamwork effectively with a caring attitude and sensitivity.
6. apply basic information technology skills in every aspect of their learning.

### Specific Objectives

By the end of Year 1, students should be able to :

1. explain the normal structures and functions of biomolecules, cells and tissues of the body.
2. explain biochemical processes and their regulation in the cells.
3. explain genetic inheritance and mutation and relate their effects on individuals and population.
4. differentiate among the various pathogens and their interactions with the host's immunity.
5. explain the basic pathological processes of diseases.
6. explain the principles of drug actions.
7. explain the concepts and principles of community health and its management, related health care services and the effects of globalization on health care.
8. explain the principles of ecology in relation to human health.
9. perform history taking, basic life support and hand washing.
10. explain the concepts and principles of aseptic techniques and universal precaution in clinical practice.
11. demonstrate self-management and coping skills in the university environment.
12. work effectively as a team member, as well as a team leader.
13. demonstrate caring attitude and sensitivity to the needs of others.
14. demonstrate problem solving, decision-making and IT skills.

**FF1622            MEDICINE & SOCIETY 1**

The module discusses several issues and challenges in the current and future settings in delivering health care services. It combines various disciplines of basic community health in tackling the issues of disease prevention and health care. The module covers topics on psychosocial aspects of disease and comprehensive health care, principle of disease prevention, basic environmental health, principle of health management, basic family health and nutrition. By introducing the principles of community health to the students, it is hoped that they are able to use it in evaluating health problems, to plan and monitor community health activities and to deliver health education to the community.

## References :

1. Asma Rahim. 2008. *Principles & Practice of Community Medicine*. New Delhi: Jaypee Brothers Medical.
2. Feinstein, R., Connelly, J. & Feinstein, M. (eds.). 2017. *Integrating Behavioral Health and Primary Care*. 1st Ed. USA: Oxford University Press
3. Howard Frunkin. 2016. *Environmental Health from Global to Local*. 3rd ed. USA: John Wiley & Sons, Inc.
4. Malaysia Ministry of Health. [www.moh.gov.my/](http://www.moh.gov.my/)
5. McKenzie, J.F. & Pinger, R.R. (eds.). 2015. *An Introduction to Community and Public Health*. 8th ed. USA: John & Bartlett Learning.
6. Raihanah Abdullah. 2004. *Kesihatan Keluarga*. PTS Publications & Distributors. Kuala Lumpur.
7. Robbins & Coulter. 2002. *Management*. 7th Edition. Prentice and Hall International Inc.
8. Smolin, L.A. & Grosvenor, M.B. 2008. *Nutrition: Science & Applications*. 1st Ed. John Wiley & Sons, Inc., USA.
9. World Health Organization. [www.who.int/](http://www.who.int/)

**FF1113            CELLULAR BIOMOLECULES**

The aim of this module is to describe to the students the structure and function of biomolecules and their role in cellular structure and function. The module will emphasise and relate protein structure to their functions. Enzymes will be introduced as important biocatalysts and as a tool in diagnosis. The synthesis of proteins and its regulation will also be discussed. In addition, the module will discuss the structure of DNA in relation to its function in inheritance and expression of genetic material, differentiate between eukaryotic and prokaryotic processes and explain how these differences can be exploited therapeutically. Several structural abnormalities in biomolecules leading to diseases will also be illustrated. Students will also perform some biochemical tests and be able to relate this to the structure and function of biomolecules.



## References :

1. Anne MR Agur, Arthur F Dalley, Keith L Moore. 2013. *Clinically Oriented Anatomy*. 7th Edition. Lippincott Williams and Wilkins, USA.
2. Michael Lieberman & Allan Marks. 2012. *Basic Medical Biochemistry: A Clinical Approach*. 4th Edition. Lippincott Williams & Wilkins, USA.
3. Richard S Snell. 2011. *Clinical Anatomy for Medical Students*. 9th Edition. Lippincott William and Wilkins, USA.
4. Baynes, J & Dominiczak, MH. 2014. *Medical Biochemistry: With STUDENT CONSULT Online Access*. Elsevier Health Sciences, UK
5. Ferrier DR. 2017. *Lippincott's Illustrated Reviews. Biochemistry*. 7th Edition. Lippincott Williams & Wilkins, USA.
6. Murray RK, Granner DK, Mayes PA & Rodwell VW. 2015. *Harper's Biochemistry*. 30th Edition. Appleton & Lange, USA.
7. Nussbaum RL, Mc Innes RR, Willard HF. 2007. *Genetics in Medicine*. 7th Edition. Elsevier Health Sciences, UK.
8. Turnpenny, PD & Ellard, S. 2017. *Emery's Elements of Medical Genetics*

**FF1213      TISSUES OF BODY**

The cell is the functional unit of all living organisms. The aim of this module is to describe to the students the living body, based on cell, classification of basic tissues and explain their embryological derivatives. The knowledge will then be applied in stating the cellular basis of diseases. This module helps in learning about the structure of body tissues which is composed of cells. Structure is closely related to the cells function. Together with the knowledge from physiology, biochemistry, pathology and other basic sciences, the study of body tissues can provide a powerful tool in understanding the normal functioning of the body as well as the disease process.

## References :

1. Hoffbrand V, Moss PAH. 2015. *Hoffbrand's Essential Haematology*. Edisi 7. Wiley Blackwell
2. Moore KL, Dalley AF, Agur AMR. 2013. *Clinically Oriented Anatomy*. Edisi 7. Lippincott, Williams & Wilkins
3. Peet A, Liebermans MA, and Marks A. 2013. *Marks' Basic Medical Biochemistry: A Clinical Approach*. Edisi 4. Lippincott, Williams & Wilkins
4. Sadler TW. 2015. *Langman's Medical Embryology*. Edisi 13. Lippincott, Williams & Wilkins
5. Young B, O'Dowd G, Woodford P. 2013. *Wheater's Functional Histology*. Edisi 6. Churchill Livingstone

## FF1223      MECHANISMS OF DISEASES

The module aims to provide an introduction to basic pathological processes which will help students to understand the diseases of the organ systems. Appreciation of the mechanisms and characteristics of the principle types of disease processes facilitates an understanding of the symptoms with which patients present, the physical signs which they demonstrate and the abnormal investigation results. It will also allow an appreciation of how various therapeutic interventions affect disease processes.

### References :

1. Katzung BG and Trevor AJ. 2015. *Basic & Clinical Pharmacology*. 13th Edition, Appleton & Lange.
2. Klatt EC. 2015. *Robbins and Cotran Atlas of Pathology*. 3rd edition. Philadelphia: Saunders.
3. Kumar V, Abbas AK and Aster JC. 2015. *Robbins and Cotran Pathologic Basis of Disease: with STUDENT CONSULT Online Access (Robbins Pathology)*. 9th Edition. Philadelphia: Saunders.
4. Kumar V, Abbas VK and Aster JC. 2013. *Robbins Basic Pathology*. 9th Edition, Saunders, Philadelphia.
5. Lakhani SR, Finlayson C, Dilly SA and Gandhi M. 2016. *Basic Pathology: An introduction to the mechanisms of disease*. 5th Edition, Arnold, London.
6. Levinson W. 2016. *Review of Medical Microbiology & Immunology*. 14th edition. Lange McGraw Hill.
7. Rang H, Ritter J, Flower R and Henderson G. 2015. *Rang and Dale's Pharmacology*. 8th Edition. Churchill Livingstone.
8. Reid R, Robert F and MacDuff E. 2011. *Pathology Illustrated*. 7th Edition, Churchill Livingstone, Edinburgh.
9. Underwood JCE (Ed) and Cross SS. 2009. *General and Systemic Pathology*. 5th Edition, Churchill Livingstone, Edinburgh.
10. Whalen K, Finkel R and Panavelil TA. 2015. *Lippincott's Illustrated Reviews: Pharmacology*. 6th Edition. Philadelphia: Lippincott Williams and Wilkins.
11. Website: <http://medsci.indiana.edu/c602web/602/c602web/>
12. Website: <http://www.med.uiuc.edu/PathAtlas/framer3/path3.html>

## FF1244      INFECTION & IMMUNITY

It is essential to facilitate the student's personal and professional development in holistic and comprehensive manner. In this module, student would be introduced to the major components of the Personal and Professional Development strand, mainly to facilitate the students' adaptation to university life and to the medical school in particular

Students will also be introduced to skills in teamwork and leadership, communication skills, spiritual awareness, critical thinking and decision-making skills.

References :

1. Jacalyn Duffin. 1999. *History of Medicine: A Scandalously Short Introduction*. University of Toronto Press. Toronto.
2. Bill Scott. 1995. *The Skills of Communicating*. Jaico Publishing House, Mumbai.
3. Ros Jay. 2003. *How To Build A Great Team*. Prentice Hall, London.
4. Charles J. Margerison. 2002. *Team Leadership*. Thomson, London.
5. Edward De Bono. 1985. *Six Thinking Hats*. Back Bay Book, New York.
6. David L. Dotlich, James L. Noel & Norman Walker. 2004. *Leadership Passages: The Personal and Professional Transitions That Make Or Break A Leader*. Jossey-Bass, San Francisco.
7. Stephen D. Brookfield. 1987. *Developing Critical Thinkers: Challenging Adults To Explore Alternative Way of Thinking and Acting*. Jossey-Bass, San Francisco.
8. Janet Donald. 2002. *Learning To Think: Disciplinary Perspective*. Jossey-Bass, San Francisco.
9. Elliot, Kratochwill, Littlefield Cook, Travers. 2000. *Educational Psychology*. 3rd Editions. McGraw Hills.
10. Hettler B. 1984. *Wellness: Encouraging A Lifetime Pursuit Of Excellence Health Values*, 8(4): 13-17.

## FF1312 HUMAN GENETICS

The aim of this module is to present the principles of inheritance and communicate an understanding of the origin and amount of genetic diversity. Students will learn about the causes of mutation and how these mutations can lead to disease. The molecular mechanisms of genetic diseases will be learned and how these may affect patients individually and in discrete populations. Students will also be exposed to the principles and applications of recombinant DNA technology.

References :

1. Turnpenny, P., & Ellard, S. 2011. *Emery's Elements of Medical Genetics* 14th Edition. Elsevier Churchill Livingstone.
2. Cummings, M.R. 2011. *Human Heredity: Principles and Issues* 9th Edition Thomson, Brooks and Cole
3. Jorde, L.B., Carey, J.C., Bamshad, M.J., White, R.L. 2009. *Medical Genetics*. 4th edition. Mosby Inc.
4. Korf, B.R. 2000. *Human Genetics and Genomic: A problem based application* 2nd edition. Blackwell Science.

5. Nussbaum, R.L., McInnes, R.R., Willard, H.F. 2009. *Thompson and Thompson Genetics in Medicine*. 6th edition. Saunders.
6. Gardner, R.J.M., Sutherland, G.R. 2004. *Chromosome Abnormalities and Genetic Counselling 3rd edition*. Oxford University Press.

## **FF1333      MEMBRANES AND RECEPTOR**

Continuous medical learning requires an adequate knowledge of the membrane structure and function of membrane lipids and proteins. This module helps the students to learn about the movement of ions and molecules across membrane, as well as the properties of cell surface and other receptors. By understanding how chemical messengers such as hormones and neurotransmitters influence the activity of cells and organs through their interactions with the receptors, they will appreciate how drugs might modify the action of such chemical messengers. In relation to that, they will learn the fate of drugs in the human body and the mechanisms of drug action and toxicity.

References :

1. Barret K, Brooks H, Boitano S & Barman S. 2016. *Ganong's Review of Medical Physiology*. 25th edition. McGraw-Hill Medical.
2. Baynes JW & Dominiczak MH. 2014. *Medical Biochemistry*. 4th edition. Mosby International Ltd.
3. Goodman & Gilman. 2017. *The Pharmacological Basis of Therapeutics*. 13th edition. Brunton L, Knollman B, Hilal-Dandan R (eds). McGraw Hill, New York.
4. Katzung BG & Trevor AJ. 2015. *Basic and Clinical Pharmacology*. 13th edition, Appleton & Lange, McGraw Hill.
5. Lieberman MA & Marks A. 2013. *Marks' Basic Medical Biochemistry: A Clinical Approach*. 4th edition, Lippincott Williams & Wilkins.
6. Sherwood L. 2015. *Human Physiology: From Cells to System*. 9th edition, Brooks/Cole Thompson Learning.

## **FF1412      METABOLISM**

This module is designed to expose 1st year medical students to the basic knowledge on biochemical process in cells with regards to synthesis, degradation, storage, utilization and inter-conversion of sugar, amino acids, fatty acids and their role in energy expenditure to the students. The importance of balanced diet and regulation of body weight in terms of the balance between energy intake and expenditure will be discussed. Students will also perform some simple biochemical tests which are related to carbohydrate metabolism.

## References :

1. B. G. Katzung, , A. J. Trevor; *Basic and Clinical Pharmacology*. 2015. *Lange Basic Science*. 13rd edition. McGraw Hill-Medical, California.
2. Baynes, J & Dominiczak, MH. 2009. *Medical Biochemistry*. 3rd edition. Elsevier Mosby Publisher, London, UK
3. Devlin TM. 2010. *Textbook of Biochemistry with Clinical Correlations*. 7th edition. Wiley-Liss.
4. Harvey RA and Ferrier DR. 2014. *Lippincott's Illustrated Reviews. Biochemistry*. 6th edition. Lippincotts Williams and Wilkins Publications. Pennsylvania. USA.
5. Liebermanns M & Marks AD. 2013. *Mark's Basic Medical Biochemistry: A Clinical Approach*. 4th Edition. Lippincotts, Williams & Wilkins, USA.
6. Murray RK et. al. 2012. *Harper's Biochemistry*. 29th edition. Prentice Hall Int.

## FF1424 MUSCULOSKELETAL SYSTEM

The aim of this module is to enable the student to acquire the cardinal principles of structures of the bones, joints, muscles, neurovascular supply and its function. The emphasis on the application of basic knowledge to the common clinical disorders and diseases of the musculoskeletal system will be discussed. In addition, clinical correlations classes in radiology and orthopaedic disciplines will be introduced to enhance the students' knowledge and appreciation to this module. The students shall learn through concept lectures, practicals, Problem-Based Learning packages (PBL) and Self-Learning packages (SLP).

## References :

1. Bertram G Katzung B.G. 2015. *Basic and Clinical Pharmacology*. Edisi Ke-13. McGraw-Hill Companies Inc.
2. Kumar V, Abbas AK, Aster JC. *Robbins and Cotran Pathologic Basis of Disease*. 2014. Edisi Ke-9. Saunders. Philadelphia.
3. Moore KL, Dalley AF, Agur AMR. 2013. *Clinically Oriented Anatomy*. Edisi Ke-7. Lippincott, Williams & Wilkins.
4. Ryan KJ, George Ray C. 2014. *Sherris Medical Microbiology*. Edisi Ke-6. McGraw-Hill.
5. Sherwood L. 2015. *Human Physiology, From Cells to Systems*. Edisi Ke-9. Cengage Learning.

## **FF1521 CLINICAL SCIENCE IB**

History-taking is an integral component of doctor-patient relationship. Early clinical exposures among students are essential for them to develop awareness to appreciate a patient as an individual in an unfamiliar and stressful situation. Specific skill objectives include proficiency in history-taking. Various teaching-learning methodologies including role-play will further emphasize the need for effective communication skills. In this module, the student will learn techniques to obtain basic history in adults and special groups like children, women, elderly and disabled patients and in patients who do not communicate well, thus the need for using interpreters or third parties. This module also aims to integrate the teaching of basic sciences with clinical practice by re-visiting the cases and clinical problems learnt in the basic sciences modules.

### References :

1. 13th Edition. Churchill Livingstone
2. Douglas, G, Nichol, F. & Robertson, C. 2013. *Macleod's Clinical Examination*.
3. Glynn M, Drake WM. *Hutchinson's Clinical Methods: An Integrated Approach to Clinical Practice*, 23rd edition. WB Saunders 2012
4. Murtagh, J. 2003. *General Practice*. 3rd Edition. Australia: McGraw Hill.
5. Swash, M. 2002. *Hutchinson's Clinical Methods*. 21st Edition. London: WB Saunders.
6. Talley, N. & O'Connor, S. 2014. *Clinical Examination: A Systemic Guide to Physical Diagnosis*. 7th Edition. Churchill Livingstone
7. Talley, N. & O'Connor, S. 2015. *Clinical Examination Essentials: An Introduction to Clinical Skills (and how to pass your Clinical Exams)*. 4th Edition. Elsevier Science Health Science.
8. UKM. 2005. CD audio-visual package on History Taking.

## **FF1813 PERSONAL & PROFESSIONAL ADVANCEMENT IA**

It is essential to facilitate the student's personal and professional development in holistic and comprehensive manner. In this module, students would be introduced to the major components of the Personal and Professional Development strand, mainly to facilitate the students' adaptation to university life and to the medical school in particular. Students will also be introduced to skills in teamwork and leadership, communication skills, spiritual enhancement, time management, stress management, critical thinking and decision-making skills.

## References :

1. Adams KL, Galanes GJ. 2014. *Communicating in Groups: Applications and Skills (Communication)*. 9th Edition, McGraw-Hill Education. New York.
2. Colaianni P. 2015. *The Overwhelmed Brain: Personal Growth for Critical Thinkers*. Ulysses Press. USA.
3. Covey, SR. 2013. *The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change*. Simon & Schuster. New York.
4. David L. Dotlich, D.L., Noel, J.L. & Walker, N. 2004. *Leadership Passages: The Personal and Professional Transitions That Make Or Break A Leader*. Jossey-Bass. San Francisco.
5. De Bono, E. 2008. *Six Thinking Hats*. Penguin. New York.
6. Elliot, S.N., Kratochwill, T.R., Cook, J.L. & Travers, J.F. 2000. *Educational Psychology*. 3rd Edition. Mc Graw Hills.
7. Hettler, B. 1984. *Wellness: encouraging a lifetime pursuit of excellence*. Health Values, 8(4): 13-17.
8. Jacalyn Duffin, J. 2010. *History of Medicine: A Scandalously Short Introduction*. 2nd Edition. University of Toronto Press. Toronto.
9. Maxwell JC. 2013. *The 17 Indisputable Laws of Teamwork: Embrace Them and Empower Your Team*. Thomas Nelson Incorporated. USA.
10. Sood A. 2013. *The Mayo Clinic Guide to Stress-Free Living*. Da Capo Press. USA.

## FF1822      PERSONAL & PROFESIONAL ADVANCEMENT 1B

This module is a continuation of previous FFFF1812. Being the second module in this PPA strand for the first year, the required personal and professional skills are further emphasized. The major aim is to further enhance the students' understanding and skills in critical areas in PPA such as adaptation skills, critical thinking, communication skills, teamwork, leadership and spiritual development

## References :

1. Dalley, D. 2013. *Developing Your Assertiveness Skills*. Lancashire, UK: Universe of Learning Ltd.
2. Halpern, D. F. 2014. *Thought and Knowledge: An Introduction to Critical Thinking (5th ed.)*. New York: Taylor & Francis.
3. Helyer, R. 2015. *Learning through reflection : the critical role of reflection in work-based learning (WBL)*. Journal of Work-Applied Management, 7(1), 15–27. <https://doi.org/10.1108/JWAM-10-2015-003>
4. Skills, C. 2013. *Effective Communications*. Retrieved from [www.free-management-ebooks.com](http://www.free-management-ebooks.com) ISBN

5. Skills, L. 2013. *Understanding Team Dynamics Leadership Skills*. Retrieved from [www.free-management-ebooks.com](http://www.free-management-ebooks.com)

## 5.2 YEAR 2

### General Objectives

By the end of Year 2, students should be able to :

1. explain the structures and functions of, the pathological process, effects and complications of common diseases in the musculoskeletal, blood and lymph, cardiovascular, respiratory, gastrointestinal, urinary, reproductive and nervous systems and the principle of drug action.
2. perform history taking, physical examination and basic clinical procedures.
3. interpret results of basic laboratory investigations in the diagnosis of common diseases.
4. compare and contrast the approaches used in the health care services, in the provision of comprehensive and holistic care to patients, families and the community, as well as groups with special needs and those related to occupational and environmental problems.
5. apply critical thinking, demonstrate leadership, effective communication skills, basic principles of religious and cultural values in dealing with patients, colleagues and the community.
6. demonstrate the ability to utilize various resources to obtain relevant and current information.

### Specific Objectives

By the end of Year 2, students should be able to :

1. describe the anatomy and explain the physiology of the following organ systems :
  - i. Musculoskeletal system
  - ii. Blood and lymph
  - iii. Cardiovascular system
  - iv. Respiratory system
  - v. Gastrointestinal system
  - vi. Urinary system
  - vii. Reproductive system



2. discuss the aetiology, pathological processes, effects and complications, and describe the pathological changes of common diseases affecting them.
3. perform physical examination of the above organ systems in a normal person as well as take his/her history.
4. interpret the results of basic laboratory investigations in the diagnosis of common diseases of the above organ systems.
5. discuss the pharmacology of different drugs used in the treatment of diseases of the above organ systems.
6. compare the different approaches used in health care services for patient, family and the community.
7. apply basic principles of epidemiology and statistics in conducting small research.
8. apply basic principles of a comprehensive and holistic approach in health care.
9. describe basic principles of health care services and health programme for groups with special needs such as mothers, children and workers.
10. discuss the risk factors, problems and preventive approaches related to occupational and environmental health.
11. perform the following basic clinical procedures :
  - i. Venepuncture
  - ii. Dressing
  - iii. Blood pressure measurement
  - iv. Catheterization
12. recognize basic teachings of various religions and apply universal, spiritual and humanistic values in self development and interpersonal interaction.
13. demonstrate critical thinking in the learning process.
14. demonstrate the ability to work collaboratively in a team as well as the ability to lead.

## **FF2113      BLOOD & LYMPH**

The module aims to enable the students to acquire basic knowledge of the normal blood cells production and the mechanisms and pathophysiology of common blood and lymphoreticular disorders. It will also facilitate students to understand the signs and symptoms of these common blood disorders and enable them to interpret the relevant investigation results for the diagnosis of these disorders. The module will also cover the principles of blood grouping and transfusion and the basic principles of stem cell transplantation.

In this module, students shall learn through concept lectures, practical, Problem-Based Learning packages (PBL) and self-learning packages (SLP). The scope of learning is outlined in the guidebook as shown in the content and specific objectives of the topics.

Students are expected to further acquire their knowledge through reading the suggested textbooks and websites.

References :

1. Arora DR and Arora B. 2007. *Medical Parasitology*. 2nd edition. New Delhi: CBS Publishers and Distributers
2. Atul B. Mehta and Keith Gomez. 2017. *Clinical Haematology*. 2nd edition. CRC Press.
3. Bertram G. Katzung, Anthony J. Trevor. 2015. *Basic and Clinical Pharmacology*. 13th Edition. McGraw-Hill Education.
4. CK Jayaram Paniker. 2013. *Textbook of Medical Parasitology*. 7th Edition. New Delhi: Jaypee Brothers Medical Publishers
5. David Male Jonathan Brostoff David Roth Ivan Roitt. 2013. *Immunology*. 8th Edition. London: Gower Medical Publishing
6. Hoffbrand, A.V., and Moss, P.A.H. 2016. *Hoffbrand's Essential Haematology*. 7th edition. Wiley Blackwell.
7. Kenneth J Ryan and C George Ray. 2004. *Sherries Medical Microbiology. An Introduction to Infectious Diseases*. 4th Edition. Mc Graw Hill
8. Kumar, Abbas and Aster. 2015. *Robbins and Cotran: Pathologic Basis of Disease*. 9th edition. Philadelphia: Elsevier
9. Lewis S.M., Bain B.J., Bates I and Laffan M. 2012. *Dacie and Lewis Practical Haematology*. 11th edition. Churchill Livingstone.
10. Martin R Howard, Peter J Hamilton. 2013. *Haematology, an Illustrated Colour Text*. 4th edition. Churchill Livingstone.
11. Noor Hayati Md Isa. 2004. *Atlas Berwarna Parasitologi Perubatan*. Edisi Kedua, Kuala Lumpur: NHMIKBM Enterprise
12. Parakrama Chandrasoma, Clive R. Taylor. 1997. *Concise Pathology*. 3rd edition. Appleton and Lange.
13. Sallehuddin Sulaiman. 1999. *Entomologi Perubatan*. Penerbit Universiti Kebangsaan Malaysia Bangi.
14. [www.BloodMed.com](http://www.BloodMed.com)

## **FF2125 GASTROINTESTINAL & HEPATOBILIARY SYSTEM**

The aim of this module is to guide the students in understanding and learning the development (embryology), structure, relation, radiology and histology (anatomy), functions (physiology) and metabolisms (biochemistry) of gastrointestinal tract and hepatobiliary system. It also emphasizes on the pathological aspects in terms of epidemiology, aetiology, pathogenesis, clinical manifestations (pathology, microbiology and parasitology) and basic principles of management and control (pharmacology & public health) of gastrointestinal diseases and infections

## References :

1. Cotran, R.S., Kumar, V. & Robbins, S.L. 2015. Robbins and Cotran, *Pathologic Basis of Disease*. 9th Edition. Philadelphia: Elsevier Saunders.
2. Elizabeth Zeibig, 2012. *Clinical Parasitology: A Practical approach*. 2nd Edition. Elsevier Health Sciences.
3. Katzung, B.G. 2012. *Basic and Clinical Pharmacology*. 12th Edition. Norwalk: McGraw Hill.
4. Lauralee Sherwood, J.H.P. 2015. *Human Physiology-From Cells to Systems*. 9th Edition. USA: Brooks/Cole Thompson Learning.
5. Sherris, J.C. 2014 (Ed). *Sherris Medical Microbiology. An Introduction to Infectious Diseases*. 6th Edition. USA: McGraw-Hill Professional.
6. Smith, C.M., Marks, A.D. & Marks, L.M. 2013. *Basic Medical Biochemistry. A Clinical Approach*. 4th Edition. Maryland, USA: Williams & Wilkins Publications.
7. Snell, R.S. 2012. *Clinical Anatomy for Medical Students*. 9th Edition. Lippincott Williams and Wilkins Publications.

## FF2214      **CARDIOVASCULAR SYSTEM**

The aim of this module is to expose students to disease processes affecting the cardiovascular system. The module builds upon an understanding of the structure, functions and metabolism of the heart and blood vessels. Students will be able to acquire knowledge on the underlying mechanisms and the principles of management of common diseases of the cardiovascular system, enabling them to integrate basic science knowledge and clinical concepts related to the system.

## References :

1. Barret et al. 2016. *Ganong's Review of Medical physiology*. 25th Ed. NY: Lange Medical Books/McGraw-Hill. Medical Publishing Division.
2. Chia, B.L. 2016. *Clinical Electrocardiography*. 4th edition. World Scientific.
3. Cotran, Kumar, Collins. 2015. *Robbins Pathologic Basis of Disease*. 9th edition. WB Saunders Company.
4. Katzung and Masters. 2015. *Basic and Clinical Pharmacology*. 13th Edition. Lange/ Mc Graw Hill.
5. Keith L Moore, Arthur F Dalley. 2013. *Clinically Oriented Anatomy*. 7th Ed. Lippincot Williams & Wilkins.
6. Lauralee Sherwood. 2015. *Human Physiology, from cells to Systems*. 9th Ed. Brookes/Cole. Thompson Learning.
7. Rang & Dale's *Pharmacology*. 2015. 8th Edition. Churchill Livingstone London.
8. Reid et al. 2011. *Pathology Illustrated*. 7th edition. Churchill Livingstone.

9. Richard Snell. *Clinical Anatomy for Medical Students*. 7th Ed. Lippincott Williams & Wilkins.
10. TW Sadler. 2014. *Langman's Medical Embryology*. 13th Ed. Lippincott Williams & Wilkins.
11. Young et al. 2014. *Wheater's Functional Histology-A Text and Colour Atlas*. 6th Ed. Churchill Livingstone Publication.

## FF2242 ENDOCRINE SYSTEM

The aim of this module is to enable the students to acquire basic knowledge on the endocrine system which include the anatomy of the endocrine glands, the hormones they secrete including their synthesis and degradation, mode of action and regulation of their secretion and also the mechanisms and pathophysiology of common endocrine disorders. It will also facilitate students to understand the signs and symptoms of these common endocrine disorders and enable them to interpret the relevant investigation results for the diagnosis of these disorders. The module will also cover the pharmacological management of some common endocrine disorders.

### References :

1. Chandrasoma, P. & Taylor, C.R. 2002. *Concise Pathology*. 4th Edition. Appleton and Lange. (C)
2. Cotran, R.S., Kumar, V. & Robbins, S.L. 2015. *Robbin's Pathologic Basis of Disease*. 9th Edition. Philadelphia: Elsevier Saunders. (C)
3. Goodman & Gilman's. 2011. *The Pharmacological Basis of Therapeutics*. 13th Edition, McGraw Hill, New York. (S)
4. Harvey RA, Champe PC, Finkel R, Cubeddu L, Clarke MA. 2008. Lippincott's Illustrated Reviews. 2008 *Pharmacology*. 4th Edition, Williams & Wilkins Lippincotts
5. Katzung, B.G. 2014. *Basic and Clinical Pharmacology*. 13th Edition. McGraw Hill Lange.
6. Luiz Carlos Junqueira & José. 2015. *Basic Histology Atlas*. 14th Edition. McGraw-Hill. (C)
7. Marshall, W.J. & Bangkert, S.K. 2017. *Clinical Chemistry*. 8th Edition. Mosby. (S)
8. Moore, K.L. & Dalley. A.F. 2014. *Clinically Oriented Anatomy*. 7th Edition. Lippincotts Williams & Wilkins. (S)
9. Netter, F.H. 2014. *Atlas of Human Anatomy*. 6rd Edition. Icon Learning System. New Jersey, USA. (C)
10. Sadler, T.W. 2014. *Langman's Medical Embryology*. 13th Edition. Lippincott Williams & Wilkins Publications, USA. (C)

11. Smith, C.M., Marks, A.D. & Marks, L.M. 2005. *Basic Medical Biochemistry. A Clinical Approach*. 2nd Edition. Maryland, USA: Williams & Wilkins Publications. (S)
12. Snell, R.S. 2004. *Clinical Anatomy for Medical Students*. 7th Edition. Lippincott Williams and Wilkins Publications. (C)
13. Young, B. & Heath, J.W. 2013. *Wheater's Functional Histology – A Textbook and Colour Atlas*. 6th Edition. Churchill Livingstone Publication. (C)

## **FF2313      RESPIRATORY SYSTEM**

The aim of this module is that the students should be able to understand the structure of the respiratory system and relate the structure to its functions. The knowledge of basic sciences obtained in year 1 such as infection and immunity, the mechanism of diseases and the pharmacokinetics of drugs will help students to understand the diseases commonly affecting the respiratory system and the drugs used in respiratory diseases.

References :

1. Barret, K.E., Barman, S.M., Boitano, S. & Brooks H. 2015. *Ganong's Review of Medical Physiology*. 25rd Edition. USA: McGraw Hill.
2. Kumar, V, Abul, A. & Jon A. 2014. *Robbins & Cotran Pathologic Basis of Disease*. 9th Edition. USA: WB Saunders Company.
3. Katzung, B.G & Anthony J.T. 2015. *Basic and Clinical Pharmacology*. 13th Edition. Norwalk: McGraw Hill.Lange.
4. Sherwood, L. 2016. *Human Physiology: From Cells to System*. 9th Edition. USA: Brooks/Cole Thomson Learning.
5. Murray P.R., Rosenthal K.S., Kobayashi G.S. & Pfaller M.A. 2015. *Medical Microbiology*. 8th edition. USA: Mosby.
6. Richard Snell. 2004. *Clinical Anatomy for Medical Students*. 7th Edition. USA: Lippincott Williams & Wilkins.
7. Sadler, T.W. 2012. *Langman's Medical Embryology*. 12th Edition. Lippincott Williams & Wilkins.
8. Walter and Israel. 1996. *General Pathology*. 7th Edition. Connecticut: Appleton & Lange.
9. Young, B. & Heath J.W. 2014. *Wheather's Functional Histology*. 6th Edition. Churchill Livingstone.

## **FF2235      NEURO SCIENCES**

The aims of the Neuroscience Module are to provide the medical students, through a study of the structure and the function of the major components of the nervous system,

the important connections and the concept of its functions and dysfunctions. They will also gain an insight into the testing and imaging of the nervous system as applied to patients' problems. It will make the diagnostic importance of concepts such as upper and lower motor neurons and peripheral and central divisions of nervous system and the associated lesions more apparent. Besides, examining discrete malfunction of the major elements, the global function of the cerebral cortex and the other parts of the nervous system, is covered with reference to the neurochemistry of the brain. They will also understand common infections of the nervous system including toxoplasmosis, prevention and the drugs used in the treatments. In addition, they will understand the drugs used in the degenerative diseases, drugs of abuse, sedative hypnotics, anaesthetics, anticonvulsants, antidepressants and antipsychotics. Furthermore, the student will understand the common cerebral neoplasia, the effects and complications. Similarly, they will understand the effects of the space occupying lesions in the nervous system.

#### References :

1. Baynes JW and Dominiczak MH, 2005. *Medical Biochemistry*. 2nd Edition. Elsevier Mosby Publisher, London.UK.
2. Cotran, R.S., Kumar, V. & Robbins, S.L. 2005. *Robbin's Pathologic Basis of Disease*. 7th Edition. Elsevier Saunders, Philadelphia.
3. Crossman AR, Neary D. 1997. *Neuroanatomy – An Illustrated Colour text*. Churchill Livingstone, Edinburgh.
4. Derek G. Waller, Andrew G. Renwick, Keith Hillier. *Medical Pharmacology and Therapeutics*.
5. Ganong, W.F. 2010. *Review of Medical Physiology*. 23rd Edition, Lange Medical Publication, Singapore.
6. Goering, R. V., Dockrell, H. M., Zuckerman, M., Wakelin, D., Roitt, I., Mims, C. & Chiodini, P.L. 2007. *Mims' Medical Microbiology*. 4th Edition. Philadelphia: Elsevier Saunders.
7. Guyton, A.C. & Hall, J.E. 2011. *Textbook of Medical Physiology*. 12th Edition. WB Saunders Co, Pennsylvania.
8. Hardman, J.G. et al. 2001. *Goodman A. and Gilman's The Pharmacological Basis of Therapeutics*. 19th Edition. Hardman and Limbird International Edition, McGraw Hill, New York.
9. Howland RD & Mycek MJ, 2006. *Pharmacology Reviews*. 3rd Edition, Lippincott's.
10. HP Rang, MM Dale, JM Ritter, PK Moore. *Pharmacology*. 5th Edition.
11. Katzung & Trevor's Pharmacology, 2005. *Exam & Board Review*. 7th Edition, Lange
12. Katzung, B.G. 2004. *Basic and Clinical Pharmacology*. 9th Edition. McGraw Hill, Norwalk.
13. Marks DB, Marks AD and Smith CM, 2008. *Basic Medical Biochemistry. A Clinical Approach*. 3rd Edition, Williams & Wilkins Publications, Maryland, USA.

14. Nasr, Seyyed Hossein. 1976. *Islamic Science: an Illustrated Study*. London: World Islamic Festival Publishing Co. Ltd.
15. Saddler, T.W. 2004. *Langman's Medical Embryology*. 10th Edition. Williams & Wilkins, Lippincott, USA. Sezgin, Fuat. 1984.
16. Sherwood, L. 2012. *Human Physiology. From Cells to System*. 8th Edition. Brooks/Cole Thompson Learning, USA.
17. Snell RS. 2001. *Clinical Neuroanatomy for Medical Students*. 5th Edition, Lippincott Williams and Wilkins Publications
18. Snell, R.S. 2004. *Clinical Anatomy for Medical Students*. 7th Edition. Lippincott Williams and Wilkins Publications.
19. Underwood, J.C.E. 2004. *General and Systemic Pathology*. 4th Edition. Churchill Livingstone, Edinburgh.

## FF2433 URINARY SYSTEM

The aims of this module are, first, the students should have sufficient knowledge of macroscopic and microscopic structure of the urinary tract system in order to understand the normal function and common clinical problems. Second, that the students should appreciate the role of the kidney in controlling the volume and composition of body fluid and the way in which they respond to abnormal volume, electrolyte concentration and systemic haemodynamics. Third, students should understand as much detail of renal cellular function as well as allow them to appreciate the basis of relevant therapeutics. Fourth, students should be able to describe normal micturition, the reasons for oliguria and such common conditions as glomerulonephritis, pyelonephritis, urinary tract infection, urinary calculi, haematuria, proteinuria and acute and chronic renal failure.

### References :

1. KatzungBG, Masters SB and TrevorAJ. *Basic and Clinical Pharmacology*. 2015. 13th Edition. Appleton-Lange / McGraw Hill.
2. Devlin, TM. *Textbook of Biochemistry with Clinical Correlations*. 2010. 7th Edition. New York, USA: A John and Wiley and Sons, Inc. Publication.
3. Reid R, Roberts F and MacDuff E. 2011. *Pathology Illustrated*. 7th Edition, Churchill Livingstone.
4. <http://www.bartleby.com/107/253.html>
5. <http://www.med/uiuc.edu/PathAtlas/framer3/path3.html>.
6. <http://www-medlib.med.utah.edu/WebPath/webpath.html>
7. Kumar and Clark. *Clinical Medicine*. 2017. 9th Edition. Elsevier.
8. Murray RK, Granner RK, Mayers PA, Rodwell VW. *Harper's Biochemistry*. 25th Edition. USA: Prentice Hall International.
9. ChandrasomaP, Taylor CR. *Concise Pathology*. 3rd Edition. Stamford, Appleton and Lange

10. Ganong WF. *Review of Medical Physiology*. 2012. 24th Edition. Appleton-Lange Medical Books / McGraw Hill, Medical Publishing Division, NY
11. Snell R. *Clinical Anatomy for Medical Students*. 2004. 7th Edition. Lippincott Williams & Wilkins.
12. Kumar V, Abbas VK and Aster JC. *Robbins Basic Pathology*. 2013. 9th Edition Saunders, Philadelphia.
13. Ryan KJ, Ray CG, Ahmad N, Drew WL, Plorde JJ. *Sherris Medical Microbiology 2014*. 6th Edition. McGraw-Hill
14. Parslow TG, Stites DP, Terr AI, Imboden JB. *Medical Immunology*. 10th Edition. Langen.
15. Brunton L, Chabner B, Knollman B. *Goodman & Gilman's The Pharmacological Basis of Therapeutics*. 2011. 12th Edition. McGraw-Hill.
16. Sadler TW. *Langman's Medical Embryology*. 2012. 12th Edition. Lippincott Williams & Wilkins.
17. Young B, Woodford P, O'Dowd G. *Wheater's Functional Histology 2014*. 6th Edition. Elsevier Churchill Livingstone
18. Marshall WJ, Lapsley M, Day A, Ayling R. *Clinical Biochemistry: Metabolic and Clinical Aspects*, 2014. 3rd Edition. Churchill Livingstone

## FF2443 REPRODUCTIVE SYSTEM

The aim of this module is that students should understand the processes of human reproduction from the production of gametes to the establishment of independent life of the neonate. Students should understand common problems and disorders of the male and female reproductive tract, mechanisms of contraception and the sexual transmission of infections.

### References :

1. Cotran, R.S. Kumar, V. Robbins, S.L. 2015. *Robbin's Pathologic Basis of Disease*. 9th Edition. Elsevier Saunders.
2. Govan et al., 2011. *Pathology Illustrated*. 7th Edition. Churchill Livingstone.
3. Keith L. Moore, Arthur F. Dalley, Anne M.R. Agur. 2013. *Clinically Oriented Anatomy*. 7th Edition. Lippincott Williams & Wilkins.
4. Katzung, B.G. 2012. *Basic and Clinical Pharmacology*. 12th Edition. McGraw Hill.
5. Kim Barrett, Heddwen L. Brooks, Scott Baitano, Susan M. Barman. 2012. *Ganong's Review of Medical Physiology*. 24rd Edition. Lange Basic Science.
6. Netter, F.H. 2014 *Atlas of Human Anatomy*. 6th Edition. Icon Learning System.
7. Peter L Chiodini. 2013. *Mims' Medical Microbiology*. 5th Edition. Elsevier Saunders



8. Richard V Goering, Hazel M Dockrell, Mack Zuckerman, Derek Wakelin, Ivan Roitt, Cedric Mims,
9. Saddler, T.W. 2014. *Langman's Medical Embryology*. 13th Edition, USA: Lippincott Williams & Wilkins.
10. Snell, R.S. 2011. *Clinical Anatomy by Regions*. 9th Edition. Lippincott Williams and Wilkins Publications.
11. Young, B. & Heath, J.W. 2013. *Wheater's Functional Histology*. 6th Edition. Churchill Livingstone.

## **FF2511 CLINICAL SCIENCE IIA**

This module is to provide the students with a basic knowledge on clinical procedure relevant to cardiorespiratory, abdomen, urinary and nervous system. The students will also be performing venipuncture, aseptic technique learning on how to interpret chest Xray interpretation. These will make them familiarise with the indications, interpretations & complications of clinical procedures. Their learning will be further reinforced by performing basic life support.

### References :

1. Douglas, G., Nichol, F. & Robertson, C. 2013. *Macleod's Clinical Examination*. 13th Edition. Churchill Livingstone
2. Glynn, M., Drake, W.M. 2012. *Hutchinson's Clinical Methods: An Integrated Approach to Clinical Practice*. 23rd edition. WB Saunders.
3. Swash, M. 2002. *Hutchinson's Clinical Methods*. 21st Edition. London: WB Saunders.
4. Talley, N. & O'Connor, S. 2014. *Clinical Examination: A Systemic Guide to Physical Diagnosis*. 7th Edition. Churchill Livingstone
5. Talley, N. & O'Connor, S. 2015. *Clinical Examination Essentials: An Introduction to Clinical Skills (and how to pass your Clinical Exams)*. 4th Edition. Elsevier Science Health Science.

## **FF2522 CLINICAL SCIENCE MODULE IIB**

The module is designed to expose students to knowledge of clinical science as applied to medicine. This module will be divided into four clinical blocks. In each block, students will be exposed to a complete approach to history taking and physical examination of the respective block/systems. The module also provides an understanding of the interface between basic and clinical sciences, and enable students to integrate basic sciences with clinical concepts related to the respective systems.

References :

1. Douglas, G, Nichol, F. & Robertson, C. 2013. *Macleod's Clinical Examination*. 13th Edition. Churchill Livingstone
2. Glynn M, Drake WM. 2012. *Hutchinson's Clinical Methods: An Integrated Approach to Clinical Practice*. 23rd edition. WB Saunders.
3. Jeremy J N Oats, Suzanne Abraham. 2016. Llewellyn-Jones *Fundamentals of Obstetrics and Gynaecology*. 10th Edition. Elsevier
4. Louise Kenny, Helen Bickerstaff. 2017. *Gynaecology by Ten Teachers*. 20th Edition. CRC Press
5. Louise Kenny, Jenny Myers. 2017. *Obstetrics by Ten Teachers*. 20th Edition. CRC Press
6. Nicholas J Talley and Simon O'Connor. 2013. *Clinical Examination: A Systematic Guide to Physical Diagnosis*. 7th edition. Churchill Livingstone
7. OJ Garden, AW Bradbury and JLR Forsythe. 2017. *Principles and Practice of Surgery*. 7th edition. Churchill Livingstone.
8. Parveen Kumar and Michael Clark. 2016. *Kumar and Clark's Clinical Medicine*. 9th edition. Saunders Ltd.
9. Reider B. Saunders. 2005. *The Orthopaedic Physical Exam*. 2nd edition
10. Swash, M. 2002. *Hutchinson's Clinical Methods*. 24th Edition. London: WB Saunders.
11. Talley, N. & O'Connor, S. 2014. *Clinical Examination: A Systemic Guide to Physical Diagnosis*. 7th Edition. Churchill Livingstone
12. Talley, N. & O'Connor, S. 2015. *Clinical Examination Essentials: An Introduction to Clinical Skills (and how to pass your Clinical Exams)*. 4th Edition. Elsevier Science Health Science.
13. UKM. 2005. CD audio-visual package on Physical examination (of the system).

## **FF2613      MEDICINE & SOCIETY II**

The module discusses the concept of prevention and control of communicable and non-communicable diseases. Special attention is given to the prevention and control of emerging and re-emerging diseases that are of public health concern in Malaysia. This module also introduces basic demography on comprehension of vital statistics, fertility data and population expansion. Basic knowledge on occupational safety and health, as well as the need for hazard assessment and control measures at workplace are also explored. The students will be exposed to the existing occupational safety and health acts and regulations in Malaysia. This module also introduces the students to the technique of conducting research from proposal preparation and data collection until data analysis and report writing. Basic statistical techniques such as descriptive statistics and inferential statistics will be introduced to the students as they conduct their research.

## References :

1. Campbell, M.J. & Swinscow, T.D.V. 2011. *Statistics at Square One*. 11th Edition. BMJ Books. ISBN:978-144-435-780-6 (ebook).
2. Campbell, M.J. 2006. *Statistics at Square Two: Understanding Modern Statistical Applications in Medicine*. 2nd Edition. BMJ Books. ISBN:978-140-513-490-3
3. Gordis, L. 2013. *Epidemiology*. 5th Edition. Saunders. ISBN: 978-145-573-733-8
4. Jamalludin, A.R. 2015. *Guidelines for Methods and Statistics in Medical Research (Springer Briefs in Statistics)*. 1st Edition. Springer. ISBN:978-981-287-923-3
5. Rothman, K.J. 2012. *Epidemiology – An Introduction*. 2nd Edition. Oxford University Press. ISBN:978-019-975-455-7
6. Swinscow, T.D.V. 1997. *Statistics at Square One*. 9th Edition. BMJ Books.(free)
7. <http://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one>

## FF2812 PERSONAL & PROFESSIONAL ADVANCEMENT IIA

The aims of this module are to further develop the students' total approach towards learning and practice of medicine which includes information technology. Student's ability to adapt to life as a medical student is emphasized, and issues related to stress management are also revisited and discussed. In addition, there will be more emphasis on interprofessional learning. Student's communication skills, teamwork, leadership skills as well as critical thinking are further developed in this module particularly in terms of issues concerning peers and significant others.

## References :

1. Gamble, T.K. & Michael W. Gamble, M.W. 2013. *Interpersonal Communication: Building Connections Together*. California: SAGE Publications,
2. Hay, I., Bochner, D., Blackett, Gill. & Dungey, Carol. 2015. *Communication Skills Guidebook*. Melbourne: Oxford University Press Australia & New Zealand,
3. Paul, R. & Elder, L. 2014. *Critical Thinking: Tools for Taking Charge of Your Professional and Personal Life* (2nd Edition). Pearson Education, Inc. New Jersey.
4. Paul, R. & Elder, L. 2014. *The Miniature Guide to Critical Thinking Concepts & Tools*. 7th edition. California: Foundation for Critical Thinking.
5. Tummers, N. 2013. *Stress Management: A Wellness Approach*. Human Kinetics, Illinois.
6. Weiss, D., Tilin, F. & Morgan, M.J. 2014. *The Interprofessional Health Care Team: Leadership and Development*. Jones & Bartlett Learning, Massachusetts.

## FF2822 PERSONAL & PROFESSIONAL ADVANCEMENT IIB

The aims of this module in the second semester of the second year program are centered on achieving a satisfactory standard of communication skills and to provide guidance for managing diversity. This is primarily because the students will be moving to the clinical years. There is also a need to consolidate their professional judgements and critical thinking skills.

### References :

1. Brookfield, S.D. 1999. *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco: Jossey-Bass.
2. Donald, J.G. 2002. *Learning to think: Disciplinary perspectives*. San Francisco: Jossey-Bass.
3. Gosall N. & Gosall G.. 2012. *The Doctor's Guide to Critical Appraisal*. 3rd Ed. Cheshire: PasTest Ltd.
4. Hakim A. C. & Solomon M. 2016. *Working with Difficult People, Second Revised Edition: Handling the Ten Types of Problem People Without Losing Your Mind*. New York: Tarcher and Perigee.
5. Malaysian Medical Council: Ethical Code & Guidelines. 2015. <http://www.mmc.gov.my/index.php/ethical-code-guidelines>

## 5.3 YEAR 3

### General Objectives

At the end of Year 3, students should be able to:

1. take a complete history, perform a proper physical examination, formulate provisional and differential diagnoses, justify relevant investigations and plan patient management taking into considerations the pathogenesis of diseases; pharmacological principles of drug use; medico-legal aspect; psychosocial, cultural, religious, and ethical values of patients, family and the community.
2. perform basic investigations and procedures.
3. communicate effectively as an individual, a leader and a team member.
4. demonstrate a sense of responsibility in self development and life-long learning ability as a junior doctor.
5. discuss health services provided by district health offices, health clinics and hospitals.
6. make a research proposal, conduct a survey, diagnose the main health problems in the community and perform health promotion activities.

## Specific Objectives

At the end of year 3, students should be able to:

1. demonstrate self-learning and self-independence in acquiring clinical skills and interacting with patients and the community.
2. work effectively as a team member as well as a leader.
3. take clinical history and perform relevant physical examination, taking into consideration the holistic approach in the respective disciplines :
  - 3.1 Medicine.
  - 3.3 Surgery.
  - 3.3 Obstetrics and Gynaecology.
4. formulate provisional and differential diagnoses in the respective disciplines :
  - 4.1 Medicine.
  - 4.2 Surgery.
  - 4.3 Obstetrics and Gynaecology.
5. relate the pathogenesis of disease to the clinical diagnosis.
6. perform basic investigations and procedures.

## FF3115 FAMILY MEDICINE

This module is designed to enable the students to acquire the competency in handling patient-centered consultation over a variety of patient encounters in the primary care setup. This module acquaints students to the concept of comprehensive health care and holistic approach in patient management. It introduces students to the primary care principles and the importance of acquiring other professional competencies and qualities. It is exercised in 5 weeks.

References :

1. Academy of Medicine, Malaysia (For online access to Malaysian Clinical Practice Guidelines) <http://www.acadmed.org.my>
2. Mc Whinney, IR. 2016. *A Textbook of Family Medicine*. 4th edition. Oxford University Press.
3. Medscape Reference: Diseases & Conditions <http://emedicine.medscape.com/>
4. Merck Manual on-line <http://www.merckmanuals.com/professional>.
5. Murtagh J. 2015 *General Practice*. 6th Revised edition. Mc Graw Hill Book Co.
6. Rakel R. Editor. 2015. *Textbook of Family Practice*. 9th edition. W B Saunders.

7. Taylor R. Editor. 2013. *Fundamentals of Family Medicine: The Family Medicine Clerkship Textbook*. 3rd edition. Springer Pub. Co.

## **FF3119 INTERNAL MEDICINE I**

The module is aimed to give an early exposure to the clinical approach to various diseases in medicine. By applying basic and clinical sciences, the students learn through an integrated approach encompassing history taking, clinical examination and interpretation of relevant investigations. At the end of this module, students should also have knowledge of the principles of patient management in a holistic manner and are expected to be able to perform basic clinical procedures.

References :

1. Brian R. Walker, Nicki R. Colledge, Stuart H. Ralston and Ian Penman. 2014. *Davidson's Principles and Practise of Medicine*. 22nd Edition. Churchill Livingstone.
2. David A. Warrell, Timothy M. Cox, and John D. Firth. 2012. *Oxford textbook of Medicine*. Updated from 5th edition. USA: Oxford University Press.
3. Dennis Kasper, Anthony Fauci, Stephen Hauser, Dan Longo, J. Larry Jameson, Joseph Loscalzo. 2015. *Harrison's Principles of Internal Medicine*. 19th edition. The McGraw-Hill Companies Inc.
4. Malaysian Clinical Practice Guidelines (CPG). <http://www.acadmed.org.my/index.cfm?&menuid=67>
5. Nicholas J.T., Simon O'Connor. 2013. *Clinical Examination: A systemic Guide to Physical Diagnosis*. 7th Edition. Blackwell Publishers.
6. Parveen J.K., Michael C. 2016. *Kumar & Clark Clinical Medicine*. 9th Edition. W.B. Saunders Company
7. UpToDate. <https://www.uptodate.com/contents/search>

## **FF3129 SURGERY 1**

This 12 week module covers the basic clinical approach to the surgical patient. By applying basic and clinical sciences, the students learn through an integrated approach of core clinical and PPD components to gain adequate knowledge and skills in the management of the patients. The candidate will also be exposed to many different surgical patients, environments and experiences. The evaluation will be done in the form of continuous learning as well as a final assessment and case write-ups. At the end of module, students are expected to develop adequate knowledge to approach and manage; as well as developed a proper attitude and conduct in treating a surgical patient.

## References :

1. Clive R. G. Quick, Joanna B Reed, Simon J.F. Harper, Kourosh Saeb-Parsy, Philip J. Deakin. 2013. *Essential Surgery: Problems, Diagnosis and Management With STUDENT CONSULT Online Access*, 5e (Burkitt, Essential Surgery). 5th Edition. Churchill Livingstone.
2. Kevin G. Burnand, John Black, Steven A. Corbett, William E.G. Thomas. 2014. *Browse's Introduction to the Symptoms & Signs of Surgical Disease*. 5th Edition. CRC Press.
3. Nicholas J Talley. Simon O'Connor. 2016. *Examination Medicine: A Guide to Physician Training*, 8th Edition. Elsevier
4. Norman S. Williams, Christopher J. K. Bulstrode, P. Ronan O'Connell. 2013. *Bailey & Love's Short Practice of Surgery (Williams, Bailey and Love's Short Practice of Surgery)*. 26th Edition. CRC Press
5. O. James Garden, Andrew W. Bradbury, John L. R. Forsythe, Rowan W Parks. 2017. *Principles and Practice of Surgery*. 7th Edition. Churchill Livingstone

**FF3512      RADIOLOGY 1**

The radiology mini strand will be integrated into the clinical years in Year 3 Medical and Surgical postings. The aim of the undergraduate radiology teaching is to equip students with the knowledge and interpretational skills required to practice safely and appropriately in their early career. Students will also be given knowledge base of the principles of radiology on which to build as their career develops. Last but not least, the module aims to ensure that medical graduates are fully aware of their legal responsibilities with regard to patient care and safety as influenced by radiology.

## References :

1. Frank H. Netter, MD. 2011. *Atlas of Human Anatomy*. 5th edition.
2. Jamie Weir, Peter H. Abrahams, Jonathan D. Spratt, Lonie R. Salkowski. 2011. *Imaging Atlas of Human Anatomy*. 4th edition.
3. Gerald de Lacey, Simon Morley, Laurence Berman. 2008. *The Chest X-ray: A Survival Guide*. 1st edition.
4. Nigel Raby, Laurence Berman, Simon Morley, Gerald de Lacey. 2015. *Accident and Emergency Radiology: A Survival Guide*. 3rd edition
5. William Herning. 2016. *Learning Radiology: Recognizing the basics*. 2nd edition
6. Peter Armstrong; Martin L. Wastie; Andrea G. Rockall. 2009. *Diagnostic Imaging*

**FF3618****MEDICINE & SOCIETY III**

The Medicine & Society III (FF3618) posting is a six-week educational programme. There are seven subjects/disciplines covered during the posting such as Health and Hospital Management, Family Health, Epidemiology and Statistics, Environmental Health, Occupational Health, Health Promotion and Community Nutrition. During this posting, the medical students are exposed to health services system and activities provided by the Ministry of Health. They are also required to carry out a community health survey by applying their epidemiological and statistical knowledge. The principles guiding the design of the posting stem are from the ultimate objective to produce a competent medical doctor's professional who will primarily serve the health needs of the Malaysian population.

## References :

1. Department of Environment, Malaysia. [www.doe.gov.my](http://www.doe.gov.my)
2. Guideline for Hazard Identification, Risk Assessment and Risk Control (HIRARC). <http://www.dosh.gov.my/index.php/en/legislation/guidelines/hirarc-2>
3. Lee, Robert & Nieman, David. 2012. *Nutritional Assessment*. 6th International Edition. McGraw-Hill
4. Malaysia DOSH. 2016. Legislations: Acts. <http://www.dosh.gov.my/index.php/en/legislation/acts>
5. Malaysia DOSH. 2016. Legislations: Regulations. <http://www.dosh.gov.my/index.php/en/legislation/regulations-1>
6. Malaysia SOCSO. 2016. Social security protection. [http://www.perkeso.gov.my/en/Ministry of Health, Malaysia](http://www.perkeso.gov.my/en/Ministry%20of%20Health,%20Malaysia). [www.moh.gov.my](http://www.moh.gov.my)
7. Theory And Practice by Trisha Greenhalgh Department of Primary Care and Population Sciences University College London UK. Blackwell publishing.
8. United States Department of Labor. Reproductive Hazards. <https://www.osha.gov/SLTC/reproductivehazards/hazards.html>

**FF3816****PERSONAL & PROFESSIONAL ADVANCEMENT (PPA) III**

PPA module is to facilitate adaptation to clinical work and life as future doctors. There is more emphasis given to medical ethics leadership, teamwork and communication skills. The module will also familiarize the students with the uncertain nature of clinical medicine, as well as the unpredictable and varied behaviour of patients.



## References :

1. Arain M, Suter E, Mallinson S, Hepp SL, Deutschlander S, Nanayakkara SD, Harrison EL, Mickelson G, Bainbridge L, Grymonpre RE. Interprofessional education for internationally educated health professionals: an environmental scan.
2. Birden H, Glass N, Wilson I, Harrison M, Usherwood T, Nass D. *Teaching professionalism in medical education: a Best Evidence Medical Education (BEME) systematic review. BEME Guide No. 25.* Med Teach. 2013 Jul;35(7):e1252-66. doi: 10.3109/0142159X.2013.789132. Review. PMID: 23829342
3. Birden HH, Usherwood T. *They liked it if you said you cried": how medical students perceive the teaching of professionalism.* Med J Aust. 2013 Sep 16;199(6):406-9.
4. Charles R, Hood B, DeRosier JM, Gosbee JW, Bagian JP, Li Y, Caird MS, Biermann JS, Hake ME. Root Cause Analysis and Actions for the Prevention of Medical Errors: *Quality Improvement and Resident Education. Orthopedics.* 2017 Apr 24;1-8. doi: 10.3928/01477447-20170418-04.
5. Levy LA1, Mathieson K. Attitudes of Physician Assistant Educators *Toward Interprofessional Education and Collaborative Care.* J Physician Assist Educ. 2017 Apr 21. doi: 10.1097/JPA.000000000000113.

**FF3922 ELECTIVE POSTING**

It is essential to facilitate student's development in holistic, comprehensive and practical manner, without restricted to formal learning methods inside classroom. In this module, students will be exposed to out-campus learning, especially to facilitate students to adapt and experience broader aspects of life. Students will be guided to participate in any elective posting programme for the minimum period of four weeks (in Malaysia) or two weeks (oversea). The elective posting programmes are chosen by students based on their preference on particular fields such as humanitarian, skills, entrepreneurship and others, subjected to approval by Programme Committee. This is important as preparation for students to enter working environment later on. It is hoped that students can learn to be independent, able to work in a team and communicate effectively especially when dealing with individuals from other organizations.

## References :

1. Adams KL, Galanes GJ. 2014. *Communicating in Groups: Applications and Skills (Communication).* 9th Edition. New York: McGraw-Hill Education.

2. Anderson LE, Bolt SB. 2015. *Professionalism: Skills for Workplace Success*. 4th Edition. Pearson College Division.
3. Baird. NB. 2013. *Internship, Practicum, and Field Placement Handbook*. 7th Edition. USA: Pearson Education.
4. Godkin, M., Savageau, J. 2003. The effect of medical students' international experiences on attitudes toward serving underserved multicultural populations. *Fam Med*. 35(4):273–278
5. Holmes, D., Zayas, L., Koyfman, A. 2012. Student Objectives and Learning Experiences in a Global Health Elective. *Journal of Community Health*. 37(5):927–934.
6. Petrosoniak, A., McCarthy, A., Varpio, L. 2010. International health electives: thematic results of student and professional interviews. *Medical Education*. 44(7):683–689.
7. Shultz GP. 2016. *Learning from Experience*. California: Hoover Institution Press.
8. Sweitzer FH, King MA. 2013. *The Successful Internship: Personal, Professional, and Civic Development in Experiential Learning*. 4th Edition. USA: Brooks/Cole.
9. Thompson, M. et al. 2003. Educational effects of international health electives on U S and Canadian medical students and residents: a literature review. *Acad Med*. 78(3):342–347.

## **5. 4                    YEAR 4**

### **General Objectives**

At the end of Year 4, the students should be able to :

1. perform history taking, physical examination, formulate provisional and differential diagnoses, justify relevant investigations and plan patient management utilizing hospital information system, taking into consideration principle of growth and development, needs of patients and their families in relation to emergency, death and dying as well as uncertainties, medico-legal and ethical issues.
2. apply knowledge and skills in forensic medicine competently as to comply with relevant legislation.
3. function as an effective leader and demonstrate a sense of responsibility in self and professional development and life long learning ability as a junior doctor.

### **Specific Objectives**

At the end of Year 4, the students should be able to :

1. demonstrate complete history taking relevant to the respective discipline.

2. perform complete examination relevant to the respective discipline.
3. formulate Provisional Diagnosis and Differential Diagnosis.
4. identify and justify the relevant investigations, cost consideration and interpretations of the result
5. perform common relevant procedures correctly.
6. explain relevant procedures including their indications and complications.
7. differentiate between normal psychological responses and disorders.
8. relate the knowledge of normal growth, physical and emotional development to clinical disorders
9. plan the basic principles in the management of patients in the respective disciplines.
10. apply the pharmacological knowledge of drugs commonly used in terms of efficacy, safety, suitability and cost
11. demonstrate good communication skills appropriate to the situation.
12. explain the impact of illness on the community.
13. recommend health education program to individual, family and community eg immunization, exercise, nutrition and prevention of blindness.
14. apply basic life support (BLS) methods in the appropriate situations and be certified in the Newborn Resuscitation Programme (NRP).
15. explain the needs of patients and their families in relation to difficult situations such as emergencies, dying, death and uncertainties.
16. apply knowledge and skill of forensic medicine (pathology & psychiatry) competently as to comply with relevant legislation.
17. apply knowledge in biomedical science gained in earlier years to the various clinical situations in the respective disciplines
18. evaluate the ethical issues that arise in common clinical situations.
19. plan pre- and postoperative care including postoperative pain relief.

## **F4118            PSYCHIATRY**

This module covers the clinical approach to various syndromes and disorders in psychiatry. By applying basic and clinical sciences, the students learn through an integrated approach of core clinical and PPD components to gain adequate knowledge and skills as well as proper attitude and conduct for a holistic management of patients.

### References :

1. American Psychiatric Association. (2013). Desk reference to the diagnostic criteria from DSM-5. Washington, DC, American Psychiatric Publishing
2. Benjamin, J.S., Sadock, V.A and Ruiz, P. (2014). Kaplan & Sadock`s Synopsis of *Psychiatry: Behavioral Sciences/Clinical Psychiatry*. Eleventh Edition, Wolters Kluwer.

3. British Association of Psychopharmacology (2017): <http://www.bap.org.uk/docsbycategory.php?docCatID=2>
4. Cowen, P., Harrison, P. and Burns, T. Sixth Edition. (2012). Shorter Oxford Textbook of Psychiatry. Oxford University Press, Oxford.
5. Flash cards for undergraduate psychiatry (2017): <http://www.cram.com/tag/mbbs-psychiatry>
6. Malaysian CPG: <http://www.acadmed.org.my/index.cfm?&menuid=67>
7. Resources prepared by University of Newcastle for medical students: <https://fms-teaching.ncl.ac.uk/psy/>

## **FF4127 PAEDIATRICS I**

During this 8 weeks paediatric posting the students will be exposed to various aspects of clinical training in paediatrics and neonatology including history taking, physical examination and assessment of developmental milestones.

References :

1. Janet M Rennie. 2013. *Rennie & Robertson's Textbook of Neonatology*. 5th edition. Churchill Livingstone.
2. Janet M Rennie, Giles S Kendall. 2013. *A Manual of Neonatal Intensive Care*. 5th edition. CRC Press, Taylor & Francis Group
3. Karen J Marcadante, Robert M Kliegman. 2014. *Nelson's Essential of Pediatrics*. 7th edition. Elsevier Health
4. Robert M Kliegman, Bonita M.D. Stanton, Joseph St. Geme. 2015. *Nelson Textbook of Pediatrics*. 20th edition. Elsevier Health
5. Tom Lissauer, Graham Clayden. 2017. *Illustrated Textbook of Paediatrics*. 5th edition. Mosby-Elsevier
6. Tricia Lange Gomella, M Douglas Cunningham. Fabien G Eyal. 2013. *Neonatology*. 7th edition. McGraw-Hill Education-Lange
7. Wayne Harris. 2010. *Examination Paediatrics*. Elsevier Health

## **F4212 ORL-HNS**

The aim of this module is to give a knowledge regarding common ear, nose, throat, head & neck (ORL-H&S) diseases. This module also will teach students regarding basic ORL-H&S examinations. Students will be taught regarding emergency cases that need to be referred to Otorhinolaryngology. At the end of this module, students should be able to explain the diagnosis and provide principal of management of common ORL-H&S diseases.

## References :

1. Dhingra, P.L., Dhingra, S. 2016. *Diseases of Ear, Nose & Throat*. 6th Edition.
2. *Ear, Nose and Throat and Head and Neck Surgery*. 4th Edition. 2013
3. KJ Lee's. 2016. *Essential Otolaryngology*. 11th edition.
4. Melissa A. Scholes ,Vijay R Ramakrishnan. 2016. *ENT Secrets*. 4th Edition.
5. Mohan Bansal. 2016. *Essentials of Ear, Nose & Throat*

**F4229            ORTHOPAEDICS**

This will be an 8 weeks posting whereby students will be exposed to common orthopedics disorders and orthopedics emergencies, including history taking, physical examination and basic procedures. This serves as a preparatory year before entering the senior clerkship in the final year and eventually nurtures them into competent house-officers upon entering the first year of working in medical service.

## References :

1. Solomon L, Warwick D, Selvadurai N. *Apley's and Solomon's Concise System of Orthopaedics and Trauma*. Taylor & Francis Group, 2014 (Fourth Edition)
2. Thompson J. *Netter's Concise Atlas of Orthopaedic Anatomy*. Saunders Elsevier, 2015 (2nd Edition – Updated Edition)
3. White T, Mackenzie S, Gray Alasdair. *McRae's Orthopaedic Trauma and Emergency Fracture Management*. Elsevier 2015 (3rd Edition)
4. Egol K, Koval K, Zuckerman J. *Handbook of Fractures*. Wolters Kluwer Health 2015 (5th edition)
5. Cleland J, Koppenhaver S, Su J. *Netter's Orthopaedic Clinical Examination. An Evidence-Based Approach*. Elsevier 2016 (3rd Edition)

**FF4322            OPHTHALMOLOGY**

The aim of this course is to provide students with an exposure and understanding to common ocular diseases. Students will be taught on how to make a diagnosis for various ocular diseases, relevant investigations and latest management options. They will also be exposed to the management of patients as a whole including their psychosocial care. The duration of this course is 2 weeks.

## References :

1. J Bruce, B Anthony, Manoj V. Parulekar. 2016. *Lecture Notes Ophthalmology*. 12th Revised Edition. Blackwell Publishing

2. J Oliver, L Cassidy, G Jutley, L Crawley. 2014. *Ophthalmology at A Glance*. Blackwell Science Ltd
3. JJ Kanski, B Bowling. 2005. Elsevier. *Ophthalmology In Focus*. Churchill Livingstone
4. John V Forrester, Andrew D.Dick, Paul G McMenamin, Fiona Roberts, Eric Pearlman. 2015. *The Eye: Basic Sciences in Practice*. 4th edition; Saunders Ltd.
5. Kanski's Clinical Ophthalmology. 2015. *A Systematic Approach*. Brad Bowling. 8th edition. Saunders Ltd
6. M Batterrury, B Bowling, C Murphy. 2009. *Ophthalmology: An Illustrated Colour Text*. Livingstone
7. Timothy L Jackson. 2014. *Moorfields Manual of Ophthalmology*. 2nd edition. JP Medical Ltd

## **FF4422 ANAESTHESIOLOGY**

The aim of this 2-week module is to introduce the students to the basic principles of general and regional anaesthesia, as well as intensive care. They will also learn the skills of airway management and basic life support course (BLS). This module also includes patient safety related to anaesthesia.

References :

1. Barrett K, et al. 2016. *Ganong's Review of Medical Physiology*. 25th Edition. McGraw-Hill.
2. Dept. of Anaesthesiology and Intensive Care, PPUKM. 2011. *Basic Life Support Course Manual. An Introduction to Cardiopulmonary Resuscitation, Basic Airway Management and Defibrillation*.
3. Gwinnutt M, Gwinnutt C. 2017. *Clinical Anaesthesia (Lecture Notes)*. 5th Edition. John Wiley & Sons
4. Katzung B, et al. 2015. *Basic and Clinical Pharmacology*. 13th Edition. McGraw-Hill.
5. Yentis S, et al. 2013. *Anaesthesia and Intensive Care A-Z*. 5th Edition. Churchill Livingstone.

## **FF4618 OBSTETRICS & GYNAECOLOGY I**

This module will allow students to apply their basic medical science knowledge learnt in the preclinical years (year 1 and 2) and relate them to the pathogenesis of diseases in O&G, to formulate diagnoses. Students will be trained to obtain medical history and perform relevant physical examination in O&G. In this module, they will also be taught to formulate provisional and differential diagnoses of common O&G conditions. Students are subsequently expected to identify, justify, perform and interpret relevant

investigations in O&G. Basic principles of patient management will be discussed during which students are also expected to apply their basic science knowledge, including pharmacological knowledge of commonly used drugs in regards to efficacy, safety, suitability and cost. They will be introduced to common procedures and surgery in O&G, and will have opportunities to perform some basic O&G and common clinical procedures. They will be expected to observe normal deliveries and suturing of episiotomy. At the completion of the module, students should be able to demonstrate effective O&G clerkship and communication skills which includes history taking, physical examination, investigations and patient management.

#### References :

1. Arulkumaran Sabaratnam, V. Sivanesaratnam, Alokendu Chatterjee, Pratap Kumar (Eds) & Shirish S. Shet. 2016. *Essentials of Obstetrics*. 3rd. Edition. Jaypee Brothers Medical Publishers (P) Ltd.
2. Catrina Bain, Kevin Burton, Jay McGavigan. 2011. *Gynaecology Illustrated*. 6th Edition. Churchill Livingstone
3. Jeremy J N Oats, Suzanne Abraham. 2016. *Llewellyn-Jones Fundamentals of Obstetrics and Gynaecology*. 10th Edition. Elsevier
4. Kevin P. Hanretty. 2009. *Obstetrics Illustrated*. 7th Edition. Churchill Livingstone
5. Kulenthiran Arumugam. 2012. *A Practical Approach To Problems in Gynaecology for the Undergraduate*. 5th Edition. University of Malaya Press
6. Lee Say Fatt. 2007. *Quick Management Guide in Gynaecology*. 1st Edition. University of Malaya Press
7. Louise Kenny, Helen Bickerstaff. 2017. *Gynaecology by Ten Teachers*. 20th Edition. CRC Press
8. Louise Kenny, Jenny Myers. 2017. *Obstetrics by Ten Teachers*. 20th Edition. CRC Press
9. Marlene M. Corton, Kenneth Leveno, Catherine Y. Spong, Jodi Dashe. 2014. *Williams Obstetrics*. 24th Edition. Churchill Livingstone

## **FF4622 RADIOLOGY II**

The radiology mini strand will be integrated into the clinical years in Year 4 Paediatrics and Orthopaedics postings. The aim of the undergraduate radiology teaching is to equip students with the knowledge and interpretational skills required to practice safely and appropriately in their early career. Students will also be given knowledge base of the principles of radiology on which to build as their career develops. Last but not least, the module aims to ensure that medical graduates are fully aware of their legal responsibilities with regard to patient care and safety as influenced by radiology.

References :

1. Frank H. Netter, MD. 2011. *Atlas of Human Anatomy*. 5th edition.
2. Jamie Weir, Peter H. Abrahams, Jonathan D. Spratt, Lonie R. Salkowski. 2011. *Imaging Atlas of Human Anato*. 4th edition.
3. Gerald de Lacey, Simon Morley, Laurence Berman. 2008. *The Chest X-ray: A Survival Guide*. 1st edition.
4. Nigel Raby, Laurence Berman, Simon Morley, Gerald de Lacey. 2015. *Accident and Emergency Radiology: A Survival Guide*. 3rd edition.
5. William Herning. 2016. *Learning Radiology: Recognizing the basic*. 2nd edition.
6. Peter Armstrong; Martin L. Wastie; Andrea G. Rockall. 2009. *Diagnostic Imaging*.

## FF4823 PERSONAL AND PROFESSIONAL ADVANCEMENT (PPA) IV

The aim of this module is to facilitate further the development of professionalism in clinical work of medical students as part of the preparation to become future clinicians. There is more emphasis given to emphatic skills in doctor-patient relationship, communication skills, teamwork, leadership, and medical ethics. The module will also familiarize the students with the uncertain nature of clinical medicine, such as the challenge in breaking bad news as well as the unpredictable and varied behaviour of patients.

References :

1. Asma Abdullah and Paul B. Pedersen. 2003. *Understanding Multicultural Malaysia Delights, Puzzles and Irritations*. Petaling Jaya & New York: Pearson Prentice Hall.
2. Bonnie F. Fremgen. 2015. *Medical Law & Ethics*. Pearson Education.
3. David L. Dotlich, James L. Noel, and Norman Walker. 2004. *Leadership Passages: The Personal and Professional Transitions That Make or Break a Leader*. San Francisco: Jossey-Bass.
4. Frederick W. Platt and Geoffrey H. Gordon. 2004. *Field Guide to the Difficult Patient Interview (2nded.)*. Philadelphia: Lippincott Williams & Wilkins.
5. Margaret Lloyd & Robert Bor. 2009. *Communication Skills for Medicine (3rded.)*. Edinburgh & New York: Churchill Livingstone.
6. Freeling and Conrad M. Harris. 1984. *The Doctor-Patient Relationship (3rded.)*. Edinburgh, Melbourne, New York : Churchill Livingstone.
7. Paul Ramsden. 2003. *Learning to Teach in Higher Education (2nded.)*. London & New York: RoutledgeFalmer.
8. Peter Maguire. 2000. *Communication Skills for Doctors :A Guide to Effective Communication with Patients and Families*. London: Arnold.
9. Robert M. Veatch. 1989. *Medical Ethics*. Massachusetts: Jones and Bartlett.



10. Suzanne Kurtz, Jonathan Silverman, and Juliet Draper. 2005. *Teaching and Learning Communication Skills in Medicine (2nd ed.)*. Abingdon, Oxon, UK: Radcliffe.
11. Tony Ghaye and Sue Lilyman. 2010. *Reflection: Principles and Practice for Healthcare Professionals(2nded.)*. London: MA Healthcare Ltd.

## **FF4911 FORENSIC PATHOLOGY I**

The Forensic Pathology module in year 4 requires the students to learn the subject forensic pathology and observe post-mortem examination under lecturer's supervision and attend moot court video presentation. All student are encourages to complete a cumulative total of 10 (ten) observations.

References :

1. *Knight's Forensic Pathology* by Bernard Knight & PekkaSaukko, Fourth Edition, Dec 2015, CRC Press
2. *Forensic Pathology* by Max M Houck, 2017, Elsevier Science Publishing
3. *Forensic pathology of Infancy & Childhood* By Kim A Collins, Roger W Byard, March 2014, Humana Press
4. *Essential Forensic Pathology* Gilbert Edward Corrigan, March 2012, CRC Press
5. *Gunshot Wounds : Practical Aspects of Firearms, Ballistics and forensic techniques* by Vincent JM diMaio, Third Edition, 2016, CRC Press.
6. *Color Atlas of Forensic Medicine & Pathology* By Charles Catanese, March 2016, CRC Press

## **FF4921 FORENSIC PATHOLOGY II**

The Forensic Pathology module in year 4 requires the students to learn the subject forensic pathology and observe postmortem examination under lecturer's supervision and attend moot court video presentation. All student are encourages to complete a cumulative total of 10 (ten) observations.

References :

1. *Knight's Forensic Pathology* by Bernard Knight & PekkaSaukko, Fourth Edition, Dec 2015, CRC Press
2. *Forensic Pathology* by Max M Houck, 2017, Elsevier Science Publishing
3. *Forensic pathology of Infancy & Childhood* By Kim A Collins, Roger W Byard, March 2014, Humana Press
4. *Essential Forensic Pathology* Gilbert Edward Corrigan, March 2012, CRC Press

5. *Gunshot Wounds : Practical Aspects of Firearms, Ballistics and forensic techniques* by Vincent JM diMaio, Third Edition, 2016, CRC Press.
6. *Color Atlas of Forensic Medicine & Pathology* By Charles Catanese, March 2016, CRC Press

## **FF4812 SPECIAL STUDY MODULE I (SSM)**

Special Study Module (SSM) is a pre-requisite for sitting the Final Professional Exam. Students have to conduct medical research which allows them to develop their skills of communication, critical thinking, information and data handling. Students are divided into groups of 5-6 students each and assigned to supervisors from various departments. The groups of students are given the opportunity to choose the type of medical research they wish to do. SSM is conducted throughout year 4 and the first 7 weeks of year 5. The aim of this SSM I is to develop a research proposal to be submitted to the medical ethics committee under their supervisor's supervision.

## **FF4812 SPECIAL STUDY MODULE II (SSM)**

Special Study Module (SSM) is a pre-requisite for sitting the Final Professional Exam. Students have to conduct medical research which allows them to develop their skills of communication, critical thinking, information and data handling. Students are divided into groups of 5-6 students each and assigned to supervisors from various departments. The groups of students are given the opportunity to choose the type of medical research they wish to do. SSM is conducted throughout year 4 and the first 7 weeks of year 5. The aim of SSM II is to train students to gain ethics approval from the Medical /Animal Ethics Committee after submitting the research proposal to the committee. Students are also trained to organise the flow of the study before starting the research.

## **5. 5. YEAR 5**

### **General Objectives**

At the end of Year 5, the students should be able to :

1. function as a junior doctor under direct supervision of a specialist.
2. conduct a research project and present the findings.
3. communicate effectively as a doctor, team member and assume leadership role in relevant situations.
4. demonstrate life long learning ability as a basis for future development in one's medical career.

## Specific Objectives

At the end of Year 5, the students should be able to :

1. describe principles of health management including functions of managers, organizational behaviour and human resource management.
2. describe basic economic issues of healthcare, including cost management, health insurance, managed care and referral system.
3. describe concept, organization, and function of urban health authority.
4. describe occupational accidents, rehabilitation and compensation process, and workplace hazards.
5. prepare a research proposal.
6. perform a research project in a chosen field of health using appropriate methods.
7. apply critical thinking skills throughout the conduct and process of research.
8. present research findings verbally, visually and in writing.
9. relate the various medicolegal aspects to clinical practice.
10. analyze the principles and practice of organizational leadership.
11. apply the dual role of doctors as team leaders and team players.
12. demonstrate good communication skills in special clinical situations such as bereavement, HIV counseling, etc.
13. apply critical thinking and learning skills in the pursuit of life-long learning and continuous professional development
14. apply medical information technology such as Hospital Information System, Electronic Medical Record, Telemedicine, etc
15. apply skills at interviews, preparing resume, and management of self, finances and health.
16. manage common problems that present to primary care practices in an evidence-based and cost-effective manner that utilizes.
17. manage mental health conditions.
18. clerk, perform physical examination, outline management plan on newly admitted patients.
19. assist the ward team in day to day management of patients.
20. assist in basic ward procedures.
21. competent in performing basic clinical procedures and interpretations of basic clinical laboratory results.
22. demonstrate good patient-doctor relationship through fine communication skills, ethical practice, appropriate bedside manners and a high degree of professionalism.
23. recognize the role of epidemiology in health promotion, disease prevention and control.
24. assist in the management of clinical emergencies.
25. assist in taking consent for a procedure and surgery.
26. assist in clinical procedures.
27. carry out patient and family counseling sessions.
28. break bad news.

29. perform on-call duties.
30. perform basic labour room procedures including normal delivery and episiotomy suturing.

## FF5119 SURGERY II

The students will be posted to the surgical department for a total of nine weeks. They will be exposed to the concept of senior clerkship which serves to prepare the students to become familiar and competent in handling common surgical cases and perform simple day-to-day procedures as surgical house officers. The students will be posted in PPUKM and Hospital Teluk Intan throughout the rotation. The students will be supervised by designated lecturers at PPUKM and Hospital Teluk Intan. The module consist of lectures, seminars, skills workshops, bedside teaching and interprofesional learning. The students will also need to attend clinics, endoscopy and operating theatres. At the end of the posting the students should be able to function as a competent and safe surgical house officer.

References :

1. Clive R. G. Quick, Joanna B Reed, Simon J.F. Harper, Kourosh Saeb-Parsy, Philip J. Deakin. 2013. *Essential Surgery: Problems, Diagnosis and Management With STUDENT CONSULT Online Access, 5e (Burkitt, Essential Surgery)*. 5th Edition. Churchill Livingstone
2. Kevin G. Burnand, John Black, Steven A. Corbett, William E.G. Thomas. 2014. *Browse's Introduction to the Symptoms & Signs of Surgical Disease*. 5th Edition. CRC Press
3. Nichoals J Talley, Simon O'Connor. 2016. *Examination Medicine: A Guide to Physician Training*. 8th Edition. Elsevier
4. Norman S. Williams, Christopher J. K. Bulstrode, P. Ronan O'Connell. 2013. *Bailey & Love's Short Practice of Surgery (Williams, Bailey and Love's Short Practice of Surgery)*. 26th Edition. CRC Press
5. O. James Garden, Andrew W. Bradbury, John L. R. Forsythe, Rowan W Parks. 2017. *Principles and Practice of Surgery*. 7th Edition. Churchill Livingstone

## FF5212 EMERGENCY MEDICINE

Emergency Medicine is a rapidly growing specialty, which focuses on early diagnosis and intervention, as well as acute management involving various categories of patients. This module exposes students to clinical case approach and the establishment of effective resuscitation teams. Students are required to complete the rotation and achieve a basic understanding of the principles of pre-hospital care, initial assessment and stabilization of critically ill patients and patients' disposition. This preliminary module only exposes

students to part of emergency medicine. However, it is hoped that it can create a different perspective on modern emergency care through various interesting methods of teaching and learning.

#### References :

1. Jonathan Wyatt, Robin Illingworth, Colin Graham, Kerstin Hogg. 2012. *Oxford Handbook of Emergency Medicine*. 4th Edition. OUP Oxford.
2. Judith E. Tintinalli, Gabor D. Kelen, J. Stephan Stapczynski. 2015. *Emergency Medicine: a comprehensive study guide/American College of Emergency Physicians*. 8th Edition. New York: McGraw Hill.
3. Shirley Ooi, Peter Manning. 2014. *Guide to the essentials in Emergency Medicine Singapore*. McGraw-Hill.
4. Journal Circulation ([http://circ.ahajournals.org/content/132/18\\_suppl\\_2](http://circ.ahajournals.org/content/132/18_suppl_2)) - Last visited 3rd August 2016
5. Websites Uptodate online (<http://www.uptodate.com/contents/table-of-contents/emergency-medicine-adult-and-pediatric>) through PPUKM library portal - Last visited 3rd August 2016
6. <http://lifeinthefastlane.com> (medical education blog) - Last visited 3rd August 2016

## FF5227 PAEDIATRICS II

This is the second paediatric posting in the medical undergraduate program. During this module, the concept of senior clerkship is introduced in order to train and prepare you prior to the internship, so that you are familiar and competent in handling acute and chronic paediatric cases.

Four weeks are in PPUKM and two weeks of this posting are spent at a peripheral district hospital. You are expected to perform ward work and attend ward rounds and clinics at these hospitals. The seventh week will consist of a community visit and presentation, and self-directed learning in the skills laboratory

#### References :

1. Kliegman. 2016. *Nelson's Textbook of Pediatrics*. 20th Edition. Saunders
2. Kliegman. 2015. *Nelson Essential Pediatrics*. 7th Edition. Saunders
3. Lissauer & Clayden. 2017. *Illustrated Textbook of Paediatrics*. 5th Edition. Mosby
4. Roberto & Rennie. 2013. *A Manual of Neonatal Intensive care*. 5th edition. Hodder&Arnold
5. W Harris. 2011. *Examination Paediatrics*. 4th Edition. Churchill Livingstone

**FF5329 INTERNAL MEDICINE II**

The aim of this module is to introduce the concept of senior clerkship which is to train and prepare the final year students prior to their internship. This is to ensure that they are familiar and competent in handling acute and chronic medical cases. At the end of Year 5, the students should be able to function as a junior doctor under direct supervision of a specialist, communicate effectively as a doctor, team member and assume leadership role in relevant situations. They should also be able to demonstrate lifelong learning ability as a basis for future development in one's medical career.

## References :

1. Buku teks
2. Parveen JK, Michael C. Kumar & Clark. *Clinical Medicine*. 9th Edition. W.B. Saunders Company. 2016.
3. Kasper D, Fauci A, Hauser S, Longo D, Jameson JL, Loscalzo J. *Harrison's Principles of Internal Medicine*. 19th edition. The McGraw-Hill Companies Inc. 2015.
4. Walker B. *Davidson's Principles and Practice of Medicine*. 22nd Edition. Churchill Livingstone. 2014.
5. Talley NJ, O'Connor S. *Clinical Examination, 7th Edition: A Systematic Guide to Physical Diagnosis*. Elsevier. 2013.
6. Longmore M, Wilkinson I, Baldwin A, Wallin E. *Oxford Handbook of Clinical Medicine*. 9th edition. Oxford University Press. 2014.
7. Website : e-medicine:www.emedicine.com
8. Malaysian Clinical Practice Guidelines (CPG). <http://www.acadmed.org.my/index.cfm?&menuid=67>
9. Medscape [www.medscape.com](http://www.medscape.com)
10. UpToDate. <https://www.uptodate.com/contents/search>

**FF5419 OBSTETRICS & GYNAECOLOGY II**

The final year will be reserved for more direct clinical exposure to prepare them for the first year of working in medical service in Obstetrics & Gynecology, to train them for work as a house officer in O&G. The students will be posted to the O&G department for a duration of seven weeks in the final year. They will be assigned according to the department rotation and supervised by department lecturers. During this attachment, the first two weeks the students will be in UKMMC, following which in the next four weeks they alternate their training in groups of 14 each between UKMMC, Hospital TelukIntan and Hospital Slim River. They all regroup in the final week of posting back to UKMMC. The module consists of tutorials, clinical workshops, bedside teaching,

rotations to relevant wards and clinics in the O&G setup such as labour room, the O&G admitting centre (OGAC), operation theatres, antenatal and postnatal wards, general O&G clinics and relevant subspecialized clinics and ultrasonography rooms in O&G. They have to complete a logbook and a gynaecological case writeup. At the end of the posting, the students should be able to have adequate knowledge, exposure and clinical skills to work as a house officer.

#### References :

1. Arulkumaran, S. 2011. *Essentials of gynecology*. New Delhi: Jaypee Brothers.
2. Arulkumaran, S. 2016. *Essentials of obstetrics*. Jaypee Brothers Medical P.
3. Beers, M. H. 2003. *The Merck manual of medical information*. Whitehouse Station, NJ: Merck Pub.
4. Letchumanan, R., Dass, R. H., Lim, Z. S., & Chai, F. X. 2015. *Doctrinaperpetua: guides on obstetrics*. Kuala Lumpur: R & S Publishing House.
5. Letchumanan, R., Vadiveloo, N., Dass, R. H., & Lim, Z. S. 2015. *Doctrinaperpetua: guides on gynaecology*. Kuala Lumpur: R & S Publishing House.
6. Nalliah, S., & S. 2015. *Clinical protocols in obstetrics and gynaecology for Malaysian hospitals: a must have compendium for practitioners of Obstetrics & Gynaecology*. Melaka, Malaysia: Colour Box Publishing House.
7. Monga, A. K., & Dobbs, S. 2011. *Gynaecology by ten teachers*. London: Hodder & Arnold.

## FF5522 FAMILY MEDICINE

The objective of this module is to consolidate the application of principles of family medicine in patient management. In this module, students will apply the skills learnt from various disciplines to manage a patient comprehensively and to outline the long term care plan. Students will be exposed to specialised skills such as preparing a discharge summary, referral letter and prescription, as well as management approach for special patient populations such as child and adolescents, and elderly care. It is exercised in 2 weeks.

#### References :

1. Fallon M, Hanks G. 2013. *ABC of Palliative care ABC series*. 2nd edition. Wiley.
2. McWhinney, IR. 2016. *A Textbook of Family Medicine*. 4th edition. Oxford University Press.
3. Murtagh J. 2015. *General Practice*. 6th Revised edition. McGraw Hill Book Co.
4. Rakel R. Editor. 2015. *Textbook of Family Practice*. 9th edition. W B Saunders.
5. Taylor R. Editor. 2013. *Fundamentals of Family Medicine: The Family Medicine Clerkship Textbook*. 3rd edition. Springer Pub. Co.

## **FF5816 SPECIAL STUDY MODULE III (SSM)**

Special Study Module (SSM) is a pre-requisite for sitting the Final Professional Exam. Students have to conduct medical research which allows them to develop their skills of communication, critical thinking, information and data handling. Students are divided into groups of 5-6 students each and assigned to supervisors from various departments. The groups of students are given the opportunity to choose the type of medical research they wish to do. SSM is conducted throughout year 4 and the first 7 weeks of year 5. The aim of SSM III is to train students to collect data, analyse data and draw conclusions from the data. Students are also trained to present their study findings at a scientific conference. Students are also trained to write the study findings in the form of a manuscript for submission to a journal.

References :

Rujukan yang disyorkan bergantung kepada jenis kajian dipilih untuk dijalankan.

## **FF5823 PERSONAL & PROFESSIONAL ADVANCEMENT (PPA) V**

This PPA module is to further facilitate the development of professionalism in clinical work of medical students as part of the preparation to become future clinicians. There is more emphasis given to emphatic skills in doctor-patient relationship, communication skills, teamwork, leadership, and medical ethics. The module will also familiarize the students with the uncertain nature of clinical medicine, such as the challenge in breaking bad news as well as the unpredictable and varied behavior of patients.

References :

1. *Skills for Communicating with Patients*. Jonathan Silverman, Suzanne Kurtz, Juliet Draper. Florida: CRC Press, 2013.
2. *The Doctor's Communication Handbook*, Peter Tate, Elizabeth Tate. London: Radcliffe Publishing Ltd, 2014.
3. *The Essentials of Patient Safety*. Charles Vincent. Wiley-Blackwell. 2012. <http://www.chfg.org/wp-content/uploads/2012/03/Vincent-Essentials-of-Patient-Safety-2012.pdf>
4. *Medical Law and Ethics*. Jonathan Herring. Oxford: Oxford University Press, 2016. *The Spiritual Assessment*. Aaron Saguil, Karen Phelps. *American Family Physician*. 2012;86(6):546-550.



## FF5911 FORENSIC PATHOLOGY III

The Forensic Pathology module in year 5 requires the students to continue observe and perform postmortem examination under lecturer's supervision, prepare postmortem report and attend moot court video presentation. All student are encourages to complete a cumulative total of 10 (ten) observations before they are allowed to perform 2 (two) postmortem examination in this year. All students are required to submit 2 postmortem reports in either English or Malay language each. An end-posting examination will be held at the end of the posting.

### References :

1. *Knight's Forensic Pathology* by Bernard Knight & PekkaSaukko, Fourth Edition, Dec 2015, CRC Press
2. *Forensic Pathology* by Max M Houck, 2017, Elsevier Science Publishing
3. *Forensic pathology of Infancy & Childhood* By Kim A Collins, Roger W Byard, March 2014, Humana Press
4. *Essential Forensic Pathology* Gilbert Edward Corrigan, March 2012, CRC Press
5. *Gunshot Wounds : Practical Aspects of Firearms, Ballistics and forensic techniques* by Vincent JM diMaio, Third Edition, 2016, CRC Press.
6. *Color Atlas of Forensic Medicine & Pathology* By Charles Catanese, March 2016, CRC Press

## STUDENT ASSESSMENT

### A. GENERAL CRITERIA

#### 1. Assessment Terminology

##### Year 1, 2 and 4

- Continuous Assessment (CA)
- End Semester I and II Examinations (ESE)
- Remedial / Refer Examination after End Semester II Examination

##### Year 5

- Continuous Assessment (CA)
- Professional Examination (PE)

#### 2. Eligibility to sit for ESE

- Attendance of 100% in teaching-learning activities

- Fulfill the criteria specified by each module

### 3. **Eligibility to sit for PE**

- Minimum attendance of 100% in teaching-learning activities
- Pass Special Study Module and Forensic Pathology

### 4. **Criteria for Progression**

#### **Year 1 and 2**

- Pass ESE, progress to subsequent year
- Fail any module in ESE,  
- sit for Remedial
- Fail Remedial / Refer Examination, repeat the year
- Fail Remedial/Refer Examination with CGPA 1.33 and below, exit the programme.
- Composite marks of all components are counted as the final marks

#### **Year 3**

- Pass Intermediate Exam (theory and clinical), progress to subsequent year
- Fail Intermediate Exam for Remedial / Refer Examination (one attempt only)
- Fail more than two major modules in ESE, repeat the year
- Fail Remedial / Refer Examination, repeat the year
- In Medicine and Society Module and PPA Module, students must pass both components CA and ESE to pass the module

#### **Year 4**

- Pass ESE, progress to subsequent year
- Fail two or less major modules in ESE, refer posting and sit for Remedial / Refer Examination
- Fail more than two major modules in ESE, repeat the year
- Fail Remedial / Refer Examination, repeat the year

#### **Year 5**

- Pass the Professional Examination, a student will be awarded with the MD (UKM) degree.
- Pass with distinction in the Professional Examination, a student will be awarded the MD (UKM) degree and the distinction will be recorded in the transcript.
- Pass with distinction in the Professional Examination and fulfill all the criteria for honours, a student will be awarded the MD(Hons) (UKM) degree.
- Fail Professional Examination, repeat Year 5 for 6 months

## 5. Grades : CGPA System

### B. EXAMINATION FORMAT & DISTRIBUTION OF MARKS

#### Year 1 and 2

#### Biomedical Modules

Examination	Distribution of Marks	Total
CA	End of Module PBL – 10% Examination – 20%	30%
ESE - Theory	MCQ (OBA & EMI) MEQ – 50% - 50%	100% → 50% - 70%
ESE - OSPE	≥ 5 stations – 10%      ≥ 8 stations – 20%	10% - 20%

#### Clinical Science Modules

Examination	Distribution of Marks		Total
Year 1 Semester II	CA – 60%	ESE – OSCE 40%	100%
Year 2 Semester I	CA – 30%	ESE – OSCE 70%	100%
Year 2 Semester II	CA – 30%	ESE – OSCE 70%	100%

#### Personal & Professional Modules

Examination	Distribution of Marks		Total
Year 1 Semester II	CA – 50%	ESE : OSCE + Theory 50%	100%
Year 2 Semester I	CA – 50%	ESE : OSCE + Theory 50%	100%
Year 2 Semester I	CA – 60%	ESE – OSCE 40%	100%
Year 2 Semester II	CA – 60%	ESE – OSCE 40%	100%

#### Medicine & Society Modules

Year 1	CA – 30%	ESE – 70%	100%
Year 2	CA – 40%	ESE – 60%	100%

#### Comprehensive Health Care

Year 2 Semester 2	CA – 10%	
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**Year 3 and 4****Clinical Modules \* (Medicine I, O&G I, Surgery I, Orthopaedics, Paediatrics I, Psychiatry)**

<b>Examinations</b>	<b>Distribution of Marks</b>	<b>Total</b>
CA	30%	30%
ESE - Theory	MCQ (OBA & EMI) and MEQ - 35%	35%
ESE - OSCE	35%	35%
		100%

**Clinical Modules \* (ORL – HNS, Ophthalmology, Anaesthesiology)**

<b>Examinations</b>	<b>Distribution of Marks</b>	<b>Total</b>
CA	30%	30%
ESE - Theory	MCQ (OBA & EMI) and MEQ - 35%	35%
ESE - OSCE	35%	35%
		100%

**Personal & Profesional Modules \*\*\***

<b>Examinations</b>	<b>Distribution of Marks</b>	<b>Total</b>
CA	50%	50%
ESE - Theory	50%	50%
		100%

**Medicine & Society Modules**

<b>Examinations</b>	<b>Distribution of Marks</b>	<b>Total</b>
CA	50%	50%
ESE – Theory & OSCE	50%	50%
		100%

**Year 5****Clinical Modules \* (Medicine II, O&G II, Surgery II, Orthopaedics, Paediatrics II, Family Medicine, Emergency Medicine)**

<b>Examinations</b>	<b>Distribution of Marks</b>	<b>Total</b>
CA	30%	30%
PE - Theory	MCQ I & II (OBA & EMI) - 20% KFQ – 15%	35%
PE - Clinical	Long Case – 30% OSCE – 78%	35%

**Forensic Pathology & Special Study Module (Pre – requisite to sit for the PE)**

<b>Examination</b>	<b>Grading</b>
Assesment throughout the modules in Year 4 & 5	Pass or Fail

**Note :****CA – Continous Assessment****ESE – End Semester Examination****PE – Profesional Examination****\*Major clinical modules****\*\*Minor clinical modules****Refer Study Guides for more detailed information**

**PERATURAN - PERATURAN  
FAKULTI PERUBATAN**

**DI BAWAH PERUNTUKAN  
PERATURAN-PERATURAN  
UNIVERSITI KEBANGSAAN MALAYSIA  
(PENGAJIAN SARJANAMUDA) 1990**

## 1. Syarat-syarat Penerimaan Masuk

### 1.1. Syarat Am Universiti

#### 1.1.1. Sijil Pelajaran Malaysia

Calon-calon mestilah lulus peperiksaan Sijil Pelajaran Malaysia (SPM) atau peperiksaan yang setaraf dengannya serta lulus dengan kepujian dalam mata pelajaran Bahasa Melayu/Bahasa Malaysia atau Bahasa Melayu/Bahasa Malaysia Kertas Julai dan;

#### 1.1.2. Sijil Tinggi Persekolahan Malaysia atau yang setaraf

1.1.2.1. Calon-calon mestilah lulus peperiksaan STPM dengan mendapat sekurang-kurangnya PNGK 2.00 dan mendapat sekurang-kurangnya :

- i. Gred C (NGMP 2.00) dalam matapelajaran Pengajian Am ; dan
- ii. Gred C (NGMP 2.00) dalam dua matapelajaran lain dan mendapat sekurang-kurangnya Tahap 1 (Band 1) dalam Peperiksaan Malaysian University English Test (MUET)

### 1.2. Syarat Khas Program

#### 1.2.1. Sijil Pelajaran Malaysia

Mendapat sekurang-kurangnya Gred B pada peringkat Sijil Pelajaran Malaysia dalam mata pelajaran berikut :

- Biologi
- Kimia
- Fizik
- Matematik/ Matematik Tambahan dan
- satu mata pelajaran lain

DAN

### 1.2.2. Sijil Matrikulasi

Mendapat sekurang-kurangnya PNGK 3.80 dan mendapat sekurang-kurangnya Gred B (NGMP 3.0) pada peringkat Matrikulasi/Asasi dalam mata pelajaran berikut :-

- Biologi
- Matematik
- Kimia

dan

Mendapat sekurang-kurangnya Gred B pada peringkat SPM dalam mata pelajaran berikut:-

- Biologi
- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)

dan

Lulus temuduga yang ditetapkan oleh Fakulti.

ATAU

### 1.2.3. Sijil Tinggi Persekolahan Malaysia

Mendapat sekurang-kurangnya PNGK 3.80 dan mendapat sekurang-kurangnya Gred B (NGMP 3.0) pada peringkat Matrikulasi/Asasi dalam mata pelajaran berikut :-

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- Biologi
- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)

dan

Lulus temuduga yang ditetapkan oleh Fakulti

ATAU :

1.2.4 Diploma/Setaraf

1.2.4.1 International Baccalaureate (IB)

Memperolehi 37 mata dengan minimum 2 mata pelajaran Sains atau Matematik di peringkat ‘higher Level (HL)’ dan 1 mata pelajaran Sains di peringkat ‘Standard Level’ dan

Memperolehi sekurang-kurangnya skor 4 dalam mata pelajaran berikut :-

- Biologi
- Kimia
- Fizik/Matematik

dan

Mendapat sekurang-kurangnya Gred B pada peringkat SPM dalam mata pelajaran berikut:-

- Biologi
- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)/setaraf

dan

Lulus temuduga yang ditetapkan oleh Fakulti

ATAU

1.2.4.2 General Certificate of Education (advanced "A" level)

Memperolehi sekurang-kurangnya Gred AAB atau ABB dalam 3 mata pelajaran berikut :-

- Biologi
- Kimia

## 1. Syarat-syarat Penerimaan Masuk

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DAN

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- Biologi
- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)

dan

Lulus temuduga yang ditetapkan oleh Fakulti.

ATAU

### 1.2.3. Sijil Tinggi Persekolahan Malaysia

Mendapat sekurang-kurangnya PNGK 3.80 dan mendapat sekurang-kurangnya Gred B (NGMP 3.0) pada peringkat Matrikulasi/Asasi dalam mata pelajaran berikut :-

- Biologi
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dan

Mendapat sekurang-kurangnya Gred B pada peringkat SPM dalam mata pelajaran berikut:-

- Biologi
- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
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dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)

dan

Lulus temuduga yang ditetapkan oleh Fakulti

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#### 1.2.4.1 International Baccalaureate (IB)

Memperolehi 37 mata dengan minimum 2 mata pelajaran Sains atau Matematik di peringkat ‘higher Level (HL)’ dan 1 mata pelajaran Sains di peringkat ‘Standard Level’ dan

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- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)/setaraf

dan

Lulus temuduga yang ditetapkan oleh Fakulti

ATAU

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Memperolehi sekurang-kurangnya Gred AAB atau ABB dalam 3 mata pelajaran berikut :-

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Mendapat sekurang-kurangnya Gred B pada peringkat SPM dalam mata pelajaran berikut:-

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- Kimia
- Fizik
- Matematik atau Matematik Tambahan dan
- Satu mata pelajaran lain

dan

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET)/setaraf

dan

Lulus temuduga yang ditetapkan oleh Fakulti

### 1.3. Syarat-syarat Masuk Yang Lain

Calon-calun mestilah juga :

- 1.3.1. Dapat memuaskan Senat tentang kecekapan mereka bertutur dalam Bahasa Malaysia ;
  - 1.3.2. mengambil apa-apa ujian serta menghadiri temuduga seperti yang ditentukan oleh Senat untuk menilai kelayakan mereka mengikuti kursus di Universiti ;
  - 1.3.3. menunjukkan lazimnya bahawa mereka berumur tujuh belas tahun atau lebih pada hari pertama tahun akademik yang mereka mohon masuk ;
  - 1.3.4. menunjukkan bukti dalam borang yang disediakan oleh Universiti bahawa mereka adalah cukup sihat dan berupaya untuk mengikuti kursus pengajian di universiti ; dan
  - 1.3.5. memenuhi apa-apa syarat lain yang ditetapkan oleh Senat dari semasa ke semasa.
- 1.4. Penerimaan masuk calon ke Fakulti bergantung kepada budi bicara Senat.

## 2. Struktur Pengajian

### 2.1. Kursus

#### 2.1.1. Fakulti

Calon-calun dikehendaki mengikuti semua kursus yang ditetapkan oleh Fakulti. Semua kursus Fakulti adalah kursus wajib. Calon-calun di peringkat klinikal dikehendaki mengikuti kesemua program kepaniteraan atau posting yang ditentukan.

#### 2.1.2. CITRA UKM

Calon-calun dikehendaki mengikuti kursus-kursus CITRA UKM dengan jumlah 30 jam kredit seperti yang ditetapkan berikut :

2.1.2.1 SEPULUH (10) jam kredit untuk kursus WAJIB UNIVERSITI.

2.1.2.2 DUA PULUH (20) jam kredit untuk kursus CITRA UNIVERSITI.

**Manakala** bagi kursus Bahasa Inggeris, pelajar perlu mengambil sebanyak 5 jam kredit semasa di Tahun 1 dan Tahun 2 pengajian.

*\* Bagi pelajar-pelajar perubatan, Kursus CITRA UKM tidak dikira di dalam pengiraan PNGK.*

### 2.2. Tempoh Pengajian

2.2.1. Calon-calun mesti mengikuti kursus ijazah Doktor Perubatan tidak melebihi tujuh (7) sesi di mana pengajian Tahun 1 dan 2 ditetapkan tidak melebihi 3 sesi dan Peperiksaan Ikhtisas Akhir boleh diambil tidak melebihi 3 kali tertakluk kepada tempoh pengajian tujuh (7) sesi. Walau bagaimanapun, pelajar boleh merayu untuk dibenarkan menduduki Peperiksaan Ikhtisas (Ulangan) satu (1) kali lagi tertakluk kepada persetujuan Fakulti dan Senat. (Senat Ke-307 - 16 Julai 2003)

2.2.2. Calon-calun program berkembar Ijazah Doktor Perubatan mesti mengikuti kursus tidak melebihi sembilan (9) sesi di mana pengajian Tahun 1, 2 dan 3 adalah ditetapkan tidak melebihi 4 sesi dan sesi pengajian Tahun 3, 4 dan 5 tidak melebihi 5 tahun. Peperiksaan Ikhtisas Akhir boleh diambil tidak melebihi 3 kali tertakluk kepada tempoh pengajian sembilan (9) sesi. Walau

bagaimanapun, pelajar boleh merayu untuk dibenarkan menduduki Peperiksaan Ikhtisas (Ulangan) satu (1) kali lagi tertakluk kepada persetujuan Fakulti dan Senat.

- 2.2.3 Calon-calon yang dikecualikan daripada sebilangan unit kursus semasa penerimaan masuk, tempoh minimum yang dikenakan untuk menyelesaikan kursus pengajian bagi ijazah bergantung kepada bilangan kursus/tahun yang dikecualikan. Bagi calon-calon yang memenuhi syarat pengecualian ini, tempoh minimum untuk mengikuti kursus perubatan adalah selama 3 tahun di peringkat klinikal tertakluk kepada perakuan Fakulti.

### **2.3 Pendaftaran Kursus**

- 2.3.1 Calon-calon dikehendaki mendaftar kursus-kursus yang ditentukan pada setiap sesi, kecuali calon-calon di peringkat praklinikal yang dikehendaki mendaftar kursus-kursus berkenaan pada setiap semester. Pendaftaran kursus-kursus tersebut hendaklah dilakukan mengikut syarat-syarat yang ditetapkan oleh Fakulti.
- 2.3.2 Penukaran kursus yang didaftarkan boleh dilakukan hanya dalam tempoh dua (2) minggu pertama permulaan tiap-tiap semester.\* (KURSUS UNIVERSITI)
- 2.3.3 Pengguguran kursus yang didaftarkan boleh dilakukan dalam tempoh 4 (empat) minggu pertama permulaan tiap-tiap semester. Pengguguran selepas minggu ke 4 sehingga minggu ke 10 akan diberikan gred TD (Tarik Diri). Kursus yang digugurkan ini tidak akan diambil kira di dalam Penilaian Gred.\* (KURSUS UNIVERSITI)

## **3. Struktur Penilaian\***

- 3.1. Pemberian markah dan gred bagi setiap semester atau sesi adalah untuk setiap kursus dan penilaian-penilaian lain yang diadakan di sepanjang semester, peperiksaan akhir semester dan peperiksaan ikhtisas.
- 3.2. Pemberian markah dan gred untuk sesuatu kursus Fakulti tanpa peperiksaan akhir semester adalah dengan cara penilaian berasaskan kepada kerja kursus dan/atau penilaian lain yang diadakan sepanjang semester.\* (SSM/CLERKSHIP-TAHUN 5)



- 3.3. Markah dan gred (serta nilai gred) yang diberikan kepada sesuatu kursus adalah seperti berikut: (KURSUS TAHUN 1-5)

Markah (%)	Gred	Nilai Gred	Taraf
80 ke atas	A	4.00	Cemerlang
75 - 79	A-	3.67	
70 - 74	B+	3.33	
65 - 69	B	3.00	Kepujian
60 - 64	B-	2.67	
55 - 59	C+	2.33	
50 - 54	C	2.00	Lulus
47 - 49	C-	1.67	
44 - 46	D+	1.33	
41 - 43	D	1.00	
40 ke bawah	E	0.00	Gagal

- 3.4 Gred-gred berikut diberikan tanpa markah atau gred/nilai gred :

- 3.4.1. L/K (Lulus/Kandas) iaitu gred yang diberikan kepada pelajar-pelajar yang mengambil kursus yang keputusannya tidak digredkan tetapi hanya diberikan catatan “lulus” atau “kandas” sahaja.
- 3.4.2. TL (Tidak Lengkap) iaitu gred yang diberikan dengan kebenaran Fakulti kepada pelajar yang tidak dapat menyelesaikan sekurang-kurangnya 70% daripada keperluan kursus atas alasan yang munasabah. Pelajar perlu melengkapkan tugas tersebut selewat-lewatnya dua (2) minggu selepas pendaftaran semester berikutnya untuk mendapat penilaian penuh dan gred.
- 3.4.3. SM (Sedang Maju) iaitu gred yang digunakan bagi sesuatu kerja atau projek yang melebihi satu semester untuk disiapkan. Ia tidak diberi mata nilai tetapi unit baginya hanya dikira untuk penentuan unit umum bagi sesuatu semester dan bukan untuk keperluan penilaian untuk mendapatkan ijazah. Unit dan nilai gred bagi kerja atau projek tersebut hanya diambil kira bagi maksud pengiraan jumlah unit untuk keperluan ijazah dan purata penilaian apabila simbol SM digantikan dengan gred.
- 3.4.4. U (audit) iaitu gred yang diberikan kepada pelajar yang mendaftar, menghadiri kursus dan mengambil peperiksaan bagi sesuatu kursus itu tetapi nilai gred tidak diberikan dan lulus peperiksaan kursus itu.

3.4.5. TD (Tarik Diri) iaitu gred yang diberikan kepada pelajar yang menarik diri bagi sesuatu kursus dengan kebenaran pensyarah dan Dekan Fakulti selepas minggu ke 4 hingga ke 10 sesuatu semester.

3.4.6. TP (Tangguh Peperiksaan) iaitu gred yang diberikan kepada pelajar yang memohon untuk menangguhkan peperiksaan di bawah perenggan 7.3. Peperiksaan gantian diadakan semasa Peperiksaan Ulangan Semester.

#### **4. Sistem Penilaian**

4.1. Semua kursus akan diambil kira untuk mengira Purata Markah dan Gred Semester/Sesi kecuali kursus Universiti seperti pada perenggan 2.1.2.

4.2. Kursus-kursus yang mendapat gred gagal juga diambil kira untuk menentukan Purata Gred/Markah bagi Semester/Sesi berkenaan.

4.3. Gred bagi Peperiksaan Ulangan Semester akan diberi taraf lulus sahaja (setaraf gred C) dan diambil kira untuk menentukan Purata Gred/Markah bagi pelajar-pelajar mengulang tertakluk kepada perenggan 8.1.

#### **5. Syarat-syarat Kelayakan Meneruskan Pengajian**

5.1. Taraf Lulus : Seseorang calon dianggap lulus dan dibenar meneruskan pengajian jika lulus semau kursus yang ditetapkan oleh Fakulti. Markah lulus sesuatu kursus adalah 50% dan ke atas atau nilai yang ditentukan melalui kaedah 'Standard Setting' yang dipersetujui dalam Mesyuarat Jawatankuasa PraPemeriksa Kursus/Modul.

5.2. Taraf Gagal : Seseorang calon dianggap gagal sesuatu kursus jika tidak memenuhi syarat 5.1., atau dilarang menduduki peperiksaan kerana tidak memenuhi syarat untuk menduduki peperiksaan sesuatu kursus seperti syarat 8.1., atau tidak menghadiri peperiksaan sesuatu kursus tanpa sebarang sebab yang munasabah.

##### **5.2.1. Taraf Gagal Tahun 1 dan Tahun 2**

5.2.1.1. Pelajar yang gagal mana-mana modul Peperiksaan Akhir Semester 1 dan atau Peperiksaan Akhir Semester 2 layak menduduki Peperiksaan Ulangan.

5.2.1.2. Seseorang calon dianggap gagal dan diberhentikan jika :

5.2.1.2.1.gagal Peperiksaan Ulangan Semester semasa dalam tahun ulangan, atau

5.2.1.2.2.telah menghabiskan tempoh maksimum tiga (3) sesi pengajian pada Tahun 1 & 2 seperti pada syarat 2.2, atau

5.2.1.2.3.gagal Peperiksaan Ulangan Semester dengan Purata Nilai Gred Keseluruhan (PNGK) kurang atau sama 1.33.

(Senat ke – 385 – 20 Feb 2013)

5.2.2. *Taraf Gagal Tahun 3 (Tertakluk kepada pengesahan Senat)*

5.2.1.1.Seorang calon yang lulus peperiksaan Ikhtisas Awal (teori dan klinikal) dibenarkan meneruskan pengajian.

5.2.1.2.Seorang calon yang gagal peperiksaan Ikhtisas Awal dikehendaki menduduki peperiksaan ulangan Ikhtisas Awal dalam tempoh yang ditentukan. Calon dibenarkan untuk menduduki peperiksaan ulangan Ikhtisas Awal sekali sahaja pada sesi yang sama.

5.2.1.3.Seorang calon dianggap gagal Peperiksaan Ulangan Ikhtisas Awal semasa dalam tahun ulangan.

5.2.3. *Taraf Gagal Tahun 4 (Tertakluk kepada pengesahan Senat)*

5.2.3.1.*Seorang calon yang gagal sekurang-kurangnya satu (1) kursus Major dikehendaki menduduki kursus ulangan dan Pperiksaan Ulangan Semester bagi kursus major yang gagal dalam tempoh yang ditentukan. Calon dibenarkan untuk menduduki Peperiksaan Ulangan Semester sekali sahaja.*

5.2.3.2.*Seorang calon yang gagal dua (2) kursus Major atau tiga (3) kursus Major atau empat (4) kursus Major dianggap gagal dikehendaki mengulang tahun pada sesi berikutnya. Kebenaran untuk mengulang tahun hanya diberi kepada seseorang calon yang Berjaya melengkapkan semua kursus pada tahun calon gagal.*

5.2.3.3.*Calon yang Berjaya melengkapkan semua kursus dan lulus 'Continuous Assessment' (CA) akan dikecualikan daripada menyediakan case write-up di tahun mengulang.*

5.2.4. *Taraf Gagal Tahun 5*

5.2.4.1.Seseorang calon dianggap gagal dan diberhentikan jika telah menghabiskan tempoh maksimum lima (5) sesi pengajian di

Tahun 3,4, dan 5 atau menghabiskan tempoh maksimum tujuh (7) sesi pengajian (syarat 2.2.).

### 5.3 Taraf Mengulang Tahun

#### 5.3.1. Taraf Mengulang Tahun 1 dan 2

Seseorang calon yang memenuhi syarat 2.2 dan mempunyai PNGK lebih daripada 1.33 dibenarkan mengulang tahun jika :

##### 5.3.1.1. Gagal Peperiksaan Ulangan Semester

Peluang seseorang pelajar untuk mengulang tahun adalah juga tertakluk kepada keputusan fakulti.  
(Senat ke-385 – 20 Feb 2013)

#### 5.3.2. *Taraf Mengulang Tahun 3 (Tertakluk kepada pengesahan Senat)* *Seseorang calon yang memenuhi syarat 2.2 dibenarkan mengulang tahun jika:*

##### 5.2.3.1. gagal Peperiksaan Ulangan Ikhtisas Awal

##### 5.2.3.2. tergolong dalam peraturan 8.1.2.

#### 5.3.3. *Taraf Mengulang Tahun 4 (Tertakluk kepada pengesahan Senat)* *Seseorang calon yang memenuhi syarat 2.2 dibenarkan mengulang tahun jika:*

##### 5.3.3.1. gagal Peperiksaan Ulangan Semester, atau

##### 5.3.3.2. gagal 3 atau lebih kursus semasa Peperiksaan Akhir Semester

### 5.4 Taraf Mengulang Tahun 5

#### 5.4.1. Seseorang calon yang memenuhi syarat 2.2 dibenarkan mengulang 6 bulan jika:

##### 5.4.1.1. tidak dibenarkan menduduki Peperiksaan Ikhtisas akhir kerana tidak memenuhi perkara 6.1. atau

##### 5.4.1.2. gagal Peperiksaan Ikhtisas akhir

##### 5.4.1.3. tergolong dalam peraturan 8.1.2.

#### 5.4.2. Seseorang calon yang memenuhi syarat 2.2 dibenarkan mengulang 1 tahun akademik jika:

5.4.2.1. telah mengikuti 100% keperluan setiap kursus Tahun 5 yang ditetapkan oleh Fakulti seperti peraturan 8.1.1.

#### 5.5 Taraf Diberhentikan Daripada Mengikuti Program

- 5.5.1. Seseorang calon Tahun 1 dan 2 dianggap gagal dan diberhentikan daripada mengikuti program jika gagal Peperiksaan Ulangan Semester dengan PNGK kurang atau sama 1.33.
- 5.5.2. Seseorang calon Tahun 3 dan 4 dan 5 dianggap gagal dan diberhentikan pengajian jika gagal melengkapkan semua kursus pada tahun calon gagal.
- 5.5.3. Seseorang calon dianggap gagal dan diberhentikan daripada mengikuti program jika gagal Peperiksaan Ulangan Semester semasa berada dalam tahun ulangan.
- 5.5.4. Seseorang calon diberhentikan jika disahkan oleh Lembaga Perubatan Pelajar Fakulti Perubatan (LPPFP) menghidap penyakit mental yang menjejaskan kemampuan untuk berfungsi sebagai seorang pelajar perubatan dan doctor.

### 6. Syarat Dibenarkan Menduduki Peperiksaan Ikhtisas Awal dan Akhir

6.1. *Seorang calon layak menduduki Peperiksaan Ikhtisas Awal jika : (Tertakluk kepada pengesahan Senat)*

6.1.1. tidak melanggar peraturan 8.1

6.2. Seorang calon layak menduduki Peperiksaan Ikhtisas Akhir jika :

6.2.1. lulus kursus Kajian Khusus

6.2.2. lulus kursus Patologi Forensik

6.2.3. tidak melanggar peraturan 8.1.

### 7. Penilaian Mendapat Ijazah

7.1. **Seorang calon mesti memenuhi semua syarat berikut untuk dikurniakan Ijazah Doktor Perubatan :**

7.1.1. Lulus Peperiksaan Ikhtisas Akhir dengan mendapat markah 50% dan ke atas atau nilai yang ditentukan melalui kaedah 'Standard

Setting' yang dipersetujui dalam Mesyuarat Jawatankuasa  
Pemeriksa Pra-Pemeriksa di dalam :

- 7.1.1.1. keseluruhan peperiksaan
- 7.1.1.2. Peperiksaan Klinikal;
- 7.1.2. Lulus semua kursus Universiti yang ditetapkan;
- 7.2. Seorang calon layak dianggap cemerlang dalam Peperiksaan Ikhtisas Akhir (tertera pada transkrip) jika mendapat markah 75% (bersamaan Nilai Gred 3.67) dan ke atas ATAU nilai lain yang dipersetujui dalam Mesyuarat Jawatankuasa Pra-Pemeriksa;
- 7.3. Seorang calon layak dikurniakan Ijazah Doktor Perubatan (Kepujian) jika lulus Peperiksaan Ikhtisas Akhir dengan :
  - 7.3.1. mendapat markah 75% dan ke atas atau nilai yang dipersetujui dalam Mesyuarat Jawatankuasa Pra-Pemeriksa;
    - 7.3.1.1. keseluruhan peperiksaan, dan
    - 7.3.1.2. Peperiksaan klinikal;
  - 7.3.2. tidak pernah gagal mana-mana kursus sepanjang mengikuti program pengajian perubatan dan;
  - 7.3.3. mendapat sekurang-kurangnya gred B (65% dan ke atas) dalam semua kursus yang diambil dalam semua peperiksaan sepanjang mengikuti program perubatan (Senat Ke-330 – 16 Mei 2007)
- 7.4. Tiada peruntukan untuk lulus bersyarat atau 'redeemable' di dalam Peperiksaan Ikhtisas Akhir.
- 7.5. Ijazah boleh dikurniakan kepada calon yang telah :
  - 7.5.1. memenuhi semua kehendak dan Akta Pengajian Sarjanamuda;
  - 7.5.2. memenuhi semua kehendak Peraturan ini;
  - 7.5.3. diperakui supaya diberi ijazah berkenaan oleh Jawatankuasa Pemeriksa dan disahkan oleh Senat.
  - 7.5.4. menjelaskan segala bayaran yang telah ditetapkan

## 8. Peruntukan-Peruntukan Lain

- 8.1. Seorang pelajar tidak akan dibenarkan mengambil peperiksaan sesuatu kursus/ikhtisas awal atau akhir sekiranya Dekan telah memperakui bahawa calon berkenaan :

- 8.1.1. Lulus Peperiksaan Ikhtisas Akhir dengan mendapat markah 50% dan ke atas atau nilai yang ditentukan melalui kaedah 'Standard Setting' yang dipersetujui dalam Mesyuarat Jawatankuasa Pemeriksa Pra-Pemeriksa di dalam :
- 8.1.2. telah tidak mengikuti 100% daripada keperluan kursus tersebut seperti yang ditetapkan oleh Fakulti dan/atau tidak memenuhi syarat-syarat lain yang ditetapkan oleh sesuatu kursus.
- 8.1.3. telah memplagiat atau menipu apa-apa bentuk penilaian (seminar, laporan, penulisan kes, buku log) yang ditetapkan dalam sesuatu kursus.
- 8.1.4. tidak memenuhi syarat-syarat lain yang ditetapkan oleh sesuatu kursus.
- 8.1.5. menghadapi tindakan tatatertib berat misalnya terlibat dengan kes jenayah dan lain-lain tindakan yang boleh menjejaskan profesyen kedokteran.
- 8.1.6. mempunyai sikap yang tidak bersesuaian sebagai seorang pelajar perubatan dan menjejaskan profesyen kedokteran.  
(Senat Ke-335 – 19 Mac 2008)

□ Rujuk :

1. Akta Universiti dan Kolej Universiti 1971. Kaedah-kaedah Universiti Kebangsaan Malaysia (Tatatertib pelajar) 1999
2. Peraturan Tatatertib Pelajar Fakulti Perubatan UKM 2014

## **9. Penggantungan Pendaftaran, Kebenaran Tidak Mendaftar Dan Penangguhan Peperiksaan**

### **9.1. Pertimbangan Untuk Penggantungan Pendaftaran**

- 9.1.1. Seseorang calon yang sakit untuk tempoh yang agak lama boleh diberi pengantungan pendaftaran untuk sesi-sesi tertentu oleh Dekan Fakulti dan disahkan oleh mesyuarat Fakulti. Dalam kes-kes seperti ini perakuan daripada doktor adalah diperlukan. Perakuan yang bukan daripada doktor boleh dipertimbangkan dalam kes-kes tertentu selepas calon berkenaan telah menjalani rawatan doktor-doktor berkenaan terlebih dahulu. Dalam kes sakit jiwa, kebenaran untuk mendaftar semula tertakluk kepada perakuan doktor-doktor yang berkenaan.
- 9.1.2. Seseorang pelajar yang menghadapi masalah lain daripada perenggan 9.1.1 di atas boleh juga diberi pengantungan

pendaftaran untuk sesuatu Sesi tersebut oleh Fakulti tertakluk kepada Dekan Fakulti berpuas hati bahawa masalahnya itu akan menjejaskan pembelajarannya pada Sesi berkenaan. Permohonan menggantung pendaftaran boleh dibuat sehingga minggu ke 10 sesuatu semester. Permohonan selepas minggu ke-10 tidak akan dipertimbangkan tetapi pelajar hendaklah memohon untuk menangguhkan peperiksaan.

## 9.2. Pertimbangan Untuk Tidak Mendaftar

9.2.1. Calon-calun yang telah mendapat pengesahan daripada doktor bahawa ia telah hamil antara 6 – 7 bulan pada waktu pendaftaran dinasihatkan tidak mendaftar pada semester tersebut.

9.2.2. Seseorang calon boleh dibenarkan oleh Dekan Fakulti untuk tidak mendaftar pada sesuatu semester dengan syarat ia memohon secara bertulis kepada Dekan dengan mengemukakan alasannya.

## 9.3. Pertimbangan Bagi Penangguhan Peperiksaan

9.3.1. Calon-calun yang sakit atau menghadapi gangguan-gangguan lain sewaktu peperiksaan boleh memohon kepada Dekan Fakulti dan disahkan oleh mesyuarat Fakulti untuk menangguhkan pengambilan peperiksaan berkenaan. Permohonan untuk menangguhkan peperiksaan untuk kursus berkenaan hendaklah dibuat dalam tempoh 48 jam selepas peperiksaan itu diadakan.

9.3.2. Permohonan untuk menangguhkan pengambilan peperiksaan semester atas sebab-sebab kesihatan hendaklah disertakan dengan pengesahan doktor yang merawat calon berkenaan seperti pada perenggan 9.1.1 di atas. Permohonan atas sebab-sebab lain boleh dipertimbangkan atas budi bicara Fakulti. Peperiksaan gantian diadakan semasa Peperiksaan Ulangan Semester.

## 9.4. Status Sebagai Seorang Pelajar Universiti

9.4.1. Calon-calun yang telah diberi penggantungan pendaftaran dan kebenaran tidak mendaftar akan hilang tarafnya sebagai pelajar Universiti dan dengan demikian beliau tidak berhak mendapat atau menggunakan kemudahan-kemudahan Universiti yang diberikan kepada calon-calun sehingga beliau mendaftar semula selepas tempoh berkenaan.



- 9.5. Tempoh Pendaftaran Semester Semasa Menggantungkan Pendaftaran/Tidak Mendaftar
- 9.5.1. Tempoh yang terlibat dengan penggantungan pendaftaran/tidak mendaftar atas sebab-sebab kesihatan tidak diambilkira sebagai sebahagian daripada keperluan maksimum yang dibenarkan bagi melayakkan diri untuk mendapatkan sesuatu ijazah.
- 9.5.2. Tempoh semester yang terlibat dengan penggantungan pendaftaran/tidak mendaftar atas sebab-sebab selain daripada kesihatan diambil kira (kecuali bagi tempoh dua semester yang pertama) sebagai sebahagian daripada keperluan maksimum yang dibenarkan bagi melayakkan diri untuk mendapat ijazah.
- 9.5.3. Tempoh penggantungan pendaftaran/tidak mendaftar tidak boleh melebihi dua semester berturut-turut setiap kali kecuali atas sebab-sebab kesihatan. Tempoh maksimum yang dibenarkan untuk menggantungkan pendaftaran ialah sebanyak empat (4) semester kecuali atas sebab-sebab kesihatan.

## **10. Penyimpanan Kertas-Kertas Jawapan Peperiksaan Dan Rayuan-Rayuan Terhadap Keputusan Peperiksaan**

- 10.1. Kertas-kertas Jawapan Peperiksaan
- 10.1.1. Semua skrip jawapan calon-calon bagi sebarang peperiksaan Universiti hendaklah diserahkan kepada Ketua Jabatan untuk disimpan.
- 10.1.2. Ketua Jabatan hendaklah menyimpan dengan selamat skrip jawapan itu untuk tempoh selama sekurang-kurangnya tiga bulan selepas pemberitahuan mengenai keputusan peperiksaan berkenaan dikeluarkan oleh Pendaftar.
- 10.1.3. Tertakluk kepada perenggan 10.1.4., semua skrip jawapan peperiksaan hendaklah dimusnahkan dengan secepat mungkin selepas genap tempoh tiga (3) bulan seperti yang tersebut dalam Peraturan-peraturan di atas.
- 10.1.4. Dalam kes-kes yang rayuan terhadap keputusan peperiksaan

yang dibuat oleh seseorang calon, skrip-skrip jawapan berkenaan tidak boleh dimusnahkan kecuali selepas Fakulti telah mengesahkan keputusan penyemakan semula.

## 10.2. Rayuan Untuk Menyemak Semula Keputusan Penilaian Kursus

- 10.2.1. Sesuatu rayuan untuk menyemak semula keputusan penilaian kursus hendaklah disampaikan secara bertulis kepada Pendaftar oleh calon yang berkenaan dalam masa dua (2) hingga empat (4) minggu kalendar selepas keputusan peperiksaan diumumkan. Sebarang rayuan yang diterima selepas tempoh ini tidak boleh diberi pertimbangan.
- 10.2.2. Setiap rayuan yang dikemukakan hendaklah menyatakan kursus atau kursus-kursus yang diminta disemak semula.
- 10.2.3. Bayaran yuran sebanyak RM25.00 bagi tiap-tiap satu kursus yang diminta disemak semula hendaklah disertakan dengan rayuan berkenaan. Bayaran ini tidak boleh dituntut balik.
- 10.2.4. Apabila diterima sesuatu rayuan, Pendaftar hendaklah merujukannya kepada Dekan Fakulti berkenaan. Dekan Fakulti selepas berunding dengan Ketua Jabatan berkenaan boleh melantik suatu panel pemeriksa bagi menyemak semula keputusan penilaian kursus berkenaan.
- 10.2.5. Panel pemeriksa hendaklah terdiri daripada Ketua Jabatan, pemeriksa asal kursus berkenaan dan sekurang-kurangnya seorang pemeriksa lain yang bidangnya sama atau hampir sama dengan bidang berkenaan.
- 10.2.6. Perakuan-perakuan panel pemeriksa hendaklah dikemukakan bagi pertimbangan mesyuarat Fakulti. Keputusan Fakulti mengenai penilaian semula kursus-kursus berkenaan hendaklah dikemukakan bagi pengesahan Senat sebelum disampaikan kepada calon berkenaan, sekiranya ada perubahan.
- 10.2.7. Setiap keputusan yang dibuat oleh Fakulti menurut kaedah ini dan disahkan oleh Senat adalah muktamad dan sebarang rayuan selanjutnya terhadap keputusan tersebut tidak boleh dilayan.

## 10.3. Rayuan Untuk Meneruskan Semula Pengajian

- 10.3.1. Seseorang calon yang mendapat keputusan “Gagal dan diberhentikan” oleh sebab gagal memenuhi syarat-syarat untuk meneruskan pengajian boleh mengemukakan rayuan terhadap keputusan tersebut.
- 10.3.2. Setiap rayuan hendaklah dikemukakan kepada Pendaftar dalam tempoh empat (4) minggu selepas pengumuman rasmi keputusan peperiksaan dan setiap rayuan hendaklah disertai dengan bayaran yuran RM25.00. Bayaran ini tidak boleh diberikan pertimbangan.
- 10.3.3. Apabila diterima sesuatu rayuan, Pendaftar hendaklah merujukkannya kepada Dekan Fakulti berkenaan. Dekan Fakulti hendaklah melantik suatu Jawatankuasa Rayuan untuk mempertimbangkannya.
- 10.3.4. Jawatankuasa Rayuan tersebut hendaklah terdiri daripada Dekan sebagai Pengerusi, Timbalan Dekan yang berkaitan dengan Hal Ehwal Akademik Pelajar, Ketua Jabatan yang berkenaan dan sekurang-kurangnya seorang ahli Fakulti yang berkaitan dengan pengajaran/pembelajaran bagi pelajar serta Pendaftar atau wakilnya sebagai Setiausaha.
- 10.3.5. Jawatankuasa tersebut hendaklah mempunyai kuasa-kuasa berikut:
  - 10.3.5.1. menerima atau menolak sesuatu rayuan ;
  - 10.3.5.2. membuat keputusan terhadap semua rayuan yang dipertimbangkan ;
  - 10.3.5.3. memperakukan kepada Fakulti keputusan yang telah dicapai terhadap semua rayuan yang dipertimbangkan dan memperakukan, jika ada, rayuan yang tidak layak dipertimbangkan.
- 10.3.6. Perakuan yang dibuat oleh Fakulti mengenai perkara tersebut hendaklah dikemukakan kepada Senat untuk pengesahan.
- 10.3.7. Setiap keputusan yang dibuat oleh Fakulti menurut kaedah ini dan disahkan oleh Senat adalah muktamad dan sebarang rayuan selanjutnya tidak boleh dilayan.

## **11. Umum**

- 11.1. Peraturan ini dan semua tafsiran mengenai yang dibuat oleh Senat dari masa ke semasa hendaklah berkuatkuasa terhadap pelajar-pelajar baru pada dan selepas tarikh berkuatkuasa.
- 11.2. Peraturan-peraturan sebelumnya hendaklah terus berkuatkuasa terhadap pelajar-pelajar yang telah memulakan program pengajian mereka mengikut peraturan lama sebelum atau selepas tarikh berkuatkuasa dan sehingga semua mereka yang layak untuk mendapatkan ijazah telah mendapat ijazah.
- 11.3. Senat boleh membenarkan apa-apa pengecualian yang difikirkan sesuai daripada kehendak-kehendak Peraturan ini.



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**AHLI JAWATANKUASA  
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