UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

BUKU PANDUAN PROGRAM

SESI AKADEMIK **2021/2022** *ACADEMIC SESSION*

UNDERGRADUATE STUDY PROGRAMME HAND BOOK

FAKULTI PERUBATAN VETERINAR
FACULTY OF VETERINARY MEDICINE

FAKULTI PERUBATAN VETERINAR

Maklumat Am

Fakulti Perubatan Veterinar, Universiti Putra Malaysia (UPM) ditubuhkan pada tahun 1973. Pada masa itu UPM dikenali sebagai Universiti Pertanian Malaysia dan Fakulti sebagai Fakulti Kedoktoran Veterinar dan Sains Peternakan. Fakulti kini dibentuk oleh 6 jabatan, tiga daripadanya baru diwujudkan pada tahun 2013. Tiga jabatan asal ialah Jabatan Sains Praklinikal Veterinar yang menumpu kepada sains veterinar asas dan produksi haiwan, Jabatan Patologi dan Mikrobiologi Veterinar kepada sains paraklinikal dan Jabatan Pengajian Klinikal Veterinar kepada sains klinikal. Tiga jabatan baharu iaitu Jabatan Diagnosis Makmal Veterinar, Jabatan Perubatan dan Pembedahan Haiwan Kesayangan dan Jabatan Perubatan dan Pembedahan Haiwan Ladang dan Eksotik yang menumpu kepada perkhidmatan dan amalan klinikal.

Fakulti juga mempunyai sebuah Hospital Veterinar Universiti (UVH) yang terulung di negara ini. Hospital ini serba lengkap dan moden, memberi perkhidmatan diagnosis, rawatan, pembedahan dan penjagaan semua jenis haiwan kepada masyarakat. Kes yang dirujuk kepada UVH juga merupakan sumber untuk pengajaran pelajar program Doktor Perubatan Veterinar.

Fakulti adalah institusi pengajian tinggi pertama yang memperolehi persijilan ISO 9001 komprehensif dalam pengajaran, penyelidikan dan perkhidmatan profesional pada 7 Julai 2000. Fakulti juga diakreditasi dengan ISO 17250 untuk beberapa ujian makmal. Untuk kekal relevan dan selaras dengan era penserantauan dan globalisasi Fakulti sedang berusaha untuk memperolehi akreditasi antarabangsa untuk program Doktor Perubatan Veterinarnya.

General Information

The Faculty of Veterinary Medicine, Universiti Putra Malaysia (UPM) was established in 1973. Then UPM was known as Universiti Putra Malaysia and the Faculty as Faculty of Veterinary Medicine and Animal Science. Currently the Faculty is composed of six departments, three of which were created in 2013. The three original departments are Department of Veterinary Preclinical Sciences focusing on basic veterinary sciences and animal production, Department of Veterinary Pathology and Microbiology on paraclinical sciences, and Department of Veterinary Clinical Studies on clinical sciences. The three new departments are Department of Veterinary Laboratory Diagnosis, Department of Small Animal Medicine and Surgery, and Department of Large and Exotic Animal Medicine and Surgery all focusing on clinical practice and service.

The Faculty also has the one and only University Veterinary Hospital (UVH) in the country. This hospital is well-equipped and modern, offering diagnostic, treatment, surgical and care services for all kinds of animal for the society. The cases referred to UVH are also sources of teaching material for the Doctor of Veterinary Medicine students.

The Faculty is the first institution of higher learning to be awarded a comprehensive ISO 9001 certification for teaching, research and professional services on 7 July, 2000. The Faulty is also accredited with ISO 17025 for several laboratory tests. To remain relevant and consistent with era of regionalisation and globalisation, the Faculty is currently in the process of acquiring international accreditation for its Doctor of Veterinary Medicine programme.

Pengurusan Fakulti/ *Faculty Management*

Dekan/*Dean*
Prof. Dr. Abdul Rahman Omar

Timbalan Dekan (Akademik & Hal Ehwal Pelajar)
Deputy Dean (Academic & Student Affairs)
Prof. Madya Dr. Hazilawati Hamzah

Timbalan Dekan (Hospital Veterinar)
Deputy Dean (Veterinary Hospital)
Prof. Dr. Jalila Abu

Timbalan Dekan (Penyelidikan, Pengajian Siswazah & Jaringan Industri dan Masyarakat)
Deputy Dean (Research, Postgraduate Studies & Industry and Community Relations)
Prof. Dr. Faez Jesse Firdaus Abdullah

Ketua Jabatan Sains Praklinikal Veterinar
Head, Department of Veterinary Preclinical Sciences
Prof. Madya Dr. Arifah Abdul Kadir

Ketua Jabatan Pengajian Klinikal Veterinar
Head, Department of Veterinary Clinical Studies
Prof. Madya Dr. Lau Seng Fong

Ketua Jabatan Patologi dan Mikrobiologi Veterinar
Head, Department of Veterinary Pathology & Microbiology
Prof. Madya Dr. Siti Khairani Bejo

Ketua Jabatan Diagnosis Makmal Veterinar
Head, Department of Veterinary Laboratory Diagnosis
Prof. Dr. Latiffah Hassan

Ketua Jabatan Perubatan dan Pembedahan Haiwan Kesayangan
Head, Department of Companion Animals Medicine and Surgery
Prof. Madya Dr. Chen Hui Cheng

Ketua Jabatan Perubatan dan Pembedahan Haiwan Ladang dan Eksotik
Head, Department of Farm and Exotic Animals Medicine and Surgery
Prof. Madya Dr. Nurul Hayah Khairuddin

Timbalan Pendaftar
Deputy Registrar
En. Amiruddin Abd Aziz

Pegawai Tadbir Fakulti
Faculty Administrative Officer
Pn. Roshaslina Mohd Basir
En. Azlan Ibrahim

Program Prasiswazah yang ditawarkan

Bacelor

1. Doktor Perubatan Veterinar/ *Doctor of Veterinary Medicine*

SKEMA ELEx UNTUK PROGRAM DOKTOR PERUBATAN VETERINAR/ ELEx SCHEME FOR DOCTOR OF VETERINARY MEDICINE

CEFR Tahap	MUET Tahap	TOEFL/IELTS Skor	CIEP Tahap	Pearson Test of English (PTE) Academic Skor	Cambridge English Skor	Keperluan Bergraduat
C1 – C2	**5.0 – 5+**	TOEFL iBT 95 – 120 IELTS 7.0 – 9.0	-	76 - 90	180 – 230	2 LPE + 1 CEL + 24 mata LAX
B1 – B2	**3.0 – 4.5**	TOEFL iBT 42 – 94 IELTS 4.0 – 6.5	104 – 109	43 – 75	140 – 179	2 LPE + 2 CEL + 24 mata LAX

<table>
<tr><th colspan="5">SKEMA UNTUK PROGRAM DOKTOR PERUBATAN VETERINAR</th></tr>
<tr><th>Tahun Pengajian</th><th>Semester</th><th colspan="2">MUET 3.0 – 4.5</th><th>MUET 5.0 – 5+</th></tr>
<tr><td rowspan="2">1</td><td>1</td><td colspan="3">LAX 12 points</td></tr>
<tr><td>2</td><td colspan="2">LPE2301
(Academic Interaction & Presentation)</td><td>LPE2402
(Critical Reading Skills)</td></tr>
<tr><td rowspan="2">2</td><td>3</td><td colspan="2">LPE2501
(Academic Writing)</td><td>LPE2502
(Creative Writing Skills)</td></tr>
<tr><td>4</td><td>CEL2106
(Communication for Professional Development)</td><td>LAX 12 points</td><td>LAX 12 points</td></tr>
<tr><td>3</td><td>5</td><td colspan="3">CEL 2105
(Spoken Communication for the Workplace)</td></tr>
</table>

LAX

- LAX (6 points or 12 points)
- 1 point = 2 hours per week

Pre-requisites for courses

- LPE2501 : Passed LPE2301
- CEL2104,2105,2106,2107 :Passed LPE2501 **or** MUET Band 5 – 6

STRUKTUR KURIKULUM/ *CURRICULUM STRUCTURE*

Nama Program : **Doktor Perubatan Veterinar/ *Doctor of Veterinary Medicine***

Jumlah Kredit Bergraduat : **192 Jam Kredit/ *Credit Hours***

Tempoh Pengajian : **10 Semester / *Semesters* (5 Tahun / *Years*)**

Matlamat Program :

1. veterinawan yang kompeten, beretika dan berdaya saing yang dapat berkecimpung dalam bidang sains veterinar secara holistik
2. veterinawan yang terlibat dalam mengejar pengetahuan dan kemahiran sepanjang hayat menerusi pembelajaran multildisplin yang sesuai dengan kerjaya dan profesion yang diceburi
3. veterinawan yang menyumbang kepada peningkatan kualiti hidup dan kesejahteraan haiwan, manusia dan ekosistem serta keharmonian dan perpaduan negara melalui perkhidmatan dan industri veterinar

RINGKASAN HASIL PEMBELAJARAN PROGRAM

Bil.	Matlamat Pendidikan Program (PEO) Doktor Perubatan Veterinar	Hasil Pembelajaran Program (PO)									
		mengaplikasi pengetahuan dan kefahaman tentang maklumat, fakta, prinsip, konsep dan teori secara sistematik dalam bidang perubatan veterinar.	melaksanakan kemahiran klinikal dalam mendiagnosis dan merawat penyakit haiwan dengan menggunakan alatan / kaedah / prosedur yang sesuai secara kompeten.	menganalisis, membangunkan strategi penyiasatan dan penyelesaian masalah penyakit haiwan secara kritikal dan holistik.	menyampaikan maklumat berkenaan penemuan diagnosis dan kaedah merawat haiwan melalui lisan atau bertulis secara berkesan dan berhemah.	berinteraksi, berkolaborasi dan bekerja secara berpasukan dalam diagnosis dan rawatan penyakit haiwan.	mengamalkan sikap beretika, berintegriti dan profesional semasa melaksanakan tanggungjawab sebagai pengamal veterinar pada setiap masa dan keadaan.	menggunakan kemahiran dan prinsip pembelajaran sepanjang hayat dengan memanfaatkan teknologi dan aplikasi digital secara beretika bagi menyelesaikan masalah dalam bidang sains dan perubatan veterinar.	menggunakan pengetahuan dan kemahiran personal dalam diagnosis dan rawatan penyakit haiwan serta potensi keusahawanan dalam bidang perubatan veterinar.	memimpin dan memikul tanggungjawab secara profesional dalam pelbagai bidang merentas disiplin sejajar dengan kod amalan Majlis Veterinar Malaysia.	mempamerkan kemahiran kuantitatif dan numerasi yang relevan dalam pembelajaran, pekerjaan dan aktiviti berkaitan dengan bidang yang diceburi.
		PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
		C	**P**	**C**	**A**	**A**	**A**	**A**	**A**	**A**	**C**
1.	Veterinawan yang kompeten, beretika dan berdaya saing yang dapat berkecimpung dalam bidang sains veterinar secara holistik.	√	√	√	√			√			
2.	Veterinawan yang terlibat dalam mengejar pengetahuan dan kemahiran sepanjang hayat menerusi pembelajaran multidisiplin yang sesuai dengan kerjaya dan profesion yang diceburi.	√	√	√				√			√
3.	Veterinawan yang menyumbang kepada peningkatan kualiti hidup dan kesejahteraan haiwan, manusia dan ekosistem serta keharmonian dan perpaduan negara melalui perkhidmatan dan industri veterinar				√	√	√		√	√	
Jumlah Kursus		**59**	**44**	**41**	**25**	**6**	**10**	**26**	**6**	**5**	**6**

1. Kursus Universiti/ *University Courses* (20 Kredit/ *credits*)

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T	PRASYARAT/ *PREREQUISITE*
SKP3112*	Falsafah dan Isu Semasa/ *Philosophy and Current Issues*	2	2	0	Tiada/ None
SKP3113** atau/ *or* SKP3123**	Falsafah dan Isu Semasa Masyarakat Sivil/ *Philosophy and Current Issues in Civil Society* atau/ *or* Penghayatan Etika dan Peradaban di Malaysia/ *Internalization of Ethics and Civilization in Malaysia*	3	3	0	Tiada/ None
SKP3122*	Penghayatan Etika dan Peradaban/ *Internalization of Ethics and Civilization*	2	2	0	Tiada/ None
LPM2100**	Bahasa Melayu Komunikasi/ *Malay Language Communication*	2	2	0	Tiada / None
SKP2101*	Kenegaraan Malaysia/ *Malaysian Nationhood*	3	3	0	Tiada/ *None*
FEM2401**	Politik Malaysia Dan Masyarakat/ *Malaysian Politics and Society*	2	2	0	
PRT2009	Pertanian dan Kehidupan/*Agriculture and Life*	2	1	1	Tiada/ *None*
LPE2301 (Muet 3.0 – 4.5)	Academic Interaction and Presentation	3	3	0	LPE2401 @ Muet 3 - 4
LPE2402 (Muet 5 & above)	Critical Reading Skills	3	3	0	
LPE2501 (Muet 3.0 – 4.5)	Academic Writing	3	3	0	LPE2301
LPE2502 (Muet 5 & above)	Creative Writing Skills	3	3	0	
QKXXXX	Kokurikulum Berkredit	1	0	1	Tiada/ *None*
QKXXXX	Kokurikulum Berkredit	1	0	1	Tiada/ *None*
VPP3171	Keusahawanan Veterinar	3	2	1	Tiada/ *None*
ELEx					

Nota: * pelajar tempatan/ *local student* **pelajar antarabangsa/ *international student*

2. Kursus Teras/ *Core Courses* (166 kredit/ *credits*)

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T	PRASYARAT/ *PREREQUISITE*
i) KURSUS ASAS					
VPP3021	Biokimia Veterinar/ *Veterinary Biochemistry*	3	2	1	Tiada/ *None*
VPP3110	Pengenalan Sains Ternakan/ *Introduction to Livestock Science*	3	2	1	Tiada/ *None*
VPP3111	Penternakan dan Pengurusan Kesihatan Ruminan/ *Ruminant Husbandry and Health Management*	3	2	1	VPP3110

VPP3112	Penternakan dan Pengurusan Kesihatan Bukan Ruminan/ *Non-Ruminant Husbandry and Health Management*	3	2	1	VPP3110
VPP3130	Pemakanan Veterinar/ *Veterinary Nutrition*	3	2	1	VPP3021
VPP3140	Genetik Veterinar/ *Veterinary Genetics*	3	2	1	Tiada/ *None*
VPP3160	Statistik Gunaan dan Kaedah Penyelidikan/ *Applied Statistics & Research Methods*	3	2	1	Tiada/ *None*
VPP3214	Histologi dan Anatomi Perkembangan Veterinar/ *Veterinary Histology and Developmental Anatomy*	3	2	1	Tiada/ *None*
VPP3215	Struktur dan Fungsi Veterinar I/ *Veterinary Structure and Function I*	4	2	2	Tiada/ *None*
VPP3216	Struktur dan Fungsi Veterinar II/ *Veterinary Structure and Function II*	4	2	2	Tiada/ *None*
VPP3217	Struktur dan Fungsi Veterinar III/ *Veterinary Structure and Function III*	4	2	2	Tiada/ *None*
VPP3218	Struktur dan Fungsi Veterinar IV/ *Veterinary Structure and Function IV*	4	2	2	Tiada/ *None*
VPP3251	Farmakologi dan Toksikologi Veterinar/ *Veterinary Pharmacology And Toxicology*	4	3	1	Tiada/ *None*
VPP3272	Etologi dan Kebajikan Haiwan/ *Ethology and Animal Welfare*	2	1	1	Tiada/ *None*
VPM3301	Bakteriologi Dan Mikologi Veterinar/ *Veterinary Bacteriology and Mycology*	3	2	1	Tiada/ *None*
VPM3340	Virologi Veterinar/ *Veterinary Virology*	3	2	1	Tiada/ *None*
VPM3353	Parasitologi Veterinar / *Veterinary Parasitology*	4	3	1	Tiada/ *None*
VPM3361	Jangkitan dan Keimunan/ *Infection and Immunity*	2	1	1	VPP3215
VPM3415	Patologi Veterinar Am/ *General Veterinary Pathology*	3	2	1	VPP3214
VPM3418	Patologi Veterinar Sistem I/ *Systemic Veterinary Pathology I*	3	2	1	VPM3415
VPM3419	Patologi Veterinar Sistem II/ *Systemic Veterinary Pathology II*	3	2	1	VPM3415
VPM4430	Patologi Klinikal Veterinar/ *Veterinary Clinical Pathology*	3	2	1	VPP3216
VPM4501	Keselamatan dan Kebersihan Makanan/ *Food Safety and Hygiene*	2	1	1	VPM3301
VPM4502	Zoonosis dan *One Health/ Zoonoses and One Health*	2	1	1	Tiada/ *None*
VPK3613	Perubatan Klinikal Veterinar I/ *Veterinary Clinical Medicine I*	2	2	0	VPK3612
VPK3921	Jurisprudens dan Etika Veterinar/ *Veterinary Ethics and Jurisprudence*	1	1	0	Tiada/ *None*
VPK4621	Epidemiologi Veterinar/ *Veterinary Epidemiology*	3	3	0	Tiada/ *None*

VPK4640	Perubatan Felin dan Kanin/ *Feline and Canine Medicine*	3	3	0	VPK3614
VPK4650	Perubatan Ekuin/ *Equine Medicine*	2	2	0	VPK3614
VPK4660	Perubatan Ruminan/ *Ruminant Medicine*	3	3	0	VPP3614
VPK4670	Perubatan Babi/ *Pig Medicine*	2	2	0	VPK3614
VPK4680	Perubatan Avian/ *Avian Medicine*	2	2	0	VPM3419
VPK4695	Perubatan Haiwan Eksotik dan Hidupan Liar/ *Exotic Animal and Wildlife Medicine*	2	2	0	VPK3614
VPD4959	Disertasi Bacelor/ *Bachelor Dissertation*	3	0	3	Tiada/ *None*
VPD4972	Siasatan dan Penyelesaian Masalah Veterinar/ *Veterinary Problem-Solving and Investigation*	1	0	1	Tiada/ *None*
ii) KURSUS KLINIKAL					
VPK3612	Kemahiran Klinikal Veterinar/ *Veterinary Clinical Skills*	2	1	1	Tiada/ *None*
VPK3614	Perubatan Klinikal Veterinar II/ *Veterinary Clinical Medicine II*	3	2	1	VPK3612
VPK3702	Anestesiologi dan Surgeri Am Veterinar/ *Veterinary Anesthesiology and General Surgery*	4	2	2	VPP3217
VPK3712	Surgeri Veterinar Sistem Badan/ *Veterinary Surgery of the Body Systems*	4	3	1	VPK3702
VPK3750	Pengimejan Diagnostik Veterinar/ *Veterinary Diagnostic Imaging*	2	1	1	VPP3215
VPK3802	Teriogenologi/ *Theriogenology*	2	1	1	VPP3217
VPK3910	Pengenalan Profesion Veterinar/ *Introduction to Veterinary Profession*	1	0	1	Tiada/ *None*
VPK3933	Amalan Klinikal dan Diagnosis I/ *Clinical Practice and Diagnosis I*	3	0	3	VPK3612, VPK3702
VPK3934	Amalan Klinikal dan Diagnosis II/ *Clinical Practice and Diagnosis II*	3	0	3	VPK3614, VPK3933
VPK4692	Kesihatan dan Pengurusan Haiwan Akuatik/ *Aquatic Animal Health and Management*	3	2	1	Tiada/ *None*
VPK4945	Amalan Klinikal Veterinar I/ *Veterinary Clinical Practice I*	14	0	14	VPK3934
VPK4946	Amalan Klinikal Veterinar II/ *Veterinary Clinical Practice II*	17	0	17	VPK4945
ii) KURSUS LATIHAN INDUSTRI					
VPD4911	Pengurusan Haiwan Kesayangan/ *Management of Companion Animals*	1	0	1	VPK3910
VPD4912	Pengurusan Haiwan Ternakan I/ *Management of Livestock I*	3	0	3	Tiada/ *None*
VPD4913	Pengurusan Haiwan Ternakan II/ *Management of Livestocks II*	3	0	3	Tiada/ *None*

VPD4914	Amalan Luar Makmal Diagnosis/ *Extramural Laboratory Diagnostic Practice*	1	0	1	Tiada/ *None*
VPD4915	Amalan Luar Klinik/ *Extramural Clinical Practice*	2	0	2	Tiada/ *None*

Nota/*Notes :* Kursus Latihan Industri dilaksanakan semasa cuti semester/ *Industrial Training courses are conducted during semester breaks.*

3. Elektif/ *Elective* (6 kredit/ *credits*)

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T	PRASYARAT/ *PREREQUISITE*
DCE3406	Kepimpinan dalam Pengembangan dan Pembangunan Masyarakat/*Leadership In Extension & Community Development*	4	4	0	Tiada/ *None*
KOC3433	Kemahiran Komunikasi keorganisasian / *Organisational Communication Skills*	3	3	0	Tiada/ *None*
ECN3010	Prinsip Ekonomi/*Principles Of Economics*	3	3	0	Tiada/ *None*
ECN3113	Ekonomi Malaysia/ *Malaysian Economics*	3	3	0	Tiada/ *None*
AKU3201	Prinsip Akuakultur/ *Principles Of Aquaculture*	3	2	1	Tiada/ *None*

Nota/ Notes : Kr = Jam Kredit/ *Credit Hour*, K = Kuliah/ *Lecture*, A = Amali/ *Laboratory*, T = Tutorial,

4. Peperiksaan Profesional/Komprehensif

KOD PEPERIKSAAN/ EXAMINATION *CODE*	NAMA PEPERIKSAAN/ *EXAMINATION NAME*	Kr	K	A/T	PRASYARAT/ *PREREQUISITE*
VCE4400	*Peperiksaan Pra-komprehensif/ *Pre-Comprehensif Examination*	-	-	-	Lulus semua kursus yang ditawarkan dari semester 1 hingga semester 5/ *Pass all courses offered from 1st semester until 5th semester*
VCE4900	**Peperiksaan Komprehensif/ *Comprehensive Examination*	-	-	-	Lulus semua kursus teras/ *Pass all core courses*

Nota Penting / *Important Notes* :

1. * Pelajar yang telah lulus semua kursus lima semester pertama akan menduduki Peperiksaan Pra-komprehensif (VCE4400) (Peperiksaan Profesional Tahap 1). Peperiksaan ini akan dilaksanakan pada semester keenam untuk menilai tahap kefahaman pelajar dalam kursus praklinikal dan paraklinikal. Pelajar perlu lulus peperiksaan pra-komprehensif (VCE4400) bagi meneruskan pengajaran dan pembelajaran sehingga penghujung semester keenam. Sekiranya pelajar gagal Peperiksaan Pra-komprehensif (VCE4400), pelajar perlu menukar program/ *Students must pass all courses offered from 1st semester until 5th semester for sitting the Pre-comprehensif Examination (VCE4400) which is also known as Phase 1 Profesional Examination. This examination is conducted in 6th semester to evaluate the understanding level of students on preclinical and paraclinical courses. Students are required to pass the examination to continue their study until the end of semester 6. If the students fail the examination, they have to drop the program and change to the other program.*

2. ** Peperiksaan Komprehensif (VCE4900) (Peperiksaan profesional Tahap 2) dilaksanakan pada semester kesepuluh yang merangkumi semua kursus asas dan klinikal secara integrasi. Pelajar perlu lulus peperiksaan ini sebelum bergraduat/ *The Comprehensive Examination (VCE4900) (Phase 2 Profesional Examination) is conducted in 10th semester which integratedly composes all core courses and clinical courses. Students are required to pass the examination to graduate.*

3. Pelajar diwajibkan memilih 2 kredit daripada kursus kokurikulum yang ditawarkan oleh universiti/ It is *compulsory for students to take 2 credits of co-curriculum courses offered by the university*

4. Kursus Elektif ditawarkan kepada pelajar akan ditetapkan oleh Fakulti berdasarkan senarai kursus elektif yang telah diluluskan oleh Senat Universiti./ *Elective courses offered to the students will be determined by the faculty based on the list of elective courses that have been approved by the University Senate.*

5. Pelajar perlu melengkapkan pakej keperluan Bahasa Inggeris seperti jadual di bawah :
(Butiran lanjut mengenai CEL dan LAX Skema ELEx Untuk Program Doktor Perubatan Veterinar yang disertakan di dalam buku in) / Students *need to complete the english package as the table below : (For more details on CEL and LAX please refer to the* Elex Scheme For Doctor Of Veterinary Medicine *Students in this book).*

CEFR Tahap	**MUET Tahap**	**TOEFL/IELTS Skor**	**CIEP Tahap**	**Pearson Test of English (PTE) Academic Skor**	**Cambridge English Skor**	**Keperluan Bergraduat**
C1 – C2	**5.0 – 5+**	TOEFL iBT 95 – 120 IELTS 7.0 – 9.0	-	76 - 90	180 – 230	2 LPE + 1 CEL + 24 mata LAX
B1 – B2	**3.0 – 4.5**	TOEFL iBT 42 – 94 IELTS 4.0 – 6.5	104 – 109	43 – 75	140 – 179	2 LPE + 2 CEL + 24 mata LAX

SKEMA PENGAJIAN/ *STUDY SCHEME*

TAHUN 1/ *1ST YEAR*

SEMESTER 1/ *1ST SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
SKP3112*	Falsafah dan Isu Semasa/ *Philosophy and Current Issues*	2	2	0
SKP3113** atau/ *or* SKP3123**	Falsafah dan Isu Semasa Masyarakat Sivil/ *Philosophy and Current Issues in Civil Society* atau/ *or* Penghayatan Etika dan Peradaban di Malaysia/ *Internalization of Ethics and Civilization in Malaysia*	3	3	0
SKP3122*	Penghayatan Etika dan Peradaban/ *Internalization of Ethics and Civilization*	2	2	0
LPM2100**	Bahasa Melayu Komunikasi/ *Malay Language Communication*	2	2	0
VPP3021	Biokimia Veterinar/ *Veterinary Biochemistry*	3	2	1
VPP3110	Pengenalan Sains Ternakan / *Introduction to Livestock Science*	3	2	1
VPP3214	Histologi dan Anatomi Perkembangan *Veternar/ Veterinary Histology and Developmental Anatomy*	3	2	1
VPP3215	Struktur dan Fungsi Veterinar I/ *Veterinary Structure and Function I*	4	2	2
VPK3910	Pengenalan Profesion Veterinar/ *Management of Companion Animals*	1	0	1
LAX2018 (Muet 3.0 & above)	Teh Tarik Book Chat	DK		
QKXXXX	Kokurikulum/ Co-curriculum	1	0	1
	JUMLAH/ *TOTAL*	**19**	**12**	**7**

SEMESTER 2/ *2ND SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
SKP2101*	Kenegaraan Malaysia/ *Malaysian Nationhood*	3	3	0
FEM2401**	Politik Malaysia Dan Masyarakat/ *Malaysian Politics and Society*	2	2	0
PRT2009	Pertanian dan Kehidupan/*Agriculture and Life*	2	1	1
VPP3140	Genetik Veterinar/ *Veterinary Genetics*	3	2	1
VPP3171	Keusahawanan Veterinar/ *Veterinary Entrepreneurship*	3	2	1
VPP3216	Struktur dan Fungsi Veterinar II/ *Veterinary Structure and Function II*	4	2	2

VPD4911	Pengurusan Haiwan Kesayangan / *Management of Companion Animals*	1	0	1
LPE2301 (Muet 3.0 – 4.5)	Academic Interaction and Presentation	3	3	0
LPE2402 (Muet 5 & above)	Critical Reading Skills	3	3	0
QKXXXX	Kokurikulum/ Co-curriculum	1	0	1
	JUMLAH/ *TOTAL*	**20**	**13**	**7**

TAHUN 2/ *2ND YEAR*

SEMESTER 1/ *1ST SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPP3217	Struktur dan Fungsi Veterinar III/ *Veterinary Structure and Function III*	4	2	2
VPP3272	Etologi dan Kebajikan Haiwan/ *Ethology and Animal Welfare*	2	1	1
VPM3301	Bakteriologi dan Mikologi Veterinar/ *Veterinary Bacteriology and Mycology*	3	2	1
VPM3353	Parasitologi Veterinar/ *Veterinary Parasitology*	4	3	1
VPM3415	Patologi Veterinar Am/ General *Veterinary Pathology*	3	2	1
LPE2501 (Muet 3.0 – 4.5)	Academic Writing	3	3	0
LPE2502 (Muet 5 & above)	Creative Writing Skills	3	3	0
	JUMLAH/ *TOTAL*	**19**	**13**	**6**

SEMESTER 2/ *2ND SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPP3130	Pemakanan Veterinar / *Veterinary Nutrition*	3	2	1
VPP3218	Struktur dan Fungsi Veterinar IV/ *Veterinary Structure and Function IV*	4	2	2
VPM3340	Virologi Veterinar/ *Veterinary Virology*	3	2	1
VPM3418	Patologi Veterinar Sistem I/ *Systemic Veterinary Pathology I*	3	2	1
VPK3612	Kemahiran Klinikal Veterinar/ *Veterinary Clinical Skills*	2	1	1
VPD4912	Pengurusan Haiwan Ternakan I/ *Management of Livestock I*	3	0	3
CEL2106 (Muet 3.0 – 4.5)	Communication for Professional Development	DK		

LAX12pt (Muet 3.0 & above)	LAX 12 points	DK		
	JUMLAH/ *TOTAL*	**18**	**9**	**9**

TAHUN 3/ *3RD YEAR*

SEMESTER 1/ *1ST SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPP3111	Penternakan dan Pengurusan Kesihatan Ruminan/ *Ruminant Husbandry and Health Management*	3	2	1
VPP3112	Penternakan dan Pengurusan Kesihatan Bukan Ruminan/ *Non-Ruminant Husbandry and Health Management*	3	2	1
VPP3251	Farmakologi dan Toksikologi Veterinar / *Veterinary Pharmacology And Toxicology*	4	3	1
VPM3361	Jangkitan dan Keimunan/ *Infection and Immunity*	2	1	1
VPM3419	Patologi Veterinar Sistem II/ *Systemic Veterinary Pathology II*	3	2	1
VPK3613	Perubatan Klinikal Veterinar I/ *Veterinary Clinical Medicine I*	2	2	0
CEL2105 (Muet 3.0 & above)	Spoken Communication for the Workplace	DK		
	JUMLAH/ *TOTAL*	**17**	**12**	**5**

SEMESTER 2/ *2ND SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPM4430	Patologi Klinikal Veterinar/ *Veterinary Clinical Pathology*	3	2	1
VPK3614	Perubatan Klinikal Veterinar II/ *Veterinary Clinical Medicine II*	3	2	1
VPK3702	Anestesiologi dan Surgeri Am/ *General Surgery and Anaesthesiology*	4	2	2
VPK3750	Pengimejan Diagnosis Veterinar/ *Veterinary Diagnostic Imaging*	2	1	1
VPK3921	Jurisprudens dan Etika Veterinar/ *Veterinary Ethics and Jurisprudence*	1	1	0
VPK4692	Kesihatan dan Pengurusan Haiwan Akuatik/ *Aquatic Animal Health and Management*	3	2	1
VPD4972	Siasatan dan Penyelesaian Masalah Veterinar/ *Veterinary Problem-Solving and Investigation*	1	0	1
VPD4913	Pengurusan Haiwan Ternakan II/ *Management of Livestocks II*	3	0	3

VPD4914	Amalan Luar Makmal Diagnosis/ *Extramural Laboratory Diagnostic Practice*	1	0	1
VCE4400	Peperiksaan Pra-komprehensif/ *Pre-comprehensive Examination*	-	-	-
	JUMLAH/ *TOTAL*	**21**	**10**	**11**

TAHUN 4/ *4TH YEAR*

SEMESTER 1/ *1ST SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPP3160	Statistik Gunaan dan Kaedah Penyelidikan/ *Applied Statistics & Research Methods*	3	2	1
VPM4501	Keselamatan dan Kebersihan Makanan/ *Food Safety and Hygiene*	2	1	1
VPK3712	Surgeri Veterinar Sistem Badan/ *Veterinary Surgery of the Body Systems*	4	3	1
VPK3802	Teriogenologi /*Theriogenology*	2	1	1
VPK3933	Amalan Klinikal dan Diagnosis I/ *Clinical Practice and Diagnosis I*	3	0	3
VPK4670	Perubatan Babi/ *Pig Medicine*	2	2	0
VPK4680	Perubatan Avian/ *Avian Medicine*	2	2	0
VPK4695	Perubatan Haiwan Eksotik dan Hidupan Liar/ *Exotic Animal and Wildlife Medicine*	2	2	0
	JUMLAH/ *TOTAL*	**20**	**13**	**7**

SEMESTER 2/ *2ND SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPM4502	Zoonosis dan *One Health/ Zoonoses and One Health*	2	1	1
VPK3934	Amalan Klinikal dan Diagnosis II/ *Clinical Practice and Diagnosis II*	3	0	3
VPK4621	Epidemiologi Veterinar/ *Veterinary Epidemiology*	3	3	0
VPK4640	Perubatan Felin dan Kanin/ *Feline and Canine Medicine*	3	3	0
VPK4650	Perubatan Ekuin/ *Equine Medicine*	2	2	0
VPK4660	Perubatan Ruminan/ *Ruminant Medicine*	3	3	0
VPD4915	Amalan Luar Klinik/ *Extramural Clinical Practice*	2	0	2
XXX0000	*Elektif Bebas/ *Elective Course*	3	3	0
	JUMLAH/ *TOTAL*	**21**	**15**	**6**

TAHUN 5/ *5TH YEAR*

SEMESTER 1/ *1ST SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPK4945	Amalan Klinikal Veterinar I/ *Veterinary Clinical Practice I*	14	0	14
VPD4959	Disertasi Bacelor/ *Bachelor Dissertation*	3	0	3
	JUMLAH/ *TOTAL*	**17**	**0**	**17**

SEMESTER 2/ *2ND SEMESTER*

KOD KURSUS/ *COURSE CODE*	NAMA KURSUS/*COURSE NAME*	Kr	K	A/T
VPK4946	Amalan Klinikal Veterinar II/ *Veterinary Clinical Practice II*	17	0	17
XXX0000	*Elektif Bebas/ *Elective Course*	3	3	0
VCE4900	*Peperiksaan Komprehensif/ *Comprehensive Examination*	-	-	-
	JUMLAH/ *TOTAL*	**20**	**3**	**17**

Nota/*Notes* :

* Pelajar yang telah lulus semua kursus lima semester pertama akan menduduki peperiksaan Pra-komprehensif (VCE4400) (Peperiksaan profesional Tahap 1). Peperiksaan ini akan dilaksanakan pada semester keenam untuk menilai tahap kefahaman pelajar dalam kursus praklinikal dan paraklinikal. Pelajar perlu lulus peperiksaan pra-komprehensif (VCE4400) bagi meneruskan pengajaran dan pembelajaran sehingga penghujung semester keenam. Sekiranya pelajar gagal peperiksaan pra-komprehensif (VCE4400), pelajar perlu menukar program./ *Students must pass all courses offered from 1st semester until 5th semester for sitting the Pre-comprehensif Examination (VCE4400) which is also known as Phase 1 Profesional Examination. This examination is conducted in 6th semester to evaluate the understanding level of students on preclinical and paraclinical courses. Students are required to pass the examination to continue their study until the end of semester 6. If the students fail the examination, they have to drop the program and change to the other program.*

* Peperiksaan Komprehensif (VCE4900) (Peperiksaan profesional Tahap 2) dilaksanakan pada semester kesepuluh yang merangkumi semua kursus asas dan klinikal secara integrasi. Pelajar perlu lulus peperiksaan ini untuk bergraduat./ *The Comprehensive Examination (VCE4900) (Phase 2 Profesional Examination) is conducted in 10th semester which integratedly composes all core courses and clinical courses. Students are required to pass the examination to graduate.*

* Pelajar diwajibkan memilih 2 kredit daripada kursus kokurikulum, 6 kredit kursus elektif yang ditawarkan oleh universiti./ *Students are required to choose 2 credits of co-curricular courses and 6 credits of elective courses offered by the university.*

* Kursus VPD4911, VPD4912, VPD4913, VPD4914 dan VPD4915 adalah kursus latihan industri yang dilaksanakan semasa cuti semester./ *VPD4911, VPD4912, VPD4913, VPD4914 and VPD4915 are the Industrial Training courses conducted during semester breaks.*

SINOPSIS KURSUS/ *COURSE SYNOPSIS*

Jabatan Sains Praklinikal Veterinar/ *Department of Veterinary Preclinical Sciences*

VPP3021 Biokimia Veterinar/ *Veterinary Biochemistry* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi aspek biokimia asas termasuk mekanismanya dalam metabolisme sel, tisu dan organ dalam badan haiwan normal dan abnormal. Penyelenggaraan sel, metabolisma tisu dan organ ditekankan. Prinsip proses biokimia dalam homoeostasis badan haiwan normal dibincangkan.

This course covers aspects of basic biochemistry which include its mechanisms in the cell, tissue and organ metabolism in the normal and abnormal animal body. Cell, tissue and organ metabolism are emphasized. The principles of biochemistry processes in homoeostasis are discussed.

VPP3110 Pengenalan Sains Ternakan/ *I*ntroduction *to Livestock Science* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi kepentingan pertanian haiwan untuk peradaban manusia. Amalan pertanian haiwan semasa dan pertanian lestari diperkenalkan. Asas kesejahteraan haiwan dan kesihatan haiwan, serta amalan kesihatan haiwan yang baik dibincangkan.

This course covers the importance of animal agriculture for human civilization. Current animal agriculture and sustainable agriculture are introduced. Basic animal well-being, health and good animal health practices are discussed.

VPP3111 Penternakan Dan Pengurusan Kesihatan Ruminan/ *Ruminant Husbandry and Health Management* 3 (2+1)

Prasyarat/ Prerequisite : VPP3110

Kursus ini merangkumi aspek pengurusan ternakan ruminan pedaging, tenusu serta produksi ruminan kecil. Keperluan utama pembangunan sistem produksi ruminan serta kaedah pengendalian susu dan karkas dalam pengeluaran ruminan ditekankan. Keperluan pengurusan bahan buangan ternakan dan kesihatan haiwan dibincangkan.

This course covers the management of beef and dairy animals, as well as small ruminant production. Major requirements in ruminant production and handling technique on milk and carcasses are emphasized. The requisite of livestock waste and animal health management is discussed.

VPP3112 Penternakan Dan Pengurusan Kesihatan Bukan Ruminan/ *Non-Ruminant Husbandry And Health Management* 3 (2+1)

Prasyarat/ Prerequisite: VPP3110

Kursus ini merangkumi aspek pengurusan ternakan poltri pedaging dan penelur serta produksi babi. Keperluan utama dalam pembangunan sistem dan pengendalian produksi bukan ruminan ditekankan. Pengurusan kesihatan haiwan serta pengendalian hasil buangan dibincangkan.

This course covers the management aspect of poultry in broilers and layers, and pig production. Major requirement in system development and production handling in non-ruminants are emphasized. Animal health and waste management are discussed.

VPP3130 Pemakanan Veterinar/ *Veterinary Nutrition* 3 (2+1)

Prasyarat/ Prerequisite: VPP3021

Kursus ini merangkumi ciri dan kepentingan nutrien dalam pemakanan haiwan, pengambilan rela serta keperluan nutrien oleh pelbagai jenis haiwan. Keseimbangan dan peranan komponen utama makanan, kaedah merumus rangsum dan penentuan nilai cerna dibincangkan.

This course encompasses the characteristics and importance of nutrients in animal nutrition, voluntary intake as well as nutrient requirements of animals. The balance and role of main component of feed, feed formulation and digestibility determination techniques are discussed.

VPP3140 Genetik Veterinar/ *Veterinary Genetics* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi prinsip pewarisan genetik, genetik molekular dan populasi pengesanan penyakit, pembiakbakaan dan pemilihan haiwan kesayangan dan haiwan bela jinak melalui prinsip genetik ditekankan. Kepelbagaian aspek genetik bagi penyakit dan kecacatan genetik untuk haiwan kesayangan dan haiwan bela jinak dapat diterapkan.

This course encompasses the principles of genetic inheritance, molecular/clinical genetics and, population and quantitative genetics in the breeding and selection of domestic and companion animals. This course also discuss selection methods, crossbreeding systems, genetic analyses and genetic defects.

VPP3160 Statistik Gunaan Dan Kaedah Penyelidikan/ *Applied Statistics & Research Methods* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini meliputi perancangan, pengurusan sumber, perlaksanaan serta tafsiran hasil penyelidikan. Pembinaan projek penyelidikan yang rasional dan penilaian kesahihan laporan penyelidikan ditekankan.

This course covers planning, resource management, execution as well as interpretation of research outcomes. Constructing rational research projects as well as being able to assess the validity of research reports are emphasized.

VPP3171 Keusahawanan Veterinar/ *Veterinary Entrepreneurship* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini meliputi konsep, prinsip, pengetahuan dan aplikasi keusahawanan dalam merancang dan membuat keputusan untuk memulakan klinik veterinar. Kanvas model perniagaan dan rancangan pemasaran untuk memenuhi keperluan, kehendak dan permintaan pemilik haiwan kesayangan ditekankan. Pembentukan rancangan perniagaan klinik veterinar didedahkan.

This course covers concepts, principles, knowledge and application of entrepreneurship in planning and decision making of veterinary clinic start-up. Business model canvas and marketing plan to fulfil the need, wants and demand by the pet owners is emphasized. Development of veterinary clinic business plan is exposed.

VPP3214 Histologi Dan Anatomi Perkembangan Veterinar/ *Veterinary Histology and Developmental Anatomy* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi pelbagai istilah yang sering digunakan dalam anatomi, histologi dan embriologi veterinar. Pembentukan awal embrio, struktur sel dan struktur histologi empat tisu asas haiwan ditekankan. Perbandingan struktur histologi sel dan tisu asas serta perkaitannya dengan fungsi organ badan dibincangkan.

This course encompasses various terminologies commonly used in veterinary anatomy, histology and embryology. Early embryo, cell structure and histological structure of four basic tissues of animals are emphasized. Comparison of cell histological structure and basic tissues as well as their relationship with the body organ function are discussed.

VPP3215 Struktur Dan Fungsi Veterinar I/ *Veterinary Structure and Function I* 4 (2+2)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini meliputi integrasi struktur dan fungsi badan haiwan merangkumi histologi, anatomi kasar dan fungsi sistem kardiovaskular, limfatik, hematopoietik, immunologi dan rangka otot. Kemahiran diseksi, pemeriksaan spesimen segar dan awet serta pemeriksaan slaid histologi didedahkan. Hubung kait struktur dan fungsi ditekankan.

This course covers the integration of structure and function of animal body which encompasses histology, anatomy and function of cardiovascular, lymphatic, haematopoietic, immunology and musculoskeletal systems. Dissection skill, examination of fresh and preserved specimens as well as examination of histological slide techniques are exposed. Relationship of structure and function is emphasized.

VPP3216 Struktur Dan Fungsi Veterinar II/ *Veterinary Structure and Function II* 4 (2+2)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini meliputi integrasi struktur dan fungsi badan haiwan merangkumi histologi, anatomi kasar dan fungsi sistem pencernaan, urinari dan pernafasan. Kemahiran diseksi, pemeriksaan spesimen segar dan awet serta pemeriksaan slaid histologi didedahkan. Hubung kait struktur dan fungsi ditekankan.

This course covers the integration of structure and function of the animal body which encompasses histology, gross anatomy and function of the animal digestive, urinary and respiratory system. Dissection skill, examination of fresh body organs and preserved specimens as well as examination of histological slides are exposed. Relationship of structure and function is emphasized.

VPP3217 Struktur Dan Fungsi Veterinar III/ *Veterinary Structure and Function III* 4 (2+2)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merupakan kursus integrasi struktur dan fungsi badan haiwan merangkumi histologi, anatomi kasar dan fungsi sistem reproduksi dan endokrin, fisiologi persekitaran, mekanisma tekanan dan ikan. Kemahiran diseksi dan pemeriksaan spesimen segar ke atas organ badan didedahkan. Hubung kait struktur dan fungsi ditekankan.

This course covers the integration of structure and function of the animal body which encompasses histology, gross anatomy and function of the animal reproductive and endocrine, environmental physiology, stress mechanism and fish. Dissection skill and examination of fresh body organs are exposed. Relationship of structure and function is emphasized.

VPP3218 Struktur Dan Fungsi Veterinar IV/ *Veterinary Structure and Function IV* 4 (2+2)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini meliputi integrasi struktur dan fungsi badan haiwan merangkumi histologi, anatomi kasar, fungsi sistem saraf, integumen dan organ deria. Kemahiran diseksi, pemeriksaan spesimen segar dan awet serta pemeriksaan slaid histologi didedahkan. Hubung kait struktur dan fungsi ditekankan.

This course covers the integration of structure and function of the animal body which encompasses the histology, gross anatomy, function of nervous system, integumentary and sense organs. Dissection skills, examination of fresh and preserved specimens as well as examination of histological slides are exposed. Relationship of structure and function is emphasized.

VPP3251 Farmakologi Dan Toksikologi Veterinar/ *Veterinary Pharmacology And Toxicology* 4 (3+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi penggunaan drug berdasarkan prinsip farmakologi dan toksikologi dengan keutamaan kepada kesan drug dan racun terhadap sistem biologi, mekanisma dan tapak tindakan. Aplikasi terapeutik, kesan ketoksikan, perbezaan respon perumah kepada agen terapeutik, faktor mempengaruhi keberkesanan drug, ketoksikan dan prinsip umum rawatan keracunan dibincangkan. Konsep dan prinsip farmakokinetik, farmakodinamik dan kimoterapi pada haiwan ditekankan.

This course encompasses use of drugs based on principles of pharmacology and toxicology with emphasis given to effects of drugs and poisons on biologic systems, their mechanisms and sites of action. Therapeutic applications, toxicity effects, differences in host response to therapeutic agents, factors influencing the effectiveness, toxicity and the general principles of treatment of poisoning is discussed. Concept and principle of pharmacokinetic, pharmacodynamic and chemotherapy are emphasized.

VPP3272 Etologi Dan Kebajikan Haiwan/ *Ethology and Animal Welfare* 2 (1+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi aspek tingkah laku haiwan, penyebab tingkah laku dan implikasinya ke atas pengurusan, produksi, kesihatan dan kebajikan. Keperluan kebajikan haiwan dan penilaiannya ditekankan. Kesan interaksi manusia-haiwan, domestikasi dan persekitaran fizikal yang disediakan terhadap perlakuan dan kebajikan haiwan dibincangkan.

This course encompasses various aspects of animal behaviour, causes of behaviour and their implications on animal management, production, health and welfare. The necessities of animal welfare and its assessment is emphasized. The effects of human–animal interaction, domestication and physical environment are discussed.

Jabatan Patologi dan Mikrobiologi Veterinar/ *Department of Veterinary Pathology & Microbiology*

VPM3301 Bakteriologi Dan Mikologi Veterinar/ *Veterinary Bacteriology and Mycology* 3 (2+1)

Prasyarat/ Prerequisite : Tiada*/Null*

Kursus ini merangkumi konsep dan prinsip bidang bakteriologi dan mikologi serta peranan bakteria dan kulat dalam menyebabkan penyakit termasuk penyebaran bakteria dalam jangkitan, langkah pencegahan dan pengawalan bakteria zoonosis. Teknik dan prinsip diagnosis pengenalpastian agen penyebab penyakit ditekankan. Kebolehan pelbagai bakteria dalam menyebabkan penyakit dibincangkan.

This course encompasses the concepts and principles in bacteriology and mycology and the role of bacteria and fungi in causing diseases including transmission of the bacteria in infection, methods for the control and prevention of bacterial zoonoses. Diagnosis techniques and principles of disease agent is emphasized. The ability of different bacteria in causing diseases is discussed.

VPM3340 Virologi Veterinar/ *Veterinary Virology* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi prinsip dasar virologi yang berkaitan dengan agen virus, penyakit virus penting bagi haiwan, penyakit virus zoonosis termasuk penyakit virus semasa yang muncul dan baru muncul. Teknik diagnosis dalam pemencilan dan pengenalpastian virus diaplikasikan. Keupayaan virus dalam menyebabkan penyakit kepada haiwan dibincangkan.

This course covers the fundamental principles of virology related to viral agents, viral diseases of veterinary significance, viral zoonotic diseases including the current emerging and remerging viral diseases. Diagnostic techniques in isolation and identification of virus are applied. The ability of virus in causing disease to animals is discussed.

VPM3353 Parasitologi Veterinar/ *Veterinary Parasitology* 4 (3+1)

Prasyarat/ Prerequisite : Tiada/ *Null*

Kursus ini merangkumi kitaran hidup kumpulan utama parasit, kesan patologi parasit, dan patogenesis penyakit teraruh parasit. Pengenalpastian parasit dan diagnosis penyakit parasit yang biasa ditemui didedahkan. Faktor epidemiologi yang melibatkan pertalian antara perumah, parasit dan persekitaran dalam kejadian penyakit ditekankan.

This course encompasses the life cycles of groups of parasites, pathological effects of parasites, and pathogenesis of diseases affected by parasite. Identification of parasites and diagnosis of common parasitic diseases are revealed. Epidemiological factors including relationship between host, parasites and environment in diseases formation are emphasized.

VPM3361 Jangkitan dan Keimunan/ *Infection and Immunity* 2 (1+1)

Prasyarat/ Prerequisite : VPP3215

Kursus ini merangkumi analisis gerakbalas imun yang membawa kepada keimunan pelindung. Ujian makmal yang terpilih untuk mengukur tindak balas keimunan didedahkan. Mekanisme gerakbalas imun terhadap pelbagai agen termasuk sel barah ditekankan.

This course encompasses analyses of immune responses that offer protective immunity. Selected laboratory tests for measurement of immune responses are revealed. Immune response mechanisms towards various agents including cancer cells are emphasized.

VPM3415 Patologi Veterinar Am/ *General Veterinary Pathology* 3 (2+1)

Prasyarat/ Prerequisite : VPP3214

Kursus ini merangkumi konsep proses penyakit dan tindakbalas tisu terhadap kecederaan, lesi makroskopi dan mikroskopi pelbagai kumpulan dan jenis lesi. Teknik laku-sendiri post mortem didedahkan. Perkembangan setiap lesi dan patogenesis penyakit dibincangkan.

This course encompasses the concept of disease process and tissue reactions to injury, gross and microscopic lesions of the various groups and types of lesions. Hands-on post-mortem technique is revealed. The development of each lesion and pathogenesis of diseases are discussed.

VPM3418 Patologi Veterinar Sistem I/ *Systemic Veterinary Pathology I* 3 (2+1)

Prasyarat/ Prerequisite : VPM3415

Kursus ini merangkumi perhubungan lesi makroskopi dan mikroskopi penting dengan penyakit yang berlaku dalam sistem hematopoietik, gastrousus, urinari, endokrin dan kardiovaskular dengan penyebab dan petanda klinikal. Patogenesis, patofisiologi, dan diagnosis penyakit akan dibincangkan dan pemeriksaan post-mortem secara guna tangan dilaksanakan.

This course encompasses the relationship of the important macroscopic and microscopic lesions, aetiology and clinical signs in disease occurrence in the hematopoietic, gastrointestinal, urinary, endocrine and cardiovascular systems. The pathogenesis, pathophysiology and diagnosis of the disease or condition are discussed, and hands-on post-mortem examination are performed.

VPM3419 Patologi Veterinar Sistem II/ *Systemic Veterinary Pathology II* 3 (2+1)

Prasyarat/ Prerequisite : VPM3415

Kursus ini merangkumi perhubungan lesi makroskopi dan mikroskopi penting dengan penyakit yang berlaku dalam sistem integumentari, saraf, rangka otot, pernafasan dan pembiakan dengan penyebab dan petanda klinikal. Patogenesis, patofisiologi, dan diagnosis penyakit akan dibincangkan dan pemeriksaan post mortem secara *hands-on* dilaksanakan.

This course encompasses the relationship of the important macroscopic and microscopic lesions, aetiology and clinical signs in disease occurrence in the integumentary, nervous, musculoskeletal, respiratory and reproductive systems. The pathogenesis, pathophysiology and diagnosis of the disease or condition are discussed, and hands-on post mortem examination is performed.

VPM4430 Patologi Klinikal Veterinar/ *Veterinary Clinical Pathology* 3 (2+1)

Prasyarat/ Prerequisite : VPP3216

Kursus ini merangkumi pentafsiran keputusan ujian darah, urin dan sitologi untuk menentukan fungsi organ. Ujian makmal yang terpilih dalam menentukan diagnosis penyakit haiwan didedahkan. Hubung kait penyakit haiwan dengan perubahan dalam parameter darah, urin dan sitologi ditekankan.

This course encompasses interpretation of blood, urine and cytology results for organ function determination. Selected laboratory tests to diagnose disease in animals are revealed. Relationship between the disease with the changes seen are emphasized.

VPM4501 Keselamatan dan Kebersihan Makanan/ *Food Safety and Hygiene* 2 (1+1)

Prasyarat/ Prerequisite : VPM3301

Kursus ini merangkumi keselamatan, kebersihan dan kualiti makanan berasal haiwan di peringkat ladang, abatoir, loji pemprosesan sehingga kepada pengguna. Kemahiran dalam pemeriksaan mikrobiologi makanan berasal haiwan diperkenalkan. Kepentingan kualiti produk dari haiwan terhadap kesihatan awam dibincangkan.

This course covers safety, hygiene and quality of foods of animal origin at farm, abattoir and food processing plant before it reaches consumers. Skills in microbiological examination of foods of animal origin is introduced. The importance of ensuring quality of animal products towards public health is discussed.

VPM4502 Zoonosis dan *One Health/ Zoonoses and One Health* 2 (1+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi zoonosis dan isu berkaitan kesihatan haiwan, persekitaran dan manusia. Pengurusan krisis kesihatan dalam kemunculan penyakit yang melibatkan interaksi dinamik antara haiwan, persekitaran dan manusia berpandukan kompetensi teras *One Health* ditekankan. Kepentingan aplikasi kaedah *One Health* dalam menangani penyakit zoonotik dan isu lain melibatkan interaksi antara manusia, haiwan dan persekitaran dibincangkan.

This course covers zoonoses and issues on animal, environmental and human health. Management of health crisis involving the dynamic interactions between animal, environment and human in disease emergence using One Health competencies is emphasized. The importance of applying One Health approach to manage issue of zoonotic diseases and other issues revolving human, animal and environment are discussed.

Jabatan Pengajian Klinikal Veterinar/ *Department of Veterinary Clinical Studies*

VPK3612 Kemahiran Klinikal Veterinar / *Veterinary Clinical Skills* 2 (1+1)

Prasyarat Prerequisite : Tiada/*Null*

Kursus ini merangkumi kemahiran untuk mengenal pasti haiwan yang sihat dan haiwan berpenyakit. Cara mendapatkan sejarah kesihatan pesakit, kemahiran dalam mengekang, pemeriksaan fizikal ke atas haiwan, dan mengenal pasti berbagai status sistemik umum dalam haiwan dibincangkan. Kaedah pemberian dan pengiraan ubat-ubatan dan penjagaan kesihatan pesakit akan ditekankan.

The course covers the skills of recognising healthy and sick animals. The way to obtain patient's health history, skills in restraining, physical examinations on animals, and identifying various general systemic statuses in animals will be discussed. Methods of administration and calculation of medications and patient health care will be emphasized.

VPK3613 Perubatan Klinikal Veterinar I / *Veterinary Clinical Medicine I* 2 (2+0)

Prasyarat/ Prerequisite: VPK3612

Kursus ini merangkumi penyakit sistem badan haiwan kesayangan dan haiwan besar. Penekanan diberikan kepada pemeriksaan khas, diagnostik pembezaan dan prinsip rawatan. Teknik diagnosis khas bagi sistem badan juga dibincangkan.

This course covers various diseases of the body systems of small animals and large animals. Emphasis is given to special examination, differential diagnoses and principle of treatments. Special diagnostic techniques for body systems are also discussed.

VPK3614 Perubatan Klinikal Veterinar II/ *Veterinary Clinical Medicine II* 3 (2+1)

Prasyarat/ Prerequisite: VPK3612

Kursus ini merangkumi penyakit sistem badan haiwan kesayangan dan haiwan besar. Penekanan diberikan kepada pemeriksaan khas, diagnostik pembezaan dan prinsip rawatan. Teknik diagnosis khas bagi sistem badan juga dibincangkan.

This course covers various diseases of the body systems of small animals and large animals. Emphasis is given to special examination, differential diagnoses and principle of treatments. Special diagnostic techniques for body systems are also discussed.

VPK3702 Anestesiologi dan Surgeri Am/ *General Surgery and Anaesthesiology* 4 (2+2)

Prasyarat/ Prerequisite : VPP3217

Kursus ini merangkumi asas surgeri am dan anestesiologi veterinar. Seliotomi dan pengkasian pada anjing atau kucing diguna untuk latihan prosedur surgeri dan anestesia. Teknik surgeri yang melibatkan sistem integumen dibincangkan.

This course encompasses the basics of veterinary surgery and anaesthesiology. Celiotomy and neuter in dogs or cats are used to practise the surgical and anaesthetic procedures. Surgical techniques involving the integument system are discussed.

VPK3712 Surgeri Veterinar Sistem Badan/ *Veterinary Surgery of the Body Systems* 4 (3+1)

Prasyarat/ Prerequisite : VPK3702

Kursus ini merangkumi pengurusan rawatan pembedahan bagi pelbagai penyakit melibatkan sistem badan haiwan kesayangan dan haiwan besar. Prosedur pembedahan spesifik tisu lembut dan ortopedik didedahkan. Perancangan teknik surgeri yang sesuai dengan keadaan penyakit dan penilaian pesakit dibincangkan.

This course covers the surgical managements of various conditions of body systems in the small and large animals. Specific surgical procedures on soft tissue and orthopaedic are exposed. Planning of suitable surgical technique with disease conditions and patient evaluation are discussed.

VPK3750 Pengimejan Diagnosis Veterinar/ *Veterinary Diagnostic Imaging* 2 (1+1)

Prasyarat/ Prerequisite: VPP3215

Kursus ini membekalkan pengenalan am kepada pengimejan diagnostik veterinar. Fizik sinaran, prinsip keselamatan sinaran, teknik pengambilan dan pemprosesan radiograf dibincangkan. Kemahiran asas dan pentafsiran radiograf ditekankan.

This course provides a general introduction to veterinary diagnostic imaging. The physics of radiation, principles of radiation safety, techniques of taking and processing radiographs are discussed. The basic skills of radiography and the interpretation of radiographs are emphasized.

VPK3802 Teriogenologi / *Theriogenology* 2 (1+1)

Prasyarat/ Prerequisite : VPP3217

Kursus ini merangkumi analisis masalah ketidaksuburan dan prosedur diagnosis. Masalah ketidaksuburan, diagnosis kebuntingan, teknik dan teknologi untuk meningkatkan keberkesanan pembiakan dibincangkan. Kepentingan teknik dan teknologi dalam pembiakan haiwan domestik ditekankan.

This course encompasses analysis of the infertility and diagnostic procedure. Issue of infertility, pregnancy diagnosis, therapeutic techniques and technology for improving reproductive efficiency will be discussed. The importance of techniques and technology for improving reproductive efficiency of domestic animals will be emphasized.

VPK3910 Pengenalan Profesion Veterinar/ *Introduction to the Veterinary Profession* 1 (0+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini memperkenalkan profesion veterinar, sejarah, badan profesional utama, dan kepelbagaian pekerjaan dalam profesion. Spesies haiwan biasa, keturunan, keperluan asasnya, pengendalian dan ikatan manusia-haiwan diperkenalkan. Peranan profesional dan tanggungjawab ahli veterinar ditekankan.

This course introduces the veterinary profession, its history, the main professional bodies, and the diversity of occupations within the profession. The common animal species, breeds, their basic needs, handling as well as the human-animal bond are introduced. Professional and responsibility of veterinarian are emphasized.

VPK3921 Jurisprudens dan Etika Veterinar/ *Veterinary Ethics and Jurisprudence* 1 (1+0)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi topik undang-undang dan peraturan yang mengawalselia pemeliharaan haiwan, amalan veterinar di Malaysia dan teori asas etika veterinar. Kepentingan undang-undang dan etika ditekankan.

This course encompasses law topics and regulations that govern animal husbandry and veterinary practice in Malaysia, and basic theory of veterinary ethics. The importance of the regulations and ethics will be emphasized.

VPK4621 Epidemiologi Veterinar/ *Veterinary Epidemiology* 3 (3+0)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi konsep dan prinsip epidemiologi. Kebolehan mengaplikasikannya untuk menyiasat isu-isu kesihatan haiwan melalui penilaian atau analisis kritikal kajian epidemiologi dan ekonomi kesihatan haiwan ditekankan.

This course covers concepts and principles of epidemiology. The ability to apply this to investigate animal health issues and critical evaluation or analysis of epidemiological studies and animal health economics are emphasized.

VPK4640 Perubatan Felin dan Kanin/ *Feline and Canine Medicine* 3 (3+0)

Prasyarat/ Prerequisite : VPK3614

Kursus ini merangkumi etiologi, epidemiologi, patogenesis, petanda klinikal, diagnosis, rawatan, kawalan, pencegahan bagi sindrom klinikal dan penyakit kanin dan felin. Tindakan dan penggunaan ubat yang berkaitan untuk rawatan serta penjagaan kesihatan diulaskan.

This course encompasses the aetiology, epidemiology, pathogenesis, clinical signs, diagnosis, treatment, control, prevention and prophylaxis of canine and feline clinical syndromes and diseases. Relevant drugs for treatment as well as patient nursing care are reviewed.

VPK4650 Perubatan Ekuin/ *Equine Medicine* 2 (2+0)

Prasyarat/ Prerequisite : VPK3614

Kursus ini merangkumi pendekatan secara sistematik ke atas penyiasatan sindrom klinikal pada ekuin. Etiologi, epidemiologi, patogenesis, petanda klinikal, diagnosis, rawatan, kawalan, pencegahan dan profilaksis penyakit dihuraikan. Tindakan dan penggunaan ubat yang sesuai untuk rawatan serta penjagaan kesihatan diliputi.

This course covers systematic approaches to investigate clinical syndromes in equine. The aetiology, epidemiology, pathogenesis, clinical signs, diagnosis, treatment, control, prevention and prophylaxis of the diseases are described. Actions and uses of relevant drugs for treatment as well as nursing care are reviewed.

VPK4660 Perubatan Ruminan/ *Ruminant Medicine* 3 (3+0)

Prasyarat/ Prerequisite : VPK3614

Kursus ini merangkumi pendekatan secara sistematik ke atas penyiasatan sindrom klinikal pada ruminan. Etiologi, epidemiologi, patogenesis, petanda klinikal, diagnosis, rawatan, kawalan dan pencegahan bagi penyakit ruminan yang lazim dan penting dibincangkan. Prinsip biosekuriti, pengunaan ubat dan penjagaan kesihatan pesakit ditekankan.

This course encompasses systematic approaches to investigate clinical syndromes in ruminants. Aetiology, epidemiology, pathogenesis, clinical signs, diagnosis, treatment, control and prevention for common and important ruminant diseases are discussed. Principles of biosecurity, the use of drugs and nursing care are emphasized.

VPK4670 Perubatan Babi/ *Pig Medicine* 2 (2+0)

Prasyarat/ Prerequisite : VPK3614

Kursus ini mendedahkan pendekatan secara sistematik ke atas penyiasatan sindrom klinikal pada babi. Etiologi, epidemiologi, patogenesis, petanda klinikal, diagnosis, rawatan, kawalan, pencegahan dan profilaksis penyakit dibincangkan. Cara pengawalan penyakit dan perancangan program kesihatan gerompok khusus untuk penternakan di tropika ditekankan.

This course deals with systematic approaches to investigate clinical syndromes in pig. The aetiology, epidemiology, pathogenesis, clinical signs, diagnosis, treatment, control, prevention and prophylaxis of these diseases are discussed. Disease control and planning for specific herd health program are emphasized.

VPK4680 Perubatan Avian/ *Avian Medicine* 2 (2+0)

Prasyarat/ Prerequisite : VPM3419

Kursus ini mendedahkan pendekatan penyiasatan secara sistematik ke atas sindrom klinikal pada avian. Etiologi, epidemiologi, patogenesis, petanda klinikal, diagnosis, rawatan, kawalan, pencegahan dan profilaksis penyakit dihuraikan. Tindakan dan penggunaan ubat yang sesuai untuk rawatan serta penjagaan kesihatan ditekankan.

This course deals with systematic approaches to investigate clinical syndromes in avian. The aetiology, epidemiology, pathogenesis, clinical signs, diagnosis, treatment, control, prevention and prophylaxis of these diseases are described. Actions and uses of relevant drugs for treatment as well as nursing care are emphasized.

VPK4692 Kesihatan Dan Pengurusan Haiwan Akuatik/ *Aquatic Animal Health and Management* 3 (2+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus ini merangkumi pelbagai aspek pengurusan akuakultur dan haiwan akuatik. Perkaitan di antara penyebab penyakit, perubahan klinikal dan patologi serta persekitaran dibincangkan. Prosedur makmal, rawatan, anestasia, pmbedahan, ujian diagnostik cepat, strategi pemvaksinan, dan penggunaan imunoperangsan dan fungsi probiotik dalam memperbaiki persekitaran didedahkan.

This course covers various aspects of aquaculture management and aquatic animals. The relationship between the causes of disease, clinical and pathological and environmental changes are discussed. Laboratory procedures, treatment, anesthesia, surgery, tests rapid diagnostics, vaccination strategies, and use of immunoperative and probiotic function in improving the environment are exposed.

VPK4695 Perubatan Haiwan Eksotik & Hidupan Liar/ *Exotic Animal and Wildlife Medicine* 2 (2+0)

Prasyarat/ Prerequisite : VPK3614

Kursus ini merangkumi asas saintifik pemuliharaan, pengurusan dan rawatan penyakit berjangkit dan bukan berjangkit hidupan liar lepas bebas dan kurungan termasuk unggas, mamalia dan reptila, roden dan haiwan eksotik. Kepentingan pemuliharaan biodiversiti, kaedah pengekangan haiwan, prosedur klinikal dan pengurusan penyakit hidupan liar dan haiwan eksotik ditekankan. Panduan asas perubatan, surgeri dan pengurusan haiwan liar dan haiwan eksotik dibincangkan.

This course covers the scientific basis of conservation, management and treatment of infectious and non-infectious diseases of captive and free-ranging wildlife which include avian, mammals, rodents and exotic animals. The importance of biodiversity conservation, animal restraint methods, clinical procedures and management of diseases in wildlife and exotic animals are emphasized. Basic medical, surgical and management guidance on wildlife and exotic animals are discussed.

Jabatan Diagnosis Makmal Veterinar/ *Department of Veterinary Laboratory Diagnosis*

VPD4914 Amalan Luar Makmal Diagnosis/ *Extramural Laboratory Diagnostic Practice* 1 (0+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Latihan industri ini merangkumi pendedahan kepada aktiviti di makmal diagnosis veterinar. Amalan baik makmal mengikut keperluan standard makmal dipraktikkan. Ciri-ciri biosekuriti dan biokeselamatan di makmal ditekankan.

This industrial training encompasses the exposure to the activities in the veterinary diagnostic laboratories. Best laboratory practices according to the laboratory standards is practiced. Biosecurity and biosafety characteristics in the laboratory are emphasized.

VPD4972 Siasatan dan Penyelesaian Masalah Veterinar/ *Veterinary Problem-Solving and Investigation* 1 (0+1)

Prasyarat/ Prerequisite : Tiada/*Null*

Kursus pembelajaran berpusatkan masalah ini mendedahkan kaedah siasatan dan penyelesaian dalam masalah veterinar. Perancangan pelan siasatan berdasarkan pengenalpastian masalah veterinar diperkenalkan. Kemahiran mengaitkan proses siasatan dalam masalah veterinar dengan rujukan penerbitan dan makalah ilmiah ditekankan.

This problem-based course exposes the methods to investigate and solve veterinary problems. Planning of investigation according to identification of veterinary problems is introduced. Skills to associate investigative processes in veterinary problems with published references and scientific papers is emphasized.

Jabatan Perubatan & Pembedahan Haiwan Kesayangan/ *Department of Campanion Animal Medicine & Surgery*

VPK3933 Amalan Klinikal dan Diagnosis I/ *Clinical Practice and Diagnosis I* 3 (0+3)

Prasyarat/ Prerequisite : VPK3612 & VPK3702

Kursus ini memberi pengenalan kepada pengurusan pesakit dan sampel semasa amalan klinik dan makmal diagnosis veterinar di mana pelajar digilirkan. Penekanan diberikan kepada kemahiran pengendalian, pengekangan dan pemeriksaan fizikal haiwan. Pelajar akan berkolaborasi untuk menyelesaikan kes atau tugasan semasa amalan.

This course introduces the management of patients and samples during rotation to veterinary clinical practice and diagnostic laboratories. Emphasis is given on animal handling, restraint and physical examination. Students will collaborate to solve the case or assignment during rotation.

VPK3934 Amalan Klinikal dan Diagnosis II/ *Clinical Practice and Diagnosis II* 3 (0+3)

Prasyarat/ Prerequisite : VPK3614 & VPK3933

Kursus ini adalah lanjutan daripada pengenalan kepada amalan klinik dan makmal diagnosis veterinar. Pelajar mengambil bahagian dalam aktiviti amalan klinik atau makmal, dan merekodkan pelaksanaan prosedur yang tersenarai dalam portfolio amalan. Penekanan diberikan kepada pengendalian kes dan kemahiran berkomunikasi.

This course is a continuation of the introduction to veterinary clinical practice and diagnostic laboratories where students are rotated. Students participate in the daily activities of the clinics and laboratories,and keep record of the procedures carried out in their clinical practice portfolio. Emphasis is given on case management and communication skills.

Jabatan Perubatan & Pembedahan Haiwan Ladang & Eksotik / *Department of Farm & Exotic Animal Medicine & Surgery*

VPK4945 Amalan Klinikal Veterinar I/ *Veterinary Clinical Practice I* 14 (0+14)

Prasyarat/ Prerequisite : VPK3934

Kursus ini merupakan penggiliran berorientasikan amalan yang merangkumi diagnosis, rawatan dan kawalan penyakit. Penggiliran ini merangkumi amalan di Hospital Veterinar Universiti yang melibatkan unit anjing dan kucing, merangkumi klinik haiwan kesayangan, wad haiwan kesayangan, rawatan rapi, neuter, surgeri dan anestesia, dan ruminan, babi, ekuin, akuatik dan avian. Penggiliran juga melibatkan kesihatan awam veterinar, parasitologi, makmal patologi klinikal, bakteriologi dan post mortem. Amalan ini memberi pendedahan, kecekapan dan keyakinan dalam pengurusan kes veterinar dengan mengintegrasikan pengetahuan asas dan klinikal.

This course is a practice-oriented rotation encompassing diagnosis, treatment and control of diseases. The rotations include practice at the University Veterinary Hospital involving dogs and cats, which include small animal clinic, small animal ward, intensive care, neuter, surgery and anaesthesia, and ruminants, swine, equine, aquatic and avian. The rotations also include veterinary public health, parasitology, clinical pathology, bacteriology and post mortem laboratories. These practices provide exposure, competency and confidence in managing veterinary cases through integrating basic and clinical knowledge.

VPK4946 Amalan Klinikal Veterinar II/ *Veterinary Clinical Practice II* 17 (0+17)

Prasyarat/ Prerequisite : VPK4945

Kursus ini merupakan penggiliran berorientasikan amalan yang merangkumi diagnosis, rawatan dan kawalan penyakit. Penggiliran ini merangkumi amalan di Hospital Veterinar Universiti yang melibatkan unit anjing dan kucing, merangkumi klinik haiwan kesayangan, wad haiwan kesayangan, rawatan rapi, neuter, surgeri dan anestesia, dan ruminan, babi, ekuin, akuatik dan avian. Penggiliran juga melibatkan kesihatan awam veterinar, parasitologi, makmal patologi klinikal, bakteriologi dan post mortem. Amalan ini memberi pendedahan, kecekapan dan keyakinan dalam pengurusan kes veterinar dengan mengintegrasikan pengetahuan asas dan klinikal serta menerapkan kemahiran kepimpinan dan kerja berpasukan.

This course is a practice-oriented rotation encompassing diagnosis, treatment and control of diseases. The rotations include practice at the University Veterinary Hospital involving dogs and cats, which include small animal clinic, small animal ward, intensive care, neuter, surgery and anaesthesia, and ruminants, swine, equine, aquatic and avian. The rotations also include veterinary public health, parasitology, clinical pathology, bacteriology and post mortem laboratories. These practices provide exposure, competency and confidence in managing veterinary cases through integrating basic and clinical knowledge to foster leadership skills and teamwork.

Pejabat Dekan/ *Dean Office*

VPD4911 Pengurusan Haiwan Kesayangan/ *Management of Companion Animals* 1 (0+1)

Prasyarat/Prerequisite : VPK3910

Latihan industri ini merangkumi pendedahan awal mengenai etika dan kemahiran pengurusan asas di pusat perlindungan haiwan. Aktiviti dan operasi harian, serta amalan yang sesuai digunapakai di pusat perlindungan haiwan didedahkan. Kepentingan kaedah sistematik dalam pengurusan aktiviti rutin dan operasi di pusat perlindungan ditekankan.

This practical training encompasses the early exposure on ethics and basic management skills at animal shelters. Daily activities and operations, and the appropriate practices at the animal shelters are highlighted. The importance of systematic approach for the management of routine activities and operations at the shelters are emphasized.

VPD4912 Pengurusan Haiwan Ternakan I/ *Management of Livestocks I* 3 (0+3)

Prasyarat/Prerequisite : Tiada/*Null*

Latihan amali ini merangkumi pendedahan kepada amalan rutin ladang ruminan dan babi atau akuatik. Pengetahuan berkenaan operasi ladang dan tahap amalan penternakan diaplikasikan. Kepentingan pengurusan ladang ruminan dan babi atau akuatik ditekankan.

This practical training encompasses the exposure to routines practices of ruminant and pigs or aquatic. Knowledge on farm management and livestock practices is applied. The importance of ruminant and pigs or aquatic farm management is emphasized.

VPD4913 Pengurusan Haiwan Ternakan II/ *Management of Livestocks II* 3 (0+3)

Prasyarat/Prerequisite : Tiada/*Null*

Latihan amali ini merangkumi pendedahan kepada aktiviti dan operasi di ladang poltri dan pusat hidupan liar-haiwan eksotik. Amalan baik di tempat ini mengikut kod etika veterinar diaplikasikan. Tanggungjawab dan peranan kepimpinan veterinawan kepada masyarakat di tempat ini juga ditekankan.

This practical training encompasses the exposure to the activites and operations at poultry farms and wildlife-exotic centers. Best veterinary practice at these places according to the code of veterinary ethics is applied. Responsibility and roles of veterinarians at these places to the public are emphasized.

VPD4915 Amalan Luar Klinik/ *Extramural Clinical Practice* 2 (0+2)

Prasyarat/Prerequisite : Tiada/*Null*

Kursus ini memberi pendedahan dalam amalan klinikal melalui penempatan pelajar di pelbagai tempat amalan veterinar. Pengetahuan klinikal berkaitan pengurusan penyakit serta amalan baik dalam perubatan veterinar diaplikasikan. Perbezaan pengurusan penyakit dan klien di pelbagai tempat amalan veterinar dibincangkan.

This course provides exposure in clinical practice through clinical attachment at various veterinary practices. Clinical knowledge related to disease management as well as good practices in veterinary medicine is applied. Differences in disease and client management at various clinical practises is discussed.

VPD4959 Disertasi Bacelor/ *Bachelor Dissertation* 3 (0+3)

Prasyarat/Prerequisite : Tiada/*Null*

Kursus ini merangkumi proses pelaksanaan penyelidkan yang meliputi penyediaan proposal, penyimpulan dan pembentangan hasil dapatan, dan penulisan disertasi. Reka bentuk eksperimen dan pengesahan penemuan saintifik yang mempunyai nilai komersial ditekankan.

This course encompasses research implementation process that covers proposal preparation, summarising and presenting research findings, and writing a dissertation. Experimental research design and scientific findings that have commercial values are emphasized.