

PANDUAN SISWAZAH
Fakulti Sains Kesihatan
Sesi Akademik 2011-2012

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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 bahasa ilmu;
- Membangun masyarakat dinamis dan berakhlak mulia;
- Mengantarabangsakan citra dan sumbangan UKM bagi masyarakat sejagat; dan
- Menjana teknologi yang bermanfaat kepada masyarakat.

Latar Belakang Universiti Kebangsaan Malaysia

Gerakan pemikiran, perdebatan serta tekad oleh segolongan cendekiawan Melayu untuk menubuhkan sebuah universiti yang menggunakan Bahasa Melayu sebagai bahasa pengantar di institusi pengajian tinggi dalam negara telah bermula pada tahun 1930-an. Namun demikian, pemikiran dan tekad tersebut tidak dapat berkembang subur dan terlaksana pada ketika itu kerana wujudnya berbagai-bagai halangan dan rintangan oleh tekanan kolonialisme. Walau bagaimanapun, idea, pemikiran, semangat dan tekad terus hidup di kalangan golongan intelek Melayu dan perjuangan penubuhan sebuah universiti kebangsaan memuncak lagi apabila negara mencapai kemerdekaan pada tahun 1957.

Mulai tahun 1957 hingga tahun 1967, perjuangan dan tekad untuk penubuhan Universiti Kebangsaan Malaysia menjadi semakin bersemarak sebagai memenuhi tuntutan dan semangat kemerdekaan bangsa dan negara. Sehubungan itu, pada tahun 1968 segolongan cendekiawan Melayu telah membentuk sebuah jawatankuasa penaja yang bertugas serta merancang penubuhan Universiti Kebangsaan Malaysia. Pelbagai forum budaya dan politik diadakan untuk mendapat sokongan daripada kerajaan dan rakyat untuk mewujudkan sebuah institusi pengajian tinggi yang menggunakan Bahasa Melayu sebagai bahasa pengantar dalam semua bidang pengajian dan keilmuan. Kegigihan, tekad dan semangat perjuangan golongan intelek yang berkobar-kobar dan tidak pernah luput itu telah membuahkan kejayaan dengan terlaksananya penubuhan Universiti Kebangsaan Malaysia (UKM) pada 18 Mei 1970. Kumpulan pertama pelajar prasiswazah seramai 192 orang mula mendaftar di tiga buah fakulti, iaitu Fakulti Sains, Fakulti Sastera dan Fakulti Pengajian Islam pada bulan Mei 1970.

Sejak tarikh tersebut, UKM berkembang pesat sebagai sebuah institusi pengajian tinggi awam terkehadapan yang kini mengandungi 12 fakulti dan 13 institut kecemerlangan penyelidikan. Manakala UKM Holdings Sdn. Bhd. (UKMHSB) yang beroperasi secara komersial mulai 1 Januari 2001 menyelaras pengurusan entiti di bawahnya, iaitu Pusat Kembangan Pendidikan (PKP), UKM Kesihatan Sdn. Bhd., dan UKM Pakarunding Sdn. Bhd.

Kampus induk UKM yang mempunyai keluasan 1,096.29 hektar terletak di Bangi, Selangor Darul Ehsan, kira-kira 35 kilometer dari bandar raya Kuala Lumpur. Kampus induk terletak di sebuah lembah yang dikelilingi pokok-pokok yang menghijau yang dapat menyediakan suasana nyaman dan tenang untuk para pelajar menimba ilmu. Fakulti dan institut kecemerlangan yang terletak di kampus induk Bangi ialah Fakulti Ekonomi dan Perniagaan, Fakulti Kejuruteraan dan Alam Bina, Fakulti Pengajian Islam, Fakulti

Sains dan Teknologi, Fakulti Sains Sosial dan Kemanusiaan, Fakulti Undang-undang, Fakulti Pendidikan, Fakulti Teknologi dan Sains Maklumat, Institut Alam dan Tamadun Melayu (ATMA), Institut Alam Sekitar dan Pembangunan (LESTARI), Institut Kajian Malaysia dan Antarabangsa (IKMAS), Institut Kajian Oksidental (IKON), Institut Sains Angkasa (ANGKASA), Institut Kejuruteraan Mikro dan Nanoelektronik (IMEN), Institut Sistem Biologi (INBIOSIS,) Institut Penyelidikan Tenaga Suria (SERI), Institut Sel Fuel (SELFUEL), Institut Islam Hadhari (HADHARI), Institut Kajian Rantau Asia Barat (IKRAB), Institut Kajian Etnik (KITA), Graduate School of Business (UKM-GSB), Pusat Pengurusan Siswazah, Pusat Pengajian Umum, Pusat Perkembangan Pelajar dan pusat perkhidmatan yang lain.

Selain itu, UKM juga mempunyai sebuah kampus kesihatan di Kuala Lumpur yang menempatkan Fakulti Perubatan (Jabatan-jabatan Praktikal), Fakulti Sains Kesihatan dan Fakulti Pergigian. Manakala Pusat Perubatan UKM (PPUKM) yang mempunyai keluasan 22.3 hektar di Cheras, Kuala Lumpur berupaya memenuhi keperluan semasa dari segi pendidikan, perkhidmatan dan penyelidikan perubatan. PPUKM menempatkan Fakulti Perubatan (Jabatan-jabatan Klinikal), Institut Perubatan Molekul (UMBI) dan Hospital UKM.

Berlandaskan kecemerlangan dalam bidang penyelidikan lebih daripada tiga dekad, UKM dipilih sebagai salah sebuah Universiti Penyelidikan di Malaysia. Keunggulan UKM terserlah dengan penempatan institut penyelidikan nasional dan antarabangsa, iaitu Institut Genom Malaysia (MGI) dan International Institute of Global Health, United Nations University. UKM juga adalah penerima Anugerah Kualiti Perdana Menteri 2006. Penganugerahan ini adalah pengiktirafan bagi kecermelangan UKM dalam bidang akademik dan pengurusan. Dengan asas yang mantap ini, UKM melestarikan kecemerlangan melalui Pelan Strategik UKM 2000-2020 (PS2020). Kini, UKM tampil dengan citra baru melalui slogan ‘Mengilhamkan Harapan, Mencipta Masa Depan’.

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Head of Forensic Science Programme

Profesor Madya (*Assoc. Prof.*) Dr. Khairul bin Osman

Ketua Program Sains Pemakanan
Head of Nutrition Science Programme

Profesor Madya (*Assoc. Prof.*) Dr. Poh Bee Koon

Ketua Program Sains Pertuturan
Head of Speech Science Programme

Profesor Madya (*Assoc. Prof.*) Dr. Rogayah binti A. Razak

Ketua Program Terapi Carakerja
Head of Occupational Therapy Programme
Dr. Sazlina binti Kamaralzaman

Penyelaras Unit Perkhidmatan Klinikal
Coordinator of Clinical Services Unit
Profesor Madya (*Assoc. Prof.*) Dr. Rokiah binti Omar

Penyelaras Unit Pendidikan Sains Kesihatan
Coordinator of Health Sciences Education Unit
Profesor Madya (*Assoc. Prof.*) Dr. Ahmad Rohi bin Ghazali

Penyelaras Unit Rundingcara Statistik
Coordinator of Statistical Consultation Unit
Dr. Ismarulyusda binti Ishak

Penyelaras Unit Khidmat Masyarakat
Coordinator of Community Services Unit
Profesor Madya (*Assoc. Prof.*) Dr. Siti Balkis binti Budin

Penyelaras Unit Perkembangan Graduan
Coordinator of Graduates Development Unit
Dr. Zahara binti Abdul Manaf

Penyelaras Unit Promosi dan Pasaran
Coordinator of Promotion and Marketing Unit
Profesor Madya (*Assoc. Prof.*) Dr. Ahmad Zorin bin Sahalan

Penyelaras e-Pembelajaran
Coordinator of e-Learning
Dr. Mazlyzam bin Abdul Latiff

Penyelaras UKM-IACLE
Coordinator of UKM-IACLE
Dr. Mohd 'Izzuddin bin Hairol

Penyelaras CESMED@Fakulti
Coordinator of CESMED@Faculty
Pn. (*Mrs.*) Norliza binti Mohammad Fadzil

Ketua Penolong Pendaftar
Principal Assistant Registrar
Mohamed Termizi bin Othman

Penolong Pendaftar & Webmaster
Assistant Registrar & Webmaster
Baharuzaini bin Baharin

Ketua Pegawai Sains
Principal Science Officer
Maimunah binti Jais

Pegawai Sains Kanan
Senior Science Officer
Rahaida binti Ramli

Ahli Akademik (Academic Staff)

Program Audiologi Audiology Programme

Profesor (Professor)

Siti Zamratol-Mai Sarah bt Mukari, *MD(UKMalaysia), MSc(Manchester), AuD(Central Michigan)*

Profesor Madya (Associate Professor)

Cila bt Umat, *SmSn(Kep.)(UKMalaysia), PGDip.(Aud), MAud.(Macquarie), PhD (Melb)*

Pensyarah Kanan (Senior Lecturers)

Nor Haniza bt Abdul Wahat, *SmAudio.(Kep.)(UKMalaysia), MSc (Southampton), PhD (Western Australia)*

Rafidah bt Mazlan, *SmAudio.(Kep.)(UKMalaysia), MPhil, PhD(Queensland)*

Pensyarah (Lecturers)

Akmaliza bt Ali, *SmAudio.(Kep.)(UKMalaysia), MSc(Southampton)*

Chong Foong Yen, *SmAudio.(Kep.)(UKMalaysia), MSc (UBC)**

Marniza bt Omar, *SmAudio.(Kep.)(UKMalaysia), MSc(Southampton)**

Nashrah bt Maamor, *SmAudio.(Kep.)(UKMalaysia), MSc(Manchester)*

Noor Alaudin bin Abdul Wahab, *SmAudio.(Kep.)(UKMalaysia), MSc(Wisc)**

Quar Tian Kar, *SmSa (Kep.)(UKMalaysia), PGDip.(Aud), MAud(Melb)**

Tutor (Tutor)

Wan Syafira bt Ishak, *SmAudio.(Kep.)(UKMalaysia)**

* Cuti belajar / *Study leave*

Program Dietetik Dietetics Programme

Profesor (Professor)

Suzana bt Shahar, *SmSn(UKMalaysia), M Med.Sci., PhD(Sheffield)*

Profesor Madya (Associate Professor)

Tilakavati Karupaiah, *BSc., MSc(Madras), MSc(Malaya), PGDip(Deakin), PhD(UKMalaysia), APD, AN(DAA)*

Pensyarah Kanan (Senior Lecturers)

Nik Shanita bt Safii, *Dip Sci(UiTM), SmSn(UKMalaysia), MSc(Aberdeen), PhD(UKMalaysia)*

Roslee bin Rajikan, *SmSn(UKMalaysia), MSc(Aberdeen), PhD(Glasgow)*

Suhaina bt Sulaiman, *Dip. Inst. Cat. & Mgmt(UiTM), BS, MS(Illinois), PGDip Dietetics(Otago), PhD(UKMalaysia)*

Zahara bt Abd Manaf, *Dip. Sci(UiTM), SmSn, SSnKes(UKMalaysia), PhD (Newcastle Upon Tyne)*

Pensyarah (Lecturers)

Nor Aini bt Jamil @ A.Wahab, *SmSn, SSnKes(UKMalaysia)*

Nur Hana bt Hamzaid, *SmSn(UKMalaysia), MSc(Med Sci)(Glasgow)**

Tutor(Tutors)

Munirah bt Ismail, *SmSn(UKMalaysia)*

Nurul Huda bt Razalli, *SmSn(UKMalaysia)*

* Cuti belajar / *Study leave*

**Program Fisioterapi
Physiotherapy Programme**

Profesor Madya (Associate Professor)

Hjh Ayiesah bt Hj Ramli, *Dip.Physiotherapy(Mal), Dip. TP Phty(Huddersfield,UK), BSc(Hons)(Northumbria, UK), CNAA. Cert. Ed.(UK), MEd(Malaya)*

Pensyarah Kanan (Senior Lecturer)

Devinder Kaur a/p Ajit Singh, *Dip. Physiotherapy(Mal), Dip. Sport Injury(CAHPER-CIDA), BSc.(Hons) Applied Rehabilitation(PT)(UK), PhD Physiotherapy (Brighton)*

Pensyarah (Lecturers)

H. Leonard Joseph, *Dip. Sport Medicine(Vidya Sagar), BSc. PT(Annamalai), MSc Physiotherapy(South Australia)*

Nor Azlin bt Mohd. Nordin, *Dip. Physiotherapy(Mal), BSc.(Hons) Applied Rehabilitation(PT)(UK), GCertPhty(Clin)(Queensland), MPhty(Queensland)**

Vijayakumar Palaniswamy, *B.PT(India), MSPT(Pittsburgh)*

Tutor (Tutors)

Asfarina bt Zanudin, *Sm.Fisioterapi(Kep)(UKMalaysia)**

Nor Azura bt Azmi, *Sm.Fisioterapi(Kep)(UKMalaysia), MSc. Health & Rehabilitation (Southampton)*

Nor Najwatul Akmal bt Ab. Rahman, *Sm.Fisioterapi(Kep)(UKMalaysia)**
Normala bt Mesbah, *Sm.Fisioterapi(Kep)(UKMalaysia)**
Roslizawati bt Nawawi, *Sm.Fisioterapi(Kep)(UKMalaysia)**

*Cuti belajar / *Study leave*

Program Kesihatan Persekitaran dan Keselamatan Industri *Environmental Health and Industry Safety Programme*

Profesor (Professor)

Salmaan Hussain bin Inayat Hussain, *SmSn(UKMalaysia), PhD(Leicester)*

Profesor Madya (Associate Professor)

Normah bt Awang, *SmSn(UKMalaysia), SSn(UKMalaysia), PhD(UKMalaysia)*

Felo Kanan (Senior Fellow)

Mazrura bt Sahani, *MD(Leuven), MPH(UKMalaysia), PhD(Richmond)*

Pensyarah Kanan (Senior Lecturers)

Anuar bin Ithnin, *Dip. Mikrobiologi(UiTM), Sm.SB(UKMalaysia), S.Kes.Pekerjaan (UKMalaysia), PhD OSH-MS(UKMalaysia)*

Azhar bin Abd Halim, *SmSn(UKMalaysia), Dip.Pendidikan(UKMalaysia), M.Sc(USMalaysia), PhD(USM)*

Chan Kok Meng, *SmSB(UKMalaysia), PhD(UKMalaysia)*

Hing Hiang Lian, *Sm.Sn(UKMalaysia), PhD(UKMalaysia)*

Mohd Sham bin Othman, *B.AppSc(USMalaysia), SSn(UKMalaysia), PhD(Chulalongkorn)*

Pensyarah (Lecturers)

Mohammad Ikram bin A. Wahab, *Sm Kes. Pers.(Kep.)(UKMalaysia), MSc (AIT)*

Siti Hajar bt Yaacob, *Sm Kes. Pers.(Kep.)(UKMalaysia), MPhil (New South Wales)*

Tutor (Tutors)

Farah Diyana bt Ariffin, *Sm Kes. Pers.(Kep.)(UKMalaysia)**

Noor Sazarina bt Mad Isa @ Yahya, *Sm Kes. Pers.(Kep.)(UKMalaysia)**

Siti Shahara bt Zulfakar, *Sm Kes. Pers.(Kep.)(UKMalaysia)**

* Cuti belajar / *Study leave*

Program Optometri dan Sains Penglihatan *Optometry and Vision Science Programme*

Profesor (Professor)

Norhani binti Mohidin, *BSc(Wales), M.Optom(UNSW), PhD(Auck), Dip. Penterj(DBP), FIACLE, FAMO, ANS*

Profesor Madya (Associate Professors)

Bariah bt Mohd. Ali, *SmOptom(UKMalaysia), PhD(UNSW), FAMO*
Faudziah bt Abd Manan, *SmOptom(UKMalaysia), MSc. Optom. Physiol. Opt, PhD(Bradford), Dip. Penterj(PPM-DBP)*
Haliza bt Abdul Mutalib, *SmOptom(UKMalaysia), MSc, PhD(UMIST)*
Rokiah bt Omar, *SmOptom(UKMalaysia), PhD(UNSW), FAAO, FAMO*
Sharanjeet Kaur, *SmOptom(UKMalaysia), PhD(UMIST)*

Pensyarah Kanan (Senior Lecturer)

Maria Lourdes Llorente Escrina, *BSc. Optometry (UCM, Spain), PhD (City, UK)*
Mohd. 'Izzuddin bin Hairol, *SmOptom(UKMalaysia)*
Zainora binti Mohammed, *SmOptom (UKMalaysia), PhD(UMIST)*

Pensyarah (Lecturers)

Bashirah bt Ishak, *SmOptom, SSnKes(UKMalaysia)*
Mizhanim bt Mohamad Shahimin, *SmOptom, SSnKes(UKMalaysia)**
Noor Fadhilah bt Ahmad Zainuri, *SmOptom, SSnKes (UKMalaysia)*
Norlaila bt Mat Daud, *SmOptom, SSnKes(UKMalaysia)*
Norliza bt Mohamad Fadzil, *BMedSc(Sheff), SSnKes(UKMalaysia)*
Saadah bt Mohamed Akhir, *SmOptom, SSnKes(UKMalaysia)*

Tutor(Tutors)

Fatimah bt Shamsudin, *SmOptom(UKMalaysia)*
Mohd Harimi bin Abd Rahman, *SmOptom(UKMalaysia)*
Sumithira A/P Narayanasamy, *SmOptom(UKMalaysia)*

* Cuti belajar / *Study leave*

Program Pengimejan Diagnostik & Radioterapi *Diagnostic Imaging & Radiotherapy Programme*

Profesor Madya (Associate Professors)

Ahmad Nazlim bin Hj. Yusoff, *SmSn, SSn, PhD(UKMalaysia)*
Kanaga Kumari a/p Chelliah, *DCRR(London), BSc, PGDip.(Curtin), MSc(USMalaysia)*

Pensyarah (Lecturers)

Aisyah bt Yusof Azuddin, *Sm Peng. Diag. Rterapi(Kep.)(UKMalaysia), MRes(Liverpool)*

Iskandar bin Kassim, *SmSB, SSnPer(UKMalaysia)*

Mazlyfarina bt Mohamad, *BEng(USMalaysia), MSc(UMalaya)*

Noorazrul Azmie bin Yahya, *Sm Peng. Diag. Rterapi(Kep.)(UKMalaysia), MSc(UMalaya)*

Nor Aniza bt Azmi, *Sm. Peng. Diag. Rterapi(Kep.)(UKMalaysia), MRes(Liverpool)**

Rozilawati bt Ahmad, *SmSn(UKMalaysia), MSc(USMalaysia)*

Rukiah bt Abd Latiff, *SmSn(UKMalaysia), MSc(USMalaysia)*

Tutor (Tutors)

Akmal bin Sabarudin, *Sm. Peng. Diag. Rterapi(Kep.)(UKMalaysia)**

Mohd. Faizal bin Jabaruddin, *Sm Peng. Diag. Rterapi(Kep.)(UKMalaysia)*

Mohd. Izuan bin Ibrahim, *Sm. Peng. Diag. Rterapi(Kep.)(UKMalaysia) **

Norhashimah Mohd Norsuddin, *Sm Peng.Diag.Rterapi(Kep.)(UKMMalaysia)*

*Cuti belajar / *Study leave*

**Program Psikologi Kesihatan
Health Psychology Programme**

Profesor Madya (Associate Professors)

Ng Lai Oon, *BA(Psych)(Western Australia), Bpsych(Murdoch), DPsych(Clinical)Murdoch*

Normah bt Che Din, *BHSc(Psychol)(IIUMalaysia), MA(Clinical Psychology)(UKMalaysia)*

Pensyarah Kanan (Senior Lecturer)

Mahadir bin Ahmad, *BPsych(I/O)(UMSabah), MA(Clinical Psychology)(UKMalaysia), PhD Psych (Aberdeen)*

Pensyarah (Lecturers)

Gan Chun Hong, *BA(Psych)(UMalaya), MA(Kyushu)*

Noh bin Amit, *BHSc(Psych)(IIUMalaysia), MA(Counseling & Clinical Psychology)(IIUMalaysia)**

Norhayati bt Ibrahim, *BA(Psych)(UKMalaysia), MA(Counseling Psychology)(UKMalaysia)**

Ponnusamy a/l Subramaniam, *BA(Psych)(UKMalaysia), MA(Clinical Psychology)(UKMalaysia)**

Safiyah bt Abdul Aziz, *BHSc(Psych)(IIUMalaysia), MA(Clinical Psychology)(UKMalaysia)**

Shazli Ezzat bin Hj Ghazali, *BMassComm(UiTM), MA(Industrial / Organisational Psychology)(UKMalaysia)*
Zaini bin Said, *BA(Usuluddin)(UMalaya), MA(Counseling Psychology)(UKMalaysia)*

*Cuti belajar / *Study leave*

Program Sains Bioperubatan Biomedical Science Programme

Profesor (Professors)

Baharudin bin Haji Omar, *Sarjana(IPBogor), MSPH, D.Sc(Tulane)*
Dato' Jamaludin bin Hj. Mohamed, *DIMP, SMP, Sm.Sn(UKMalaysia), Ph.D(St. Andrews), FIBA(Cambridge), FABI(Raleigh)*
Mohamed Kamel bin Abd. Ghani, *MD(UKMalaysia), DLSHTM(London), M.Sc(London), AM(Mal)*
Sallehudin bin Sulaiman, *JSM, B.Sc.(ITB), Drs(ITB), M.Sc(Liverpool), Ph.D(Liverpool), FRES(London)*

Profesor Madya (Associate Professors)

Ahmad Rohi bin Ghazali, *B.Sc(Liverpool), M.Sc(Birmingham), Ph.D(Birmingham)*
Ahmad Zorin bin Sahalan, *Sm.Sn, M.Sc(UKMalaysia), Ph.D(Bradford)*
Hawa bt Ismail, *D.V.M.(Lahore), M.Sc(UPMalaysia)*
Hidayatul Fathi bt Othman, *B.Sc(USMalaysia), M.Sc(Liverpool)*
Nor Fadilah bt Rajab, *B.Sc(UPMalaysia), S.Sn(UKMalaysia), Ph.D(Ulster)*
Noraziah bt Mohamed Zin, *B.Sc(UPMalaysia), Ph.D(Strathclyde)*
Siti Balkis bt Budin, *MD(UKMalaysia), M.Sc(Ulster), Ph.D(UKMalaysia)*
Syarif Husin Lubis, *MD(USU), MPH(Johns Hopkins)*

Pensyarah Kanan (Senior Lecturers)

Asmah bt Hamid, *Sm.Sn, S.SnKes(UKMalaysia)*
Dayang Fredalina bt Hj Basri, *B.Sc(Aberdeen), M.Sc(Sussex), Ph.D(UKMalaysia)*
Ismarulyusda bt Ishak, *Sm.SB, PhD(UKMalaysia)*
Jacinta a/p Santhanam, *Sm.Sn(UKMalaysia), M.Sc(Manchester), Ph.D(Manchester)*
Mazlyzam bin Abdul Latif, *B.Sc(Malaya), PhD(UKMalaysia)*
Nihayah bt Mohammad, *D.V.M., M.Sc(UPMalaysia), Ph.D(UKMalaysia)*
Shafariatul Akmar bt Ishak, *B.Sc(Malaya), M.Sc(Liverpool)*
Yanti bt Rosli, *Sm.Sn(UKMalaysia), M.Med.Sci(Glasgow), PhD(ANU)*
Zariyantey bt Abdul Hamid, *Sm.SB(UKMalaysia), PhD(King's College London)*

Pensyarah (Lecturers)

Arimi Fitri bin Mat Ludin, *Sm.SB(UKMalaysia), M.Sc(USMalaysia)**
B. Hemabarathy a/p Bharatham, *B.Sc (Hons.)(Biomed)(UPMalaysia), M.Sc(UKMalaysia)**

Elda Surhaida bt Latif, *SmSB(UKMalaysia), M.Sc(Medical, UKMalaysia)*
Farah Wahida bt Ibrahim, *SmSB(UKMalaysia), M.Sc(Medical, UKMalaysia)*
Juwaini bt Abu Bakar, *SM Perubatan(USMalaysia)**
Nor Malia bt Abdul Warif, *Sm.SB, S.SnKes(UKMalaysia)*
Nur Zakiah bt Mohd Saat, *Sm.Sn, S.Sn(UKMalaysia)*
Nurul Huda bt Othman, *SmSB(UKMalaysia), M.Sc(Aberdeen)**
Putri Noradyani bt Megat Hashim, *SmSB(UMalaya), SSnKes(UKMalaysia)**
Satirah bt Zainal Abidin, *SmSB(UMalaya), M.Sc(UKMalaysia), Ph.D (Strathclyde)*
Ng Kim Tien, *SmB(MSU), M.Sc(UKMalaysia)*
Nur Najmi Mohamad Anuar, *SmB(MSU), MML.Sc(RMIT, Australia)*

Tutor (Tutors)

Nurul Farhana binti Jufri, *SmSB(UKMalaysia)*
Siti Fatimah bt Masre, *SmSB(UKMalaysia), M.Sc(USMalaysia)*

* Cuti belajar / *Study leave*

Program Sains Forensik Forensic Science Programme

Profesor Madya (Associate Professor)

Khairul bin Osman, *Sm.SB, PhD(UKMalaysia)*

Pensyarah (Lecturers)

Hukil bin Sino, *SmSn(UKMalaysia), M.Env(UPMalaysia)*
Muhammad Yusof bin Omar, *BSc.(Hons.)(Forensic Sc.)(USMalaysia), MFS (George Washington University)*
Normaizatul Afizah bt Ismail, *BSc.(Hons.)(Forensic Sc.)(USMalaysia), MSc(Dundee)*
Raja Muhammad Zuha bin Raja Kamal Bashah, *SmSB (UKMalaya), MCJ(UMalaysia)**

Pensyarah Pelatih (Tranee Lecturers)

Noor Hazfalinda bt Hamzah, *MD(UKMalaysia), MA(Forensic.Med.)(Dundee)*
Sri Pawita Albakri bt Amir Hamzah, *MB BCh BAO (Dublin), DMJ (Path) (London)*

Tutor (Tutors)

Gina Francesca Gabriel, *SmSnForensik((Kep.)(UKMalaysia)*
Lee Loong Chuen, *BSc.(Hons.)(Forensic Sc.)(USMalaysia)**
Seri Mirianti bt Ishar, *BSc.(Hons.)(Forensic Sc.)(USMalaysia)**
Wan Nur Syazwani bt Wan Mohamad Fuad, *BSc.(Hons.)(Forensic), MSc.(USMalaysia)*

*Cuti belajar / *Study leave*

**Program Sains Pemakanan
Nutrition Science Programme**

Profesor (Professors)

Mohd. Ismail bin Mohd. Noor, *DVM(Lahore), MSc(Reading), PhD(London), FASc, FIUNS, FMSA, FNSM*

Norimah bt A. Karim, *BSc, MSc(IU), PhD(Southampton), FNSM*

Profesor Madya (Associate Professors)

Poh Bee Koon, *SmSn, PhD(UKMalaysia), FNSM*

Ruzita bt Abd Talib, *SmSn., PhD(UKMalaysia)*

Pensyarah Kanan (Senior Lecturer)

Hasnah bt Haron, *SmSn, SSn(UKMalaysia), PhD(UPMalaysia)*

Pensyarah (Lecturers)

Hanis Mastura bt Yahya, *SmSn, SSnKes(UKMalaysia)**

Rasyedah bt Ahmad Raqi, *SmSn, SSn(UKMalaysia)**

Razinah bt Mohd Sharif, *SmSn(UKMalaysia)**

Sameeha bt Mohd Jamil, *BSc(PKK)(UPM), MHSc(International Health)(Tokyo)*

Wong Jyh Eiin, *SmSn(UKMalaysia), MSc(Med Sci)(Glasgow)*

* Cuti belajar / Study leave

**Program Sains Pertuturan
Speech Science Programme**

Profesor Madya (Associate Professors)

Kartini bt Ahmad, *MBBCh(Tanta), MSc(London), PhD(Wisc.)*

Rogayah bt A. Razak, *BSc, MA(Indiana), PhD(USMalaysia/U.Calif. at Santa Cruz)*

Pensyarah Kanan (Senior Lecturers)

Basyariatul Fathi bt Othman, *SmSn Pertut.(Kep.)(UKMalaysia), PhD (Melb)*

Hasherah bt Mohd Ibrahim, *SmSn Pertut.(Kep.)(UKMalaysia), PhD(Melb)*

Lim Hui Woan, *SmSa(Kep.)(UKMalaysia), MA(Reading), PhD(Sheffield)*

Pensyarah (Lecturers)

Antoinette Sandra Vandort, *BA(NUS), Dip. Ed.(Singapore), MA(Temple)*

Badrulzaman bin Abdul Hamid, *BA(Hons.)(UMalaya), MA(Newcastle Upon Tyne)*

Rahayu bt Mustaffa Kamal, *SmSn Pertut.(Kep.)(UKMalaysia), MSLT(Canterbury)**

Shobha Sharma, *BA(St. Cloud State Uni.), MLSP(UMalaya), MSLT(Canterbury)**

Yazmin bt Ahmad Rusli, *SmSn Pertut.(Kep.)(UKMalaysia)*, *MSc(Durham)*

Tutor (Tutors)

Etain Vong, *SmSn Pertut.(Kep.)(UKMalaysia)*

Fatimah Hani bt Hassan, *SmSn Pertut.(Kep.)(UKMalaysia)**

Mohd. Azmarul bin A. Aziz, *SmSn Pertut.(Kep.)(UKMalaysia)*

Mursyida bt Hassan, *B.Med.Sci.(Leicester)*, *SmSn Pertut.(Kep.)(UKMalaysia)**

Susheel Kaur Dhillon a/p Joginder Singh, *SmSn Pertut.(Kep.)(UKMalaysia)**

Wong Min Ney, *SmSn Pertut.(Kep.)(UKMalaysia)**

* Cuti belajar / *Study leave*

**Program Terapi Carakerja
Occupational Therapy Programme**

Profesor Madya (Associate Professor)

Noor Ibrahim bin Mohamed Sakian, *MD(UKMalaysia)*, *PG Dip(Salford)*,
M.Sc(USMalaysia)

Pensyarah Kanan (Senior Lecturer)

Sazlina bt Hj. Kamaralzaman, *M.B.B.Ch*, *B.A.O.(Ireland)*, *LRCP & SI(NUI)*, *DipEd.*
(Hons.)(Malaya), *MSc. Rehab(Nottingham)*

Siti Arbi bt Hj. Kamsu (PPN), *Dip/BSc. Occupational Therapy(London)*, *Dip*
Mgt.(MIM), *MBA(Ohio)*

Pensyarah (Lecturers)

Chai Siaw Chui, *Dip.OT(KKMalaysia)*, *BSc.(Hons)App. Rehab.(OT) (Teesside)*,
*MA(New York)**

Dzalani bt Harun, *Dip.OT(KKMalaysia)*, *BSc.(Hons)App. Rehab.(OT)(Teesside)*,
*MHLthSc(OT)(Sydney)**

Masne bt Kadar, *Dip.OT(KKMalaysia)*, *BSc.(Hons)App. Rehab.(OT)(Teesside)*, *Master*
*in Disability Studies(Adelaide)**

Nor Afifi bt Razaob @ Razab, *SmSB(UKMalaysia)*, *MSc. in Cardiac*
*Rehabilitation(UK)**

Nor Farah bt Mohamad Fauzi, *SmSB(UKMalaysia)*, *MSc(USMalaysia)*

Tutor (Tutors)

Aifah bt Jamaludin, *SmTer.Ckerja(UKMalaysia)*

Hanif Farhan bin Mohd Rasdi, *SmTer.Ckerja(UKMalaysia)**

Noorashikin bt Samin, *SmTer.Ckerja(UKMalaysia)**

* Cuti belajar / *Study leave*

Sejarah Penubuhan Fakulti Sains Kesihatan

Idea untuk menubuhkan Fakulti Sains Kesihatan telah tercetus sejak tahun 1982 lagi oleh pihak Fakulti Perubatan dan Fakulti Sains Hayat UKM dan telah dibangkitkan pada Mesyuarat Jawatankuasa Perancangan dan Perkembangan Akademik (JPPA) Ke-75 yang telah diadakan pada 16 Julai 1991. Ini adalah berikutan permohonan Fakulti Perubatan untuk memperkenalkan satu program baru iaitu Program Sarjanamuda Sains Bioperubatan dengan Kepujian. Ini adalah suatu langkah yang munasabah memandangkan Fakulti Perubatan yang sudah mempunyai 18 Jabatan dan mempunyai 17 program ijazah lanjutan tidak perlu dibebankan dengan program-program Sains Kesihatan. Tambahan, penubuhan sebuah fakulti yang baru memberi peluang untuk Universiti Kebangsaan Malaysia menerokai kursus-kursus Sains Kesihatan seperti Fisioterapi, Audiologi, Sains Pertuturan dan lain-lain.

Kertas kerja konseptual mengenai penubuhan fakulti yang dinamakan Fakulti Sains Kesihatan Bersekutu telah dipersetujui oleh Mesyuarat Fakulti Perubatan Ke-204 pada 6 Februari 1991 dan telah dimajukan ke Mesyuarat JPPA Ke-76 pada 4 November 1991. Program Sarjanamuda Optometri yang telah dikelolakan oleh Fakulti Perubatan semenjak tahun 1982 serta Program Sarjanamuda Sains (Dietetik) yang dijalankan bersama Fakulti Perubatan - Fakulti Sains Hayat semenjak tahun 1984 direncanakan diletakkan bersama Program Sarjanamuda Sains Bioperubatan yang telah diluluskan oleh pihak Kementerian Pendidikan pada Mesyuarat JPT Ke-115 pada 28 Januari 1992. Senat telah bersetuju pada mesyuaratnya yang Ke-238 pada 20 November 1991 untuk memperakukan penubuhan Fakulti Sains Kesihatan Bersekutu dan pihak Kementerian Pendidikan telah bersetuju pada Mesyuarat JPT Ke-116 pada 9 Jun 1992. Pihak Universiti telah mengisytiharkan penubuhan fakulti tersebut pada 1 September 1992. Serentak dengan itu, tiga jabatan baru iaitu Jabatan Sains Bioperubatan, Jabatan Optometri dan Jabatan Dietetik telah ditubuhkan.

Fakulti Sains Kesihatan Bersekutu telah mengambil langkah untuk mengubah nama dan menstrukturkan semula jabatan dan program pengajiannya pada tahun 2010. Cadangan perubahan nama dan penstrukturan semula ini telah dipersetujui dalam Mesyuarat Fakulti Sains Kesihatan Bersekutu Bil.97 pada 7 April 2010 dan telah dimajukan ke Mesyuarat JPPA Ke-153 pada 10 Mei 2010. Senat telah bersetuju dalam mesyuaratnya yang Ke-354 pada 23 Jun 2010 untuk memperakukan perubahan nama Fakulti Sains Kesihatan Bersekutu kepada Fakulti Sains Kesihatan dan penubuhan tiga pusat pengajian iaitu, Pusat Pengajian Sains Diagnostik dan Kesihatan Gunaan (PPSDKG), Pusat Pengajian Sains Rehabilitasi (PPSR), dan Pusat Pengajian Sains Jagaan Kesihatan

(PPSJK). Penstrukturan ini juga melibatkan pertukaran nama bagi dua program, iaitu Optometri kepada Optometri dan Sains Penglihatan, dan Kesihatan Persekitaran kepada Kesihatan Persekitaran dan Keselamatan Industri. Pada 5 Ogos 2010, Mesyuarat Lembaga Pengarah Universiti Bil.4/2010 telah memperakukan perkara tersebut dan kemudiannya diluluskan oleh Mesyuarat JPT Bil.4/2011 pada 8 Februari 2011.

Fakulti Sains Kesihatan merupakan Fakulti pertama di negara ini yang menawarkan program-program Sains Kesihatan secara komprehensif. Kampusnya terletak di tengah-tengah Bandaraya Kuala Lumpur iaitu di Jalan Raja Muda Abdul Aziz bersama-sama Fakulti Perubatan (Praklinikal), Fakulti Pergigian dan Fakulti Farmasi. Kepelbagaian dan kedinamikan kehidupan di Bandaraya juga tercermin pada warga Fakulti dan program yang ditawarkannya. Pada awal penubuhannya hanya terdapat tiga program pengajian iaitu Sains Bioperubatan, Optometri, dan Dietetik. Kemudian, pada sesi 1995-1996 empat buah program iaitu Pemakanan, Farmasi, Audiologi dan Sains Pertuturan ditawarkan. Program Pengimejan Diagnostik dan Radioterapi pula dimulakan pada sesi 2000-2001 dan diikuti dengan penubuhan Unit Psikologi Kesihatan yang menawarkan program pengajian pascasiswazah pada tahun 2001. Pada sesi 2003-2004 dua program baru lain diperkenalkan iaitu Fisioterapi dan Kesihatan Persekitaran. Manakala program Terapi Carakerja diperkenalkan mulai sesi 2004-2005. Program Sains Forensik mula diperkenalkan pada sesi 2006-2007. Satu lagi program baru telah diperkenalkan iaitu Sains Perubatan Kecemasan pada sesi 2007-2008. Selari dengan perkembangan semasa, Jabatan Farmasi telah dinaiktaraf menjadi Fakulti Farmasi pada 1 Jun 2008 manakala program Sarjanamuda Sains Perubatan Kecemasan dipindahkan ke Fakulti Perubatan pada 13 Julai 2010.

Sehingga kini, Fakulti Sains Kesihatan menawarkan 11 program Prasiswazah, 2 program Diploma Pascasiswazah, 5 program Sarjana secara kerja kursus, 2 program Sarjana secara kerja kursus dan tesis, 8 program Sarjana secara penyelidikan, dan 8 program Doktor Falsafah.

Falsafah / Rasional Penubuhan

1. Perkembangan teknologi perubatan akan terus mencabar bidang ikhtisas perubatan ke tahap pencapaian yang lebih tinggi dan mengakibatkan banyak perubahan dalam pendidikan perubatan untuk para doktor di serata dunia. Dengan hakikat ini, perubahan dalam profesyen perubatan seharusnya membuka peluang yang lebih baik untuk para profesional kesihatan yang lain. Nyatalah bahawa jika bidang perubatan itu berkembang pesat tanpa kemajuan yang setara dengan profesyen kesihatan yang lain, maka taraf kesihatan masyarakatnya tidak akan mencerminkan tahap kemajuan dalam profesyen perubatan tersebut.
2. Pendekatan khidmat kesihatan secara berpasukan dianggap sebagai cara yang paling berkesan untuk mencapai “Kesihatan untuk Semua”. Oleh yang demikian wajarlah setiap ahli pasukan ini diperkembangkan prestasinya seberapa yang mungkin untuk berganding bahu dengan ikhtisas perubatan. Mereka bukan sahaja memberi khidmat bantuan, tetapi juga mempunyai hubungan simbiosis dengan disiplin perubatan.
3. Program yang ditawarkan oleh Fakulti akan meningkatkan martabat profesyen Sains Kesihatan selaras dengan kemajuan program pendidikan yang dilakukan di negara-negara lain di dunia.
4. Keperluan tenaga mahir untuk menunjang peningkatan perkhidmatan kesihatan di negara ini adalah sangat mendesak.

Visi Fakulti

FSK berhasrat menjadi pusat kecemerlangan pendidikan serantau dalam bidang Sains Kesihatan dengan menyediakan ilmu yang berkualiti dan terkehadapan dalam bidang pendidikan, penyelidikan dan pembangunan serta khidmat masyarakat di samping mendukung jatidiri kebangsaan.

Misi Fakulti

FSK menyediakan pendidikan yang berkualiti dan terkini melalui penerapan hasil penyelidikan untuk menghasilkan profesional kesihatan yang beretika dan kompeten untuk meningkatkan kesihatan dan kesejahteraan masyarakat.

Matlamat Fakulti

- Mencapai dan mengekalkan kualiti pendidikan bertaraf dunia serta memupuk sahsiah insan cemerlang beracuan kebangsaan.
- Memperkukuhkan budaya penyelidikan serta memperluaskan dan mengeratkan jaringan strategik global sejajar dengan taraf universiti penyelidikan.
- Memperkasakan tanggungjawab sosial dalam Sains Kesihatan untuk kesejahteraan masyarakat.
- Mencapai dan mengekalkan sistem penyampaian berkesan bagi menyokong perancangan strategik Fakulti.

Objektif Pendidikan Fakulti

FSK bertekad melahirkan graduan Sains Kesihatan dengan jati diri kebangsaan yang:

- berpengetahuan yang menyeluruh dan terkini dalam disiplinnya;
- kompeten, berkeyakinan serta berdaya saing di peringkat global;
- berfikiran kritis dan analitikal dan mampu menjalankan penyelidikan;
- menitikberatkan pembelajaran sepanjang hayat;
- mempunyai kemahiran berkomunikasi secara efektif;
- mempamerkan nilai-nilai murni dalam menjalankan tanggungjawab sosial;
- beretika, komited dan profesional;
- berkebolehan kerja berpasukan, mengurus, mentadbir, memimpin serta mempunyai ciri-ciri keusahawanan dalam bidang Sains Kesihatan.

Program Pengajian Siswazah Fakulti Sains Kesihatan

MATLAMAT DAN OBJEKTIF PENGAJIAN SISWAZAH

Matlamat dan objektif pengajian siswazah di FSK adalah seperti berikut:

- Menghasilkan bakal pemimpin dan penyelidik untuk Negara.
- Menggalakkan budaya penyelidikan dalam bidang Sains Kesihatan.
- Membangun kemampuan untuk melakukan penyelidikan secara berdikari.
- Menghasilkan pakar bidang berwibawa dalam pelbagai profesyen Sains Kesihatan.
- Menerapkan kepentingan pembelajaran sepanjang hayat.

PROGRAM PENGAJIAN SISWAZAH

Pada sesi akademik 2011-2012, Fakulti Sains Kesihatan menawarkan program pengajian siswazah secara kerja kursus sahaja, atau kerja kursus dan penyediaan tesis, atau penyediaan tesis sahaja.

A. Kerja Kursus

1. Diploma Pascasiswazah Dietetik
2. Diploma Pascasiswazah Psikologi Kesihatan
3. Sarjana Sains Kesihatan (Sains Bioperubatan)
4. Sarjana Psikologi Klinikal
5. Sarjana Sains Kesihatan (Pendidikan Kesihatan)
6. Sarjana Sains Kesihatan (Linguistik Klinikal)
7. Sarjana Sains Kesihatan (Optometri Klinikal)

B. Kerja Kursus dan Penyediaan Tesis

1. Sarjana Sains Kesihatan (Pemakanan Klinikal)
2. Sarjana Sains Kesihatan (Pemakanan Komuniti)

C. Penyediaan Tesis

1. Sarjana Sains Kesihatan (Sains Bioperubatan)
2. Sarjana Sains Kesihatan (Pemakanan)

3. Sarjana Sains Kesihatan (Dietetik)
4. Sarjana Sains Kesihatan (Linguistik Klinikal)
5. Sarjana Sains Kesihatan (Optometri)
6. Sarjana Sains Kesihatan (Pendengaran dan Pertuturan)
7. Sarjana Sains Kesihatan (Pengimejan Diagnostik)
8. Sarjana Sains Kesihatan (Radioterapi)
9. Doktor Falsafah (Sains Bioperubatan)
10. Doktor Falsafah (Pemakanan)
11. Doktor Falsafah (Dietetik)
12. Doktor Falsafah (Linguistik Klinikal)
13. Doktor Falsafah (Optometri)
14. Doktor Falsafah (Pendengaran dan Pertuturan)
15. Doktor Falsafah (Pengimejan Diagnostik)
16. Doktor Falsafah (Radioterapi)

TOPIK PENYELIDIKAN TERKINI

1. Linguistik Klinikal

- Analisa linguistik ke atas aspek kecelaruan bahasa dan pertuturan
- Pembentukan norma-norma bahasa dan pertuturan normal bagi bahasa-bahasa setempat seperti bahasa Melayu, Cina dan Tamil, dan sebagainya
- Pembinaan alat-alat penilaian dan intervensi
- Pemerolehan dan pemprosesan bahasa normal
- Perkembangan bahasa populasi di Malaysia
- Sociolinguistik seperti dwibahasa, kepelbagaian bahasa, pemilihan bahasa, penukaran dan percampuran kod, dan sebagainya.

2. Optometri

- Ambliopia
- Disleksia
- Elektrofisiologi
- Ergonomik visual
- Fungsi visual dalam kecelaruan okular
- Kanta lekap silikon hidrogel
- Kecekapan larutan kanta lekap
- Keratokonus
- Miopia
- Ortokeratologi
- Penglihatan binokular
- Penglihatan dan keselamatan jalan raya
- Penglihatan warna

- Refraksi Periferal
- Retinopati pramatang

3. Pemakanan dan Dietetik

- Antioksidan dan Kesihatan
- Epidemiologi pemakanan
- Keperluan tenaga dalam populasi tertentu
- Keseimbangan tenaga dan aktiviti fizikal
- Metabolisme tenaga
- Obesiti
- Pemakanan geriatrik
- Pemakanan kanak-kanak
- Pemakanan klinikal
- Pemakanan komuniti
- Pemakanan metabolik
- Pemakanan remaja
- Pemakanan sukan
- Pendidikan pemakanan
- Rekabentuk dan validasi soal selidik kekerapan makanan
- Sistem maklumat pemakanan
- Status pemakanan dan komposisi tubuh
- Tingkahlaku makanan

4. Pendengaran dan Pertuturan

- Amalan berpusatkan keluarga dalam intervensi awal
- Amalan profesional dan pendidikan terapis pertuturan-bahasa di Malaysia
- Aplikasi ujian elektrofisiologi dalam kecelaruan pemprosesan auditori
- Diagnosis dan rehabilitasi vestibular
- Faktor yang mempengaruhi tahap reaksi terhadap tinnitus
- Fisiologi lipatan peti suara normal dan berpenyakit
- Implikasi pemprosesan auditori ke atas rehabilitasi auditori di kalangan populasi geriatrik
- Isu-isu pertuturan dan bahasa di kalangan kanak-kanak dengan kecelahan lelangit dan bibir
- Keberkesanan ciri-ciri alat bantu pendengaran berteknologi tinggi terhadap pengenalpastian pertuturan
- Kegagalan
- Kepakaran dalam diagnosis vestibular (ujian vestibular *evoked myogenic potentials*, irigasi kalorik, dan posturografi)
- Kesejahteraan psikososial dalam populasi hilang pendengaran
- Kesihatan komunikasi di kalangan populasi geriatrik
- Kesihatan vokal di kalangan pengguna profesional suara

- Kualiti hidup penerima implan koklea dan ahli keluarga
- Mutu penelanan dalam populasi geriatrik
- Pemakanan kanak-kanak yang mengalami kecelahan langit dan bibir
- Pemasangan dan penilaian alat bantu pendengaran
- Pencapaian pendidikan dan vokasional penerima implan koklea
- Pendidikan klinikal bidang sains pertuturan
- Pengukuran tahap kesengauan melalui kaedah persepsi dan instrumentasi
- Perbandingan kaedah preskriptif pemasangan alat bantu pendengaran
- Perkembangan bahasa normal dan atipikal
- Perkembangan fonologikal secara bilingual dan multilingual
- Persepsi bunyi dan pertuturan melalui alat implant koklea – pemasangan dwimodal, unilateral dan dwilateral
- Rehabilitasi keseimbangan dan vestibular pada populasi umum
- Ujian akustik immitans berfrekuensi tinggi dan reflektans jalur lebar dalam praktis audiologi

5. **Pengimejan Diagnostik**

- Air sebagai kontras media oral untuk tomografi berkomputer abdominopelvis
- Algoritma dosimetri sinaran untuk mamografi digital
- Angka merit dalam radiologi
- Dosimetri dalam radiologi
- Fizik pengimejan resonans magnet
- Fungsi otak manusia
- Mamografi berkomputer dan digital
- Pembelajaran interprofession
- Pendidikan komuniti terhadap kesedaran kanser payudara
- Pengimejan forensik
- Pengimejan resonans magnet kefungsiian
- Pengimejan sains neuro
- Pengoptimuman dos sinaran dan kualiti imej dalam radiologi
- Refleksi dalam amalan klinikal
- Tomografi Impedans elektrik

6. **Psikologi Kesihatan**

- Dementia dan terapi *Reminiscence*
- Faktor psikologi dalam pemulihan angin ahmar
- Ingatan dan sawan
- Kefungsiian eksekutif dan kognisi dalam penyakit Alzheimer
- Kepetahan tingkahlaku dalam kemahiran akademik asas
- Kesihatan mental silang budaya dan penyalahgunaan alcohol/dadah

- Kualiti hidup dan persepsi penyakit dalam penyakit ginjal
- Meditasi dan kesihatan mental
- Obesiti, imej badan dan harga diri
- Persediaan psikologikal untuk prosedur perubatan
- Saringan psikometri untuk kecelaruan mental

7. Radioterapi

- Dosimetri
- Kesan radioterapi
- Kualiti hidup pesakit selepas rawatan brakiterapi
- Pengoptimuman dos terapi menggunakan *Intensity Modulated Radiotherapy (IMRT)*
- Perancangan rawatan IMRT (*Intensity Modulated Radiotherapy*)
- Pergerakan organ dalaman semasa rawatan radioterapi
- Radioterapi berpandukan imej – mesin ultrabunyi, CBCT
- Refleksi emosi dan kesakitan pesakit yang menerima rawatan brakiterapi

8. Sains Bioperubatan

- Aktiviti antikulat secara in vitro dan in vivo oleh hasilan semulajadi
- Aktiviti antimikrob dan mekanisme tindakannya
- Anatomi manusia
- Bioaktif peptida dan polipeptida dari pokok dan haiwan
- Bioinsektisidal
- Biokimia agen antikanser, perlindungan hepar, penyembuhan luka dan sasaran penyakit lain oleh produk semulajadi
- Biosensor untuk tuberkulosis
- Diagnosis patogen manusia
- Diagnostik mikroskop elektron bagi penyakit berjangkit dan bioteroris
- Ekologi dan dinamik populasi nyamuk
- Elektrofisiologi dan neurosains penglihatan
- Entomologi forensik
- Epidemiologi unsur surih
- Farmakodinamik agen antimikrob
- Farmakologi
- Fisiologi reproduktif
- Fungsi kognitif dan tahap kesihatan pelajar sekolah
- Hematologi
- Intervensi suplemen mikronutrien

- Kajian sitopatogenomik
- Kawalan nyamuk dan lalat menggunakan insektisidal dan pestisidal
- Kawalan penyakit bawaan vektor terutamanya denggi
- Kejuruteraan tisu
- Kerosakan dan baikpulih DNA
- Kesan biologi hasilan semulajadi
- Kesihatan umum dan komuniti
- Kimia perubatan
- Kosmetikseutikal
- Mikrob endofit
- Mikrobiologi persekitaran dan penyakit bawaan makanan
- Neurosains matematik
- Nosokomial infeksi, epidemiologi dan pengtaipan DNA
- Novel antibiotik dan aktiviti anti-infektiviti dari hasilan semulajadi
- Parasitologi dan entomologi perubatan
- Patologi eksperimental dan molekul
- Patologi radikal bebas dan antioksidan
- Pemencilan dan identifikasi kulat endofit serta bahan bioaktif metabolit sekundernya
- Pemindahan patogen enterik
- Pengesanan dan penentuan kulat berasaskan DNA
- Penilaian ketoksikan genetik sampel biobahan, produk semulajadi, makanan dan sumber alam sekitar berasaskan garispanduan OECD dan ISO
- Penyakit bawaan air
- Peranan vitamin dalam kesihatan manusia dan status penyakit
- Persenyawaan in vitro
- Perubatan tropikal
- Pestisid dan fungsi peparu
- Psikofizik manusia
- Toksikologi biokimia dan toksikologi makanan
- Toksikologi molekul dan mekanisme apoptosis

KURSUS WAJIB FAKULTI (WF)

Semua pelajar yang mengikuti program pengajian Sarjana (secara penyelidikan) dan Doktor Falsafah diwajibkan mendaftar dan lulus satu (1) Kursus Wajib Fakulti (WF) iaitu NNPD6014: Kaedah Penyelidikan & Statistik Untuk Sains Kesihatan.

NNPD6014 Kaedah Penyelidikan & Statistik Untuk Sains Kesihatan

Objektif kursus ini adalah untuk memberi kebolehan kepada pelajar terhadap statistik deskriptif, inferensial dan lanjutan. Mereka juga akan diajar untuk menjalankan analisa statistik menggunakan perisian SPSS.

Bacaan Asas

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish. Version 15.0 for Windows*. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics. 4th edition*. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design Using ANOVA*. Belmont: Duxbury Press.

PERTUKARAN TAHAP PENGAJIAN DARIPADA PROGRAM SARJANA KEPADA PROGRAM DOKTOR FALSAFAH

1. Syarat permohonan adalah seperti berikut:-
 - i. Pelajar Sarjana (secara penyelidikan) yang mendaftar secara sepenuh masa sahaja;
 - ii. Telah menerbitkan sekurang-kurangnya SATU penerbitan dan telah membentangkan hasil penyelidikan;
 - iii. Mempunyai laporan kemajuan yang memuaskan dan mendapat sokongan penyelia;
 - iv. Perlu membentangkan proposal terbaru untuk penyelidikan di peringkat Doktor Falsafah;
 - v. Diluluskan oleh Dekan Fakulti dan Senat Universiti .

2. Cara permohonan adalah seperti berikut:
 - i. Permohonan perlu dibuat selewat-lewatnya pada minggu keempat semester ke-3 pengajian, supaya pertimbangan dapat dilakukan dalam semester ke-3 dan keputusan dapat dikeluarkan sebelum semester ke-4 pengajian bermula.
 - ii. Calon perlu menyediakan proposal baru untuk penyelidikan Doktor Falsafah yang merangkumi:
 - Penambahan skop penyelidikan
 - Kesignifikan penyelidikan
 - Penambahan objektif penyelidikan
 - Penambahan masa penyelidikan
 - iii. Calon menyerahkan permohonan dan dokumen yang diperlukan kepada penyelia untuk mendapat perakuan.
 - iv. Penyelia akan menyerahkan permohonan tersebut kepada Pengerusi Pusat Pengajian.
 - v. Pengerusi Pusat Pengajian akan meminta calon membentangkan cadangan penyelidikan Doktor Falsafah di hadapan kakitangan akademik dan pelajar siswazah Pusat Pengajian.
 - vi. Jika dipersetujui di peringkat Pusat Pengajian, permohonan calon dimajukan kepada Timbalan Dekan (Siswazah & Antarabangsa) dan Jawatankuasa Pertukaran Status Pengajian Pascasiswazah (JPSPP) akan meneliti dan menilai proposal calon.
 - vii. Calon akan membentangkan proposal penyelidikan Doktor Falsafah tersebut dengan kehadiran ahli JPSPP dan pensyarah lain.

- viii. Jika dipersetujui oleh JPSPP, calon diminta membuat pembetulan proposal mengikut cadangan yang diberikan.
- ix. Calon menyerahkan proposal baru kepada kepada Timbalan Dekan (Siswazah & Antarabangsa) untuk perakuan Fakulti.
- x. Keputusan akan dimajukan kepada Pengarah Pusat Pengurusan Siswazah untuk tindakan selanjutnya.
- xi. Sebarang keputusan akan dimaklumkan kepada calon.

Program Diploma Pascasiswazah Psikologi Kesihatan

Pengenalan

Program Diploma Pascasiswazah Psikologi Kesihatan merupakan satu program *conversion* (tukar bidang) kepada pelajar yang bukan daripada aliran psikologi memasuki program psikologi berorientasikan klinikal dan kesihatan di peringkat sarjana dan doktor falsafah. Di samping itu juga program ini amat bersesuaian kepada profesyen-profesyen tertentu yang memerlukan pengetahuan psikologi bagi kerjaya mereka seperti guru, pensyarah, jururawat, polis, tentera, kakitangan swasta dan kerajaan yang berurusan dengan pihak awam dan pegawai kesihatan. Program ini juga menawarkan kursus-kursus yang melihat manusia dalam konteks kognitif dan emosi dalam persepsi manusia dan tingkah laku manusia. Ini secara langsung mendedahkan pelajar kepada semua aspek perkembangan kognitif sosial, sikap, tingkah laku dan ciri-ciri individu, faktor ekologi yang mempengaruhi tingkah laku, pengaruh sosial, kelompok sosial dan sebagainya. Dengan adanya kursus sebegini akan membantu membangunkan individu yang seimbang, peka masyarakat, mahir berkomunikasi dan mampu membuat keputusan.

Objektif

- Memberi peluang kepada graduan lepasan ijazah pertama bukan aliran psikologi memasuki bidang Psikologi Kesihatan seterusnya melanjutkan pelajaran di peringkat Sarjana dan Doktor Falsafah dalam bidang kepakaran yang khusus.
- Meningkatkan bilangan graduan Psikologi Kesihatan dalam memenuhi keperluan Negara.
- Melatih lebih ramai graduan Psikologi Kesihatan yang komited untuk melanjutkan pelajaran dalam bidang psikologi berteraskan Sains Kesihatan.
- Memenuhi keperluan rujukan kepakaran yang ada pada ahli Psikologi Kesihatan dari profesyen lain.
- Berkebolehan untuk mempromosikan Psikologi Kesihatan menggunakan pendekatan pengamalan ilmu sains.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 35 unit.

Kurikulum Program Diploma Pascasiswazah Psikologi Kesihatan

Semester I

Kod	Tajuk Kursus	Unit
NNNC4012	Penyelidikan: Kaedah Kuantitatif dan Kualitatif	2
NNNC4013	Kitaran Hidup Manusia	3
NNNC4014	Pengenalan dan Sejarah Psikologi	4
NNNC4032	Minda dan Tingkahlaku Sosial	2
NNNC4033	Persepsi, Kognisi dan Memori	3
NNNC4034	Personaliti: Teori dan Aplikasi	4
NNNC4052	Pembelajaran dan Motivasi	2
	Jumlah Unit	20

Semester II

Kod	Tajuk Kursus	Unit
NNNC4022	Prinsip dan Etika Profesyen Menolong	2
NNNC4023	Kecelaruhan Minda dan Tingkahlaku	3
NNNC4024	Penilaian Psikologi	4
NNNC4042	Psikologi Kesihatan	2
NNNC4044	Projek Psikologi Kesihatan	4
	Jumlah Unit	15

Jumlah keseluruhan unit adalah 35 unit

Sinopsis Kursus Program Diploma Pascasiswazah Psikologi Kesihatan

NNNC4012 Penyelidikan: Kaedah Kuantitatif dan Kualitatif

Kursus ini memperkenalkan beberapa cara penyelidikan dan kaedah kuantitatif serta kualitatif dalam Psikologi. Pelajar akan didedahkan kepada kaedah penyelidikan dari mengenalpasti masalah kajian hingga menginterpretasi penemuan kajian. Perhatian juga diberikan kepada teknik analisis deskriptif dan inferensi. Tumpuan akan diberikan pada kajian gunaan yang dikaitkan dengan kajian, kes studi, serta penilaian rawatan.

Bacaan Asas

- Coolican, H. 2004. *Research methods and statistics in Psychology. Ed. Ke 4.* London: Hodder & Stoughton.
- Cozby, B. 2002. *Method in behavior research.* USA: Mc Graw-Hill.
- Goodwin, C.J. 2005. *Research in Psychology methods and design. Ed. Ke 4.* New Jersey: John Wiley.
- Neuman, W.L. 2004 *Basic of social research:Qualitative and quantitative approaches.* Boston, MA: Allyn & Baron.
- Pagano, R.K. 2004. *Understanding statistics in behavioral science. Ed. Ke 7.* Belmont, Canada: Thompson & Wodswath.

NNNC4013 Kitaran Hidup Manusia

Kursus ini merangkumi perkembangan psikologi bayi, kanak-kanak, remaja, dewasa dan lanjut usia. Penekanan diberikan kepada perkembangan emosi, fizikal, kognitif dan sosial di setiap tahap perkembangan. Selain daripada itu faktor-faktor genetik dan persekitaran diberikan penekanan di samping melihat kepada teori-teori perkembangan manusia. Di samping itu juga, masalah penyesuaian perkembangan semasa dan pengaruh-pengaruh sekeliling dalam pusingan hidup akan dihuraikan dalam kursus ini.

Bacaan Asas

- Bee, H.L. 1996. *The developing child.* Ed. Ke-6. New York: Harper Collins College.
- Hoffman, L., Paris, S. & Hall, E. 1994. *Development psychology today.* Ed. Ke-6. New York: McGraw-Hill.
- Papalia, D., Olds, W., & Feldman, D. 2007. *Human development.* Ed Ke-11. New York: Mc Graw Hill.
- Papalia, D., Sterns, R. & Seldman, E. 2002. *Adult development and aging.* Ed. Ke-3. USA: Mc Graw-Hill.
- Richard, J. E. 2000. *Developmental psychology.* New Jersey: Ablex.

NNNC4014 Pengenalan dan Sejarah Psikologi

Kursus ini memperkenalkan ilmu-ilmu asas psikologi dan sejarahnya. Pelajar akan didedahkan topik-topik asas dalam bidang psikologi dan juga sejarah perkembangan ilmu psikologi. Selain itu, melalui tugas dan perbincangan dalam kelas, pelajar dilatih untuk mengaplikasikan ilmu psikologi dalam memahami diri sendiri dan juga persekitarannya. Dengan mengikuti kursus ini, pelajar akan dapat menyediakan diri untuk mendalami lagi bidang-bidang psikologi yang lebih khusus pada masa akan datang.

Bacaan Asas

- Baron, R. A. 2005. *Psychology*. Ed. Ke 5. Prentice-Hall of India.
- Ciccarelli, S. K., & White, J. N. 2009. *Psychology*. Ed. Ke 2. Pearson Education.
- Coon, D., & Mitterer, J. O. 2010. *Introduction to Psychology: Gateways to Mind and Behavior*. Ed. Ke 12.
- Kalat, J. W. 2005. *Introduction to Psychology*. Ed. Ke 7. Wadsworth Thomson Learning.
- Lahey, B. B. 2009. *Psychology: An Introduction*. Ed. Ke 10. McGraw-Hill. Wadsworth.

NNNC4032 Minda dan Tingkah laku Sosial

Kursus ini adalah melihat hubungan antara kognitif dan afektif terhadap persepsi sosial dan tingkah laku manusia. Pelajar akan didedahkan dengan kognitif sosial, sikap, tingkah laku dan ciri-ciri individu, faktor ekologi yang mempengaruhi tingkah laku, pengaruh sosial, kelompok sosial dan faktor yang mempengaruhi tingkahlaku sosial. Di samping itu aspek persekitaran dan kesihatan mempengaruhi tingkah laku manusia juga diberi penekanan dalam kursus ini. Memperlihatkan kepada pelajar psikologi sosial diaplikasikan dalam bentuk yang lebih luas dalam memahami dan meningkatkan kualiti hidup manusia.

Bacaan Asas

- Baron, R.A., & Bryne, D. 1991 . *Social psychology understanding human interaction*. Ed Ke 6. Boston: Allyn Bacon
- Bringham, J.C. 1991 . *Social psychology*. New York: Harper Colin.
- Michener, H.A. 1999. *Social psychology*. Ed. Ke- 4. Madison: Wadsworth.
- Mohd Makhzan Musa. 1997. *Psikologi sosial*. Kuala Lumpur: Utusan Publication.
- Worchel, S. 1999. *Social psychology*. USA : Wadsworth.

NNNC4033 Persepsi, Kognisi dan Memori

Kursus ini memperkenalkan kepada pelajar aspek-aspek penting psikologi iaitu aspek persepsi, kognisi dan memori. Kursus ini pelajar didedahkan konsep persepsi, pengamatan pola visual, pengamatan pertuturan dan pengecaman pola. Pelajar juga didedahkan dengan proses ingatan, perwakilan pengetahuan, bahasa, penyelesaian masalah dan kreativiti, pembuatan keputusan dan kepintaran manusia.

Bacaan Asas

- Coren, S., Ward, L.M., Enns, J.T. 1999. *Sensation and Perception*. Ed. Ke 5. Orlando, Florida: Harcourt.
- Ellis, A.W., & Andrew, W.Y. 1991. *Cognitive Neuropsychology*. East Sussex, UK. Lawrence Erlbaum.
- Reed, S.K. 2000. *Cogniton: Theory and Application*. Belmont, California: Wadsworth.
- Schiffman, H.R. 2001. *Sensation and Perception: An Integrated Approach*. New York: John Wiley & Sons.
- Stenberg, R.J. 2005. *Cognitive Psychology*. Belmont, California: Wadsworth.

NNNC4034 Personaliti: Teori dan Aplikasi

Kursus ini adalah kursus pengenalan kepada psikologi personaliti. Ia memperkenalkan pelajar kepada konsep asas dan teori dalam bidang psikologi personaliti. Dengan mengikuti kursus ini, pelajar diharap dapat membentuk pemahaman sendiri tentang tabii manusia. Pemahaman ini juga dapat ditambah dengan mengambil kira beberapa perspektif yang digunakan bagi memahami fungsi manusia. Perspektif ini termasuklah daripada psikodinamik, kemanusiaan, tret kitaran hidup dan kognitif.

Bacaan Asas

- Brody, N., & Ehrlichman, H. 1998. *Personality Psychology: The Science of Individuality*. New Jersey: Prentice
- Fiest, T. 2001. *Theories of personality*. Ed. Ke 5. USA: Mc Graw – Hill.
- Funder, D. C. 2007. *The Personality Puzzle*. Ed. Ke 4. New York: W.W. Norton. Hall.
- Ryckman, R. 2000. *Theories of personality*. Ed. Ke 7. USA: Wadsworth.
- Schultz, D., & Schultz, S.E. 1998. *Theories of Personality*. Ed. Ke 6. Florida: Brooks/Cole.

NNNC4052 Pembelajaran dan Motivasi

Kursus ini merupakan pengenalan konsep asas dan teori pembelajaran. Penekanan akan diberikan kepada aspek pelaziman klasik, pelaziman operan, rangsangan-tindak balas, sistem ganjaran dan pembelajaran melalui peniruan. Selain itu kursus ini juga mendedahkan pelajar kepada aspek aplikasi teori pembelajaran melalui kaedah modifikasi tingkah laku di samping memberi penerangan tentang perkaitan aspek pembelajaran dengan proses kognitif seperti memori, perhatian dan sistem kedamaian manusia.

Bacaan Asas

- Chance, P. 2009. *Learning and behavior*. Ed. Ke 6. Belmont, CA, USA: Wadsworth
- Domjan, M. 2000. *Essentials of conditioning and learning*. Ed. Ke 2. USA :Thompson.
- Franken, R.E. 2006. *Human Motivation*. Wadsworth.
- Frieman, J. 2002. *Learning and adaptive behaviour*. Ed. Ke 4. USA: Thompson.
- Kazdin, A.E. 2001. *Behavior modification in applied settings*. Ed. Ke 6. Belmont, CA, USA: Wadsworth

NNNC4022 Prinsip dan Etika Profesyen Menolong

Kursus ini memperkenalkan ilmu kaunseling sebagai ilmu teras dalam profesion yang menawarkan pertolongan kepada pelbagai klien. Pengenalan kaunseling diberikan daripada segi konsep, pendekatan, proses, model, etika, isu profesional, serta aspek praktikalnya yang menekankan kemahiran-kemahiran kaunseling dan amali latihan. Pelajar dikehendaki mengaitkan ilmu dan teknik kaunseling dengan bidang psikologi kesihatan dan menghayati pengetahuan dan kemahirannya supaya mendapat manfaat apabila berdepan dengan klien kelak.

Bacaan Asas

- Egan G. 2006. *Essentials of skilled helping: Managing problems, developing opportunities*. Belmont, USA: Thomson Wadsworth.
- Gladding, S. T. 2008. *Counseling: A comprehensive profession*. Ed. Ke 6. New Jersey: Prentice Hall.
- Ivey A. E., & Ivey M. B. 2007. *Intentional interviewing and counseling: Facilitating client development in a*
- Kottler, J. A., & Shepard, D. S. 2008. *Introduction to counseling: Voices from the Field*. Ed. Ke 6. Belmont: *multicultural society*. Ed. Ke 6 Belmont: Brooks/Cole.
- Neukrug, E. 2007. *The world of the counselor: An introduction to the counseling profession*. Ed. Ke 3. Belmont: Thomson Brooks/Cole.

NNNC4023 Kecelaruhan Minda dan Tingkah Laku

Kursus ini memperkenalkan psikologi bilazim berkenaan kecelaruhan psikologi. Fokus akan diberikan kepada kecelaruhan utama di dalam the Diagnostic and Statistical Manual of Mental Disorders (DSM). Pelajar akan didedahkan kepada penilaian psikologi dan diagnosis berkenaan formulasi untuk rawatan. Kursus ini juga menyentuh atas tingkah laku bilazim mengikut tahap perkembangan mereka dari kanak-kanak, remaja, dewasa dan warga tua dan beberapa maklumat asas mengenai jenis-jenis rawatan yang ada untuk kecelaruhan-kecelaruhan ini.

Bacaan Asas

- Barlow, DH, Durand, VM. 2010. *Essentials of Abnormal Psychology*. Belmont, CA, USA: Wadsworth
- Eshun, S., & Gurung, R.A.R. (Peny.) 2009. *Culture and mental health: sociocultural influences, theory and practice*. West Sussex, UK: Wiley-Blackwell.
- Steven, S. 2000. *Abnormal psychology: Discovery approach*. USA: Mc Graw-Hill.
- Susan, N. 2001. *Abnormal psychology*. USA: Mc Graw-Hill.

NNNC4024 Penilaian Psikologi

Kursus ini akan mendedahkan pelajar kepada proses mengumpul maklumat yang melibatkan temuduga, pemerhatian tingkah laku, dan mentadbirkan alat ujian psikologi. Pelajar juga akan dilatih untuk menggunakan alat-alat ujian psikologi yang asas,

memahami tujuan penggunaan alat ujian untuk mentafsirkan aspek kognitif, personality, emosi dan tingkah laku manusia.

Bacaan Asas

- Gregory, R.J. 2004. *Psychological testing: History, principles, and applications*. Ed. Ke 4. Needham Heights, MA: Allyn & Bacon.
- Groth-Marnat, G. 2006. *Neuropsychological Assessment in Clinical Practice: A Guide to Test Interpretation and Integration*. Ed. Ke 5. New York: John Wiley & Sons.
- Kaplan, R.M. & Saccuzzo, D. P. 2005. *Psychological testing: Principles, applications, and issues*. Ed. Ke 6. Belmont, CA: Wadsworth/Thomson.
- Lezak, M. D., Howieson, D.B. & Loring, D.W. 2004 *Neuropsychological assessment*. Ed. Ke 4. New York: Oxford University Press.
- Sattler, J.M. 2004. *Assessment of children: Cognitive Foundations*. Ed. Ke 5. San Diego, CA: Jerome M. Sattler, Publisher.

NNNC4042 Psikologi Kesihatan

Psikofisiologi atau dikenali sebagai psikologi fisiologi, biopsikologi atau fisiologi tingkah laku menumpukan perhatian kepada kajian asas-asas biologi tingkah laku dan mental. Kursus ini mengkaji perkaitan di antara faktor psikologi dan fisiologi manusia. Kursus ini juga memberi perhatian kepada penjelasan mengenai fungsi otak, sistem saraf, sistem imun, hormon, kelenjar endokrin, sistem deria dan organ badan manusia ke atas tingkah laku dan proses mental manusia.

Bacaan Asas

- Feldman, R. S. 2010. *Understanding psychology*. Ed. Ke 8. USA: Mc Graw-Hill.
- Kalat, J. W. 2002. *Biological psychology*. Ed. Ke 7. USA: Thomson.
- Kent, G. & Dalgleish, M. 1996. *Psychology and medical care*. London: WB Saunders.
- Sarafino, E. P. 2005. *Health psychology: Biopsychosocial interaction*. Ed. Ke 5. USA: John Wiley & Son.
- Taylor, S. E. 2002. *Health psychology*. Ed. Ke 8. New York: McGraw-Hill.

NNNC4044 Projek Psikologi Kesihatan

Pelajar dikehendaki menjalankan satu mini projek di tempat yang dilawat mengenai masalah atau aspek yang dihadapi oleh masyarakat di Malaysia mengenai isu-isu psikologi kesihatan. Di samping itu juga pelajar akan membentangkan kajian kes serta membuat laporan mengenai kajian yang dipertanggungjawabkan.

Program Diploma Pascasiswazah Dietetik

Pengenalan

Program ini mengambil masa sekurang-kurangnya satu tahun. Ia melibatkan penguasaan ilmu di bidang Sains Kesihatan dan amalan pemakanan klinikal. Program ini akan memberi peluang kepada Ahli Pemakanan dalam negara dan luar negara yang sedang berkhidmat serta graduan baru dalam bidang Sains Pemakanan untuk meningkatkan ilmu serta kemahiran dalam bidang Dietetik. Pelajar akan dilatih dalam aspek penjagaan pemakanan pesakit di hospital terutamanya mereka yang memerlukan pemakanan khas. Tenaga mahir dalam bidang Dietetik akan dapat memberi perkhidmatan yang bermutu dan cemerlang bukan sahaja di hospital tetapi di peringkat komuniti iaitu di klinik pesakit luar dan di klinik kesihatan Kementerian Kesihatan Malaysia. Graduan program ini juga mampu berfungsi sebagai pakar rujuk di bidang yang bersangkutan dengan pemakanan dan kesihatan diri.

Objektif

Melahirkan graduan yang mempunyai asas teori yang mantap serta kemahiran amali serta pengurusan diet yang komprehensif kepada individu, keluarga dan masyarakat. Graduan juga mampu melakukan kerja klinikal tentang pemakanan untuk kesejahteraan pesakit.

Jumlah Unit

Jumlah unit wajib bagi program ini ialah sebanyak 33 unit.

Kurikulum Program Diploma Pascasiswazah Dietetik**Semester I**

Kod	Tajuk Kursus	Unit
NNND5012	Terapi Pemakanan Perubatan	2
NNND5013	Pendidikan Pesakit	3
NNND5014	Tajuk Khas Perubatan	4
NNND5032	Penyediaan Diet Terapeutik	2
NNND5034	Perkhidmatan Dietetik Pesakit Luar I	4
NNND5054	Perkhidmatan Dietetik Dalam Wad I	4
	Jumlah Unit	19

Semester II

Kod	Tajuk Kursus	Unit
NNND5052	Kepaniteraan Perkhidmatan Makanan	2
NNND5024	Perkhidmatan Dietetik Pesakit Luar II	4
NNND5044	Perkhidmatan Dietetik Unit Khas II	4
NNND5064	Perkhidmatan Dietetik Dalam Wad II	4
	Jumlah Unit	14

Jumlah unit keseluruhan adalah 33 unit

Sinopsis Kursus Program Diploma Pascasiswazah Dietetik

NNND5012 Terapi Pemakanan Perubatan

Kursus ini merupakan teras kepada prinsip dan pengurusan diet. Pembelajarannya merangkumi patogenesis, manifestasi, perubahan fisiologi dan biokimia bagi sesuatu permasalahan, contohnya obesiti, masalah gangguan makanan eating disorders, penyakit sistem endokrin (NIDDM dan IDDM), penyakit sistem kardiovaskular, penyakit sistem gastrousus dan kanser. Aspek penjagaan pemakanan pesakit paediatik dari penilaian status pemakanan dan terapi diet untuk kekurangan protein dan tenaga (PEM), diarrhea, kelainan metabolisme sehingga ke penggunaan produk khusus juga dibincangkan. Setiap topik akan dikupas secara menyeluruh. Perbincangan proses penjagaan diet meliputi penilaian pemakanan, perancangan, pelaksanaan dan penilaian keberkesanan regim diet yang dipreskripsikan.

Bacaan Asas

- Katz, D.L. 2008. *Nutrition in clinical practice*. Edisi ke- 2. Philadelphia: Lippincott William & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. Edisi ke-5. London: McGraw Hill.
- Mahan, L.K. & Escott-Stump, S. 2007. *Krause's food and nutrition therapy*. Edisi ke-12. Philadelphia: W.B.Saunders.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: diabetes, hyperlipidemia & hypertension*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

NNND5013 Pendidikan Pesakit

Kursus ini bertujuan mendedahkan pelajar tahun akhir dietetik kepada definisi, skop tugas dan etika perkhidmatan dietitian di dalam bidang klinikal, komuniti, perkhidmatan makanan dan pentadbiran; organisasi hospital dan dinamik kumpulan. Aspek-aspek penting yang ditekankan termasuklah asas pendidikan pesakit yang meliputi pengetahuan, sikap dan amalan pesakit terhadap penyakit, memperkenalkan perubahan dalam diet dan cara kehidupan pesakit, teknik dokumentasi dan kaunseling dietetik, teknik penilaian status pemakanan dalam skop klinikal dan juga penyediaan pakej pendidikan pemakanan yang

berkesan. Pelajar akan dilatih dengan kemahiran profesional kaunseling dietetik melalui sesi pemerhatian di klinik diet pesakit luar. Selain dari itu, pelajar juga dikehendaki menyediakan pakej pendidikan pemakanan bagi penyakit tertentu.

Bacaan Asas

- Behan E. 2005. *Therapeutic Nutrition: A Guide to Patient Education*. Lippincott Williams & Wilkins.
- Falvo, D.R. 2010. *Effective patient education: A guide to increased adherence*. Edisi ke-4. Jones & Bartlett Publishers.
- Gable, J. 2007. *Counseling skills for dietitians*. Edisi ke-2. Massachusetts: Wiley-Blackwell Science.
- Holli, B.B., O'Sullivan, J. & Calabrese, R.J. 2003. *Communication and education skill for dietetics professionals*. Edisi ke-4. Illinois: Lippincott Williams & Wilkins.
- Redman, B.K. 2002. *Measurement tools in patient education*. Edisi ke-2. New York: Springer

NNND5014 Tajuk Khas Perubatan

Kursus teras ini meliputi pelbagai tajuk perubatan. Ia mendefinisikan istilah perubatan yang sering digunakan oleh doktor perubatan. Ia juga memperkenalkan pelajar dengan pelbagai jenis prosedur analitikal yang dilakukan untuk membuat diagnosis sesuatu penyakit. Kuliah asas dijalankan untuk membuat diagnosis sesuatu penyakit. Patofisiologi penyakit dan rawatan akan dibincangkan. Penyakit mengikut sistem termasuk penyakit pada gastrousus, kardiovaskular, urinari, endokrin, dan saraf. Kuliah juga meliputi perubatan geriatrik, trauma, surgikal dan kebakaran. Pelajar juga akan diberi pendedahan tentang pengendalian pesakit di wad atau klinik. Ini adalah untuk memberi penekanan klinikal tentang rawatan.

Bacaan Asas

- Hay, W., Levin, M., Deterding, R. & Sondheimer, J. 2008. *CURRENT Diagnosis and Treatment Pediatrics*. Edisi ke-19. McGraw-Hill Medical.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S., Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. Edisi ke-16. Boston: McGraw Hill Professionals.
- Kim E. Barrett, Susan M. Barman, Boitano, S. & Brooks, H. 2009. *Ganong's Review of Medical Physiology*, 23rd Edition. McGraw-Hill Medical.
- Kumar, P. & Clark, L.M. 2005. *Clinical Medicine: with STUDENT CONSULT Access*. Edisi ke-6. Saunders Ltd
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical.

NNND5032 Penyediaan Diet Terapeutik

Kursus ini memberi pendedahan klinikal mengenai kaedah-kaedah penyediaan diet terapeutik dari segi pengubahsuaian tertentu. Penggunaan barangan atau barangan khusus yang biasa digunakan di dalam diet terapeutik akan diperkenalkan dalam penyediaan diet. Kebolehan memesan bahan makanan, pengiraan kandungan zat hidangan, kaedah penyediaan dan demonstrasi hidangan serta penilaian deria diberi penekanan. Tutoran bagi membincangkan protokol penyediaan diet terapeutik dijalankan sebelum amali diet berkaitan dijalankan. Penilaian berasaskan kepada kebolehan memesan bahan makanan, pengiraan zat makanan, penyediaan hidangan, demonstrasi serta penilaian deria.

Bacaan Asas

- Drummond, K.E. & Brefer, L.M. 2009. *Nutrition for foodservice & culinary professionals*. Edisi ke-7. New Jersey: John Wiley & Sons.
- Escott-Stump, S. 2007. *Nutrition and diagnosis-related care*. Edisi ke-6. Philadelphia: Lippincott, Williams & Wilkins.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia, hypertension & chronic kidney disease*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Persatuan Pemakanan Malaysia. 2002. *Resepi sihat: Pilihan bijak*. Jilid I. Vol 2. Kuala Lumpur: Persatuan Pemakanan Malaysia.
- Tee, E.S., Ismail M.N., Nasir, M.A. & Khadijah, I. 1997. *Nutrient composition of Malaysian foods*. Kuala Lumpur: Institute for Medical Research.

NNND5034 Perkhidmatan Dietetik Pesakit Luar I

Kursus ini merupakan latihan klinikal dietetik untuk pesakit luar. Pelajar akan memulakan latihan dengan sesi pemerhatian sesi kaunseling diet. Seterusnya pelajar akan membuat penilaian status pemakanan pesakit, merancang, memantau dan mengendalikan sesi kaunseling diet di bawah pengawasan dietitian. Pelajar juga mempelajari sistem rujukan pesakit, rekod, temujanji dan komunikasi di antara ahli penjagaan kesihatan yang lain. Pelajar akan ditempatkan di klinik diet di Klinik Warga, HUKM.

Bacaan asas

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. Edisi ke-5. Philadelphia: Lippincott, Williams & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. Edisi ke-5. London: McGraw Hill.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease*. Kuala Lumpur: Persatuan Dietitian Malaysia.

Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

NNND5054 Perkhidmatan Dietetik Dalam Wad I

Kursus ini merupakan latihan klinikal dietetik untuk pesakit dalam wad. Pada peringkat awal pelajar akan mempelajari sistem rujukan pesakit, rekod dan komunikasi di antara ahli penjagaan kesihatan yang lain. Pelajar juga akan mempelajari pelbagai diet terapeutik dan pemakanan enteral dan parental yang terdapat di hospital. Pelajar akan memulakan latihan dengan sesi pemerhatian pemesanan dan perancangan diet terapeutik, melakukan penilaian status pemakanan dan diet pesakit, merancang dan melaksanakan pemberian diet terapeutik dan seterusnya memantau perkembangan pesakit. Pelajar akan ditempatkan di wad medikal dan surgikal serta obstetrik dan ginekologi.

Bacaan Asas

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. Edisi ke-5. Philadelphia: Lippincott, Williams & Wilkins.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S. Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. Edisi ke-16. Boston: McGraw Hill Professionals.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical.
- Rolandelli, R., Bankhead, R., Boullata, J. & Compher, C. 2004. *Clinical Nutrition: Enteral and Tube Feeding, Text with CD-ROM*. Edisi ke-4. Boston: Saunders.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

NNND5052 Kepaniteraan Perkhidmatan Makanan

Pelajar akan menjalani kepaniteraan ini selama 5 minggu di Jabatan Sajian dan Dietetik hospital kerajaan dan swasta. Latihan ini menitikberatkan kaedah pelaksanaan perkhidmatan makanan termasuk pengurusan kakitangan, pembelian, penerimaan, penyimpanan, penyediaan serta belanjawan makanan, jaminan kualiti, keselamatan kerja dan kebersihan makanan. Pelajar juga perlu melakukan pelbagai projek dan program berkaitan yang akan dinilai semasa kepaniteraan ini.

Bacaan Asas

- Birchfield, J.C. & Sparrowe, R.T. 2003. *Design and layout of foodservice facilities*. New Jersey: John Wiley & Sons.
- Knight, J.B.L. & Kotschevar, L.H. 2000. *Quantity food production, planning and management*. Edisi ke-3. New Jersey: John Wiley & Sons.
- Miller, J.E., Dopson, L.R. & Hayes, D.K. 2005. *Food & beverage: Cost control*. Edisi ke-3. New Jersey: John Wiley & Sons.

- National Restaurant Association Educational Foundation. 2004. *Servsafe essentials*. Edisi ke-3. Chicago: National Restaurant Association.
- Spears, M.C. & Gregoire, M.B. 2009. *Food service organization. A managerial and systems approach*. Edisi ke -7. New Jersey: Prentice Hall.

NNND5024 Perkhidmatan Dietetik Pesakit Luar II

Kursus ini merupakan lanjutan kepada ND4414 Perkhidmatan Dietetik Pesakit Luar I. Pelajar akan ditempatkan di klinik-klinik pakar termasuk medikal, pediatrik, surgikal dan renal. Penempatan di klinik-klinik tersebut akan memperkasakan ilmu dietetik dan seterusnya meningkatkan lagi keyakinan pelajar dalam menilai status pemakanan pesakit, perancangan diet dan pengendalian sesi kaunseling diet di bawah pengawasan dietitian.

Bacaan asas

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. Edisi ke-5. Philadelphia: Lippincott, Williams & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. Edisi ke-5. London: McGraw Hill.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

NNND5044 Perkhidmatan Dietetik Dalam Wad II

Kursus ini dijalankan selepas tamat menjalani kursus ND5024 Perkhidmatan Dietetik Pesakit Luar II dan ND5064 Perkhidmatan Dietetik Dalam Wad II. Latihan bagi kursus ini dijalankan di hospital terpilih di Lembah Kelang. Pelajar akan diletakkan dibawah seliaan dietitian yang berpengalaman. Bidang yang diperluaskan termasuklah geriatrik, pemakanan enteral, pediatrik, onkologi, renal, gastro, hepar dan penjagaan kritikal & trauma.

Bacaan asas

- Cresci, G. 2005. *Nutrition support for the critically ill patients: A guide to practice*. Florida: CRC Press.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S. Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. Edisi ke-16. Boston: McGraw Hill Professionals.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*.

Boston: McGraw-Hill Medical

Rolandelli, R., Bankhead, R., Boullata, J. & Compher, C. 2004. *Clinical Nutrition: Enteral and Tube Feeding, Text with CD-ROM*. Edisi ke-4. Boston: Saunders.

Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

NNND5064 Perkhidmatan Dietetik Unit Khas

Kursus ini merupakan lanjutan kepada ND5054 Perkhidmatan Dietetik dalam Wad I. Pelajar akan ditempatkan di pelbagai hospital di bawah kendalian dietitian dan memahami tugas hakiki dietitian di hospital. Pendedahan pelajar termasuklah pencarian maklumat dari rekod pesakit, diagnosis, ujian makmal/prosedur diagnostik pesakit yang diperlukan dalam pengurusan pemakanan pesakit. Pelajar perlu melakukan kajian dan penulisan kes yang diikuti di dalam wad.

Bacaan asas

Cresci, G. 2005. *Nutrition support for the critically ill patients: A guide to practice*. Florida: CRC Press.

McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical

Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease & nutrition support in critically ill adults*. Kuala Lumpur: Persatuan Dietitian Malaysia.

Mitch, W.E. & Klahr, S. 2002. *Handbook of nutrition and the kidney*. Edisi ke-4. Philadelphia: Lippincott Williams & Wilkins.

Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. Edisi ke- 3. Wiley-Blackwell.

Program Sarjana Sains Kesihatan (Sains Bioperubatan)

Pengenalan

UKM adalah universiti pertama yang menawarkan program Sarjanamuda Sains Bioperubatan (Kepujian) yang bermula pada sesi akademik 1992-1993. Ciri utama program Sains Bioperubatan di peringkat sarjanamuda adalah program yang merangkumi bidang yang luas dan menyeluruh serta bercorak multi disiplin di mana tahap maklumatnya adalah di peringkat pendahuluan atau sederhana. Program Sarjana Sains Kesihatan (Sains Bioperubatan) secara kerja kursus ini merupakan yang pertama ditawarkan di Malaysia. Ia memberi peluang mempertingkatkan ilmu dan pengetahuan graduan dan ahli Sains Bioperubatan. Di peringkat Sarjana, penyampaian maklumat adalah lebih mendalam dan berfokus serta mempunyai beberapa modul elektif yang boleh di pilih mengikut minat pelajar. Pelajar juga perlu melakukan suatu projek penyelidikan berasaskan makmal.

Objektif

Objektif program ini adalah:

- Menghasilkan siswazah peringkat Sarjana yang berkemahiran untuk memenuhi keperluan dan permintaan di Malaysia sejajar dengan tuntutan akademia dan selaras dengan perkembangan perkhidmatan kesihatan di negara-negara maju masa ini.
- Memberi peluang kepada para graduan lepasan ijazah pertama Sains Bioperubatan dan Sains Biologi yang berkelayakan melanjutkan pelajaran ke peringkat sarjana dalam bidang Sains Bioperubatan dengan pengkhususan di dalam bidang tertentu.
- Memberi peluang kepada para graduan melanjutkan pelajaran di peringkat pascasiswazah dengan perbelanjaan yang mampu dibiayai.
- Membuka ruang dan peluang perkerjaan yang lebih luas di industri luar dan tempatan.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 38 unit.

Kurikulum Program Sarjana Sains Kesihatan (Sains Bioperubatan)

Semester I

Modul Wajib: Teras Program

Kod	Tajuk Kursus	Unit
NNNB5014	Teknik Makmal Sains Bioperubatan	4
NNNB5034	Teknik Makmal Biologi Sel dan Molekul	4
NNNB5053	Pengurusan Makmal	3
NNNB5073	Kaedah Penyelidikan & Biostatistik	3
	Jumlah Unit	14 unit

Semester II

Modul Elektif

Elektif I: Patologi Kimia

Kod	Tajuk Kursus	Unit
NNNB5444	Penyakit Metabolik	4
NNNB5464	Teknik Makmal Kimia Klinikal	4
NNNB5484	Interpretasi Data Makmal Kimia Klinikal	4
	Jumlah Unit	12 unit

Elektif II: Penyakit Berjangkit

Kod	Tajuk Kursus	Unit
NNNB5022	Patogenesis Mikrob	2
NNNB5042	Mikrobiologi Persekitaran	2
NNNB5062	Penempatan Dalam Makmal Diagnosis Mikrobiologi Perubatan	2
NNNB5083	Penyakit Parasit Manusia dan Entomologi Perubatan	3
NNNB5183	Teknik Makmal dan Lapangan Parasitologi dan Entomologi	3
	Jumlah Unit	12 unit

* Setiap pelajar dikehendaki memilih 1 modul elektif.

Semester III

Modul Wajib: Penyelidikan dan Penulisan Tesis

Kod	Tajuk Kursus	Unit
NNNB501C	Penyelidikan Sains Bioperubatan	12
	Jumlah Unit	12 unit

Jumlah unit keseluruhan adalah 38 unit

SENARAI KURSUS MENGIKUT MATRIKS HASIL PEMBELAJARAN IJAZAH SARJANA SAINS KESIHATAN (SAINS BIOPERUBATAN)

Program Ijazah Sarjana Sains Kesihatan (Sains Bioperubatan) bertujuan untuk:

- PO1:** Melahirkan graduan yang berpengetahuan luas, mampai dan berkebolehan dalam bidang masing-masing.
- PO2:** Melatih graduan yang kompeten dalam menilai dan mengaplikasikan protokol dan prosedur.
- PO3:** Melahirkan graduan yang kreatif, inovatif, sensitif dan bertanggungjawab terhadap komuniti, budaya dan persekitaran.
- PO4:** Memajukan graduan yang mana boleh memainkan peranan dalam memimpin perancangan dan implimentasi sesuatu tugas.
- PO5:** Melatih graduan dengan kerjasama, komunikasi, penyelesaian masalah dan kemahiran saintifik yang baik.
- PO6:** Menghasilkan graduan yang boleh menjalankan penyelidikan dengan penyeliaan yang minima.
- PO7:** Mengembangkan kemahiran ICT, kepimpinan dan keusahawanan graduan.
- PO8:** Menggalakkan pembelajaran sepanjang hayat pada graduan.

Semester I

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNNB5014	4	Teknik Makmal Sains Bioperubatan	√	√		√	√		√	√
2	NNNB5034	4	Teknik Makmal Biologi Sel dan Molekul	√	√		√	√		√	√
3	NNNB5053	3	Pengurusan Makmal	√	√	√	√	√	√	√	√
4	NNNB5073	3	Kaedah Penyelidikan & Biostatistik	√				√	√		√

Semester II

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNNB5444	4	Penyakit Metabolik	√	√	√	√	√	√	√	√
2	NNNB5464	4	Teknik Makmal Kimia Klinikal	√	√	√	√	√	√	√	√
3	NNNB5484	4	Interpretasi Data Makmal Kimia Klinikal	√	√	√	√	√	√	√	√
4	NNNB5022	2	Patogenesis Mikrob	√	√	√	√	√		√	√
5	NNNB5042	2	Mikrobiologi Persekitaran	√	√		√	√			√
6	NNNB5062	2	Penempatan Dalam Makmal Diagnosis Mikrobiologi Perubatan	√	√	√	√	√		√	√

Sinopsis Kursus Program Sarjana Sains Kesihatan (Sains Bioperubatan)

NNNB5014 Teknik Makmal Sains Bioperubatan

Kursus ini merangkumi kuliah dan amali mengenai pelbagai teknik canggih yang digunakan dalam bidang Sains Bioperubatan. Kuliah memberi maklumat latar belakang yang mencukupi mengenai sesuatu teknik supaya pelajar dapat menggunakan teknik berkenaan dengan berkesan dan secara meluas. Kelas amali memberi peluang kepada pelajar melakukan teknik berkenaan secara pendedahan bekerja sendiri (*hands-on*) maka mempertingkatkan kemahiran makmal pelajar serta membolehkan pelajar memperolehi alat teknikal tertentu bagi penyelidikan.

Bacaan Asas

- Clynes, M. 1998. Animal cell culture. New York: Springer-Verlag.
- Gallagher, S.R. & Wiley, E.A. 2008. Current Protocols in Essential Laboratory Techniques. New York : John Wiley & Sons.
- Hay, F.C. & Westwood, O. 2002. Practical immunology. 4th ed.. Oxford: Blackwell Science.
- Jones, P. 1995. Gel electrophoresis: Nucleic acids: Essential techniques. New York: John Wiley & Sons.
- Journal of Biomedical Science. BioMed Central Publishers.
- Malaysian Journal of Medical Sciences. School of Medical Sciences, Universiti Sains Malaysia Publisher.

NNNB5034 Teknik Makmal Biologi Sel dan Molekul

Kursus ini merangkumi amali dalam pelbagai teknik biologi sel dan molekul. Pendekatan *hands-on* digunakan supaya pelajar dapat memperolehi kemahiran dalam teknik biologi sel dan molekul sehingga peringkat penyelidikan atau diagnostik, mendedahkan pelajar kepada maklumat yang mencukupi mengenai sesesuatu teknik supaya pelajar dapat menggunakan teknik berkenaan dengan berkesan, dan memberi peluang kepada pelajar melakukan teknik berkenaan secara sendiri.

Bacaan Asas

- Ausubel, F.M., Brent, R., Kingston, R.E. & Moore, D.D. 1999. Short protocols in molecular biology. 4th ed. New York: Van Nostrand Reinhold.
- BMC Microbiology. BioMed Central Publishers.
- Journal of Biomedical Science. BioMed Central Publishers.

- Sambrook, J., MaCallum, P. & Russell, D. 2001. *Molecular cloning: A laboratory manual*. Ed. ke-3. New York: Cold Spring Harbour.
- Tait, RC. 1997. *An introduction to molecular biology*. New York: Horizon Scientific Press.

NNNB5053 Pengurusan Makmal

Kursus ini merangkumi kuliah dan lawatan ke tempat yang berkaitan dengan pengurusan makmal seperti makmal diagnostik, setor bahan kimia, dan pusat pelupusan sisa makmal. Kursus ini merangkumi pelbagai aspek yang membolehkan makmal diagnostik diuruskan dengan cekap dan selamat serta memberi perkhidmatan yang berkualiti. Dalam hal ini topik berkenaan adalah faktor yang menentukan jenis ujian makmal yang akan dijalankan; aspek alat radas (penjagaan, penempatan dan penggunaan); prosedur dalam pembelian reagen dan alat radas; penyimpanan reagen dan alat pakai habis; kawalan kualiti dan keselamatan di makmal; pengurusan, latihan dan perkembangan tenaga pekerja makmal.

Bacaan Asas

- Aamodt, A. 2009. *Industrial/organizational psychology : An Applied Approach*. 6th ed. New York: Wadsworth.
- Clinical Laboratory Science. American Society for Clinical Laboratory Science Publisher.
- Dent, N.J. & Carson, P.A. 1994. *Good laboratory and clinical practices*. London: Arnold Publication.
- Fischbach, F & Dunning, MB. 2008. *A Manual of Laboratory and Diagnostic Tests*. 8th ed. Lippincott Williams & Wilkins.
- Laboratory Medicine. American Society for Clinical Pathology Publisher.
- Lehmann, C.A.1998. *A Manual of Clinical Laboratory Science*. Philadelphia: W.B. Saunders.
- Stricoff, R.S. & Walters, D.B. 2011. *Handbook of laboratory health and safety*. 3rd ed. New York: John Wiley & Sons.

NNNB5073 Kaedah Penyelidikan & Biostatistik

Kursus ini merangkumi kuliah, tUTORAN dan latihan dalam statistik yang menggunakan komputer. Kursus ini mendedahkan pelajar kepada beberapa aspek yang akan dilakukan oleh para saintis sebelum aktiviti penyelidikan boleh dimulakan: pemilihan parameter kajian yang sesuai bagi sejenis penyelidikan, kesedaran serta kefahaman isu etika dalam penyelidikan yang melibatkan manusia dan juga haiwan, pemilihan ujian statistik yang sesuai serta yang membolehkan hasil yang maksimum diperolehi berdasarkan pengetahuan yang mencukupi mengenai jenis ujian statistik yang sedia ada, cara persediaan cadangan penyelidikan yang lengkap bagi penafsiran jawatankuasa saintifik dan etika.

Bacaan Asas

- Allen, P & Bennett K. 2008. *SPSS for the health and behavioural sciences*, 1st Ed. Australia: Cengage Learning.
- Bartlett, J.E., Kotrlik, J.W. & Higgins, C.C. 2001. *Organizational Research: Determining Appropriate Sample Size in Survey Research*. *Information Technology, Learning and Performance Journal*. Vol 19 (1):43-50.
- Brownson, R.C. & Petitti, D.B. 1998. *Applied epidemiology: Theory to practice*. Oxford: Oxford University Press.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics*. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Mappes, T.A. & De Grazia, D. 1996. *Biomedical ethics*. 4th edition. New York: McGraw-Hill.
- Milton, J.S. 1999. *Statistical methods in the biological and health sciences*. 3rd edition. New York: McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design Using ANOVA*. Duxbury Press.

NNNB5444 Penyakit Metabolik

Kursus ini mengandungi sesi kuliah simulasi kes, pakej belajar sendiri dan seminar. Ia menekankan pemahaman mengenai pelbagai jenis penyakit metabolik dan cara untuk mengesannya.

Bacaan Asas

- Annual Review of Clinical Chemistry*. Saunders.
- Bishop, M.L., Fody, E.P. & Schoeff, L.E. 2009. *Clinical chemistry : Techniques, Principles, Correlations*. 6th ed. Philadelphia: Lippincott Williams & Wilkins.
- Journal of Clinical Chemistry*. American Association of Clinical Chemistry Publishers.
- Journal of Clinical Pathology*. British Medical Journal Publishers.
- Marshall, W.J. & Bagent, S.K. 2008. *Clinical biochemistry: Metabolic and clinical aspects*. 2nd ed. Edinburgh: Churchill Livingstone.
- Scriver, C.R. 2001. *The metabolic and molecular bases of inherited disease*. Ed. Ke-8 New York: McGraw-Hill.

NNNB5464 Teknik Makmal Kimia Klinikal

Kursus ini mengandungi sesi kuliah simulasi kes, pakej belajar sendiri, amali dan seminar. Ia menekankan kepada pelbagai ujian yang dijalankan di makmal kimia, cara untuk mengesan kesalahan dan teknik untuk menginterpretasi maklumat yang diperolehi.

Bacaan Asas

- Bishop, M.L., Fody, E.P. & Schoeff, L.E. 2009. *Clinical chemistry : Techniques, Principles, Correlations*. 6th ed. Philadelphia: Lippincott Williams & Wilkins.
- Estridge, B.H., Reynolds, A.P. & Walters, N.J. 2007. *Basic clinical laboratory techniques*.

- 5th ed. Albany, USA : Delmar–Thomson Learning
- Godkar, P.B. 1996. Textbook of medical laboratory technology. Bombay : Bhalani.
- Journal of Clinical Chemistry. American Association of Clinical Chemistry Publishers.
- Journal of Clinical Pathology. British Medical Journal Publishers.
- Mayne, P.D. 1994. Clinical chemistry in diagnosis and treatment. London : Arnold.
- Varcoe J.S. 2001. Clinical biochemistry: techniques and instrumentation: A practical course. Melbourne: World Scientific Publishing.

NNNB5484 Interpretasi Data Makmal Kimia Klinikal

Kursus ini memberi tumpuan kepada aspek latihan dalam bidang kimia klinikal. Pelajar akan ditempatkan di pelbagai makmal diagnosis yang menjalankan kerja-kerja kimia klinikal. Pelajar dikehendaki mengetahui dan berupaya menjalankan pelbagai kaedah pewarnaan untuk mencapai diagnosis yang betul.

Bacaan Asas

- Annals of Clinical Biochemistry. United Kingdom Clinical Biochemistry Association Publishers.
- Burtis, C.A., Ashwood, E.R. & Bruns, D.E. 2005. Tietz textbook of clinical chemistry and molecular diagnostics. 4th ed. Philadelphia: W.B. Saunders Co.
- Journal of Clinical Pathology. British Medical Journal Publishers.
- Kaplan, L.A. & Pesce, A.J. 2009. Clinical chemistry: Theory, analysis and correlation. 5th ed. St. Louis : Mosby.
- Mayne, P.D. 1994. Clinical chemistry in diagnosis and treatment. London : Livingstone.
- Walmsley, R.N. & White, G.H. 1994. A guide to diagnostic clinical chemistry. 3rd ed. Oxford: Blackwell Scientific.

NNNB5022 Patogenesis Mikrob

Kursus ini merangkumi kuliah, tutoran, penulisan esei panjang, pembentangan seminar dan amali. Kursus ini meliputi beberapa aspek patogenesis mikrob seperti faktor virulens mikrob dan pengelakan sistem pertahanan perumah oleh mikrob, dan juga patogenesis mikrob tertentu. Perhatian diberi kepada penyakit infeksi yang penting di Malaysia dan rantau ini pada masa kini, dan juga penyakit yang berpotensi mencapai status berkenaan di masa hadapan.

Bacaan Asas

- Benerke, E.S. & Rogers, A.L.. 1996. Medical mycology and human mycoses. California: Star Publishing Company.
- Collier, L., Balows, A. & Sussman, M. 1998. Topley & Wilson's micro biology & microbial infections. Ed. ke-9. New York: Oxford University Press.
- FEMS Immunology and Medical Microbiology. FEMS publishers.
- Journal of Clinical Microbiology. ASM publishers.

Mims, C., Dockrell HM, Goering RV, Roitt I, Wakelin, D. and Zuckerman M. 2005. *Medical microbiology*. 3rd edition. Philadelphia: Elsevier Limited
Neal Nathanson. 1997. *Viral pathogenesis*. New York: Lippincott-Raven.

NNNB5042 Penempatan Dalam Makmal Diagnosis Mikrobiologi

Pelajar akan ditempatkan di satu makmal bakteriologi atau serologi di hospital universiti, hospital kerajaan atau di makmal kesihatan awam kerajaan untuk jangka masa yang ditetapkan. Objektifnya adalah untuk mempelajari pemprosesan spesimen klinikal .

NNNB5062 Mikrobiologi Persekitaran

Kursus ini merangkumi kuliah, pembentangan (secara kumpulan) dan amali. Kursus ini akan membekalkan pelajar dengan konsep semasa dan prinsip mikrobiologi persekitaran; patogen bawaan air; mikroorganisma dan pencemaran udara; mikroorganisma tanah; mikrobiologi pencemaran air (tawar dan marin), biodegradasi bahan kimia bahaya, eutrofikasi. Pelajar akan juga belajar bagaimana ekologi mikrob telah dieksplotasi oleh manusia untuk memulihkan tanah yang tercemar sisa toksik, dan air yang tercemar sisa pertanian, industri dan rumah, dan penggunaan mikrobiologi dalam pengurusan sisa pepejal. Aktiviti makmal termasuk ujian mutu air dan teknik dalam pemencilan dan pencirian mikrob air dan tanah.

Bacaan Asas

Jones, D.R., Board, R.G., Fredrick, A.S. 1992. *Identification Methods in Applied and Environmental Microbiology*. Oxford: Blackwell Science.
Lightfoot, N.F. & Maier, E.A. 1998. *Microbiological analysis of food and water: Quideline for quality assurance*. Amsterdam: Elsevier Science.
Mitchell, R. 1994. *Environmental Microbiology*. New York: Wiley, John & Sons.
Pepper, I.L., Gerba, C.P. & Brendecke J.W. 1995. *Environmental Microbiology A Laboratory Manual*. New York: Academic Press.
Rochelle, P.A. 2001. *Environmental molecular microbiology: protocols and applications*. Norfolk, UK: Horizon Scientific Press

NNNB5083 Penyakit Parasit Manusia dan Entomologi Perubatan

Kursus ini merangkumi kuliah, seminar dan peninjauan kertas saintifik dan satu projek mini. Kandungan kursus ini adalah penyakit parasit termasuk penyakit parasit yang menjadi penting akibat daripada perubahan aktiviti manusia. Kursus ini juga merangkumi beberapa aspek entomologi yang berkaitan dengan kesihatan manusia seperti serangga sebagai vektor penyakit mikrob dan parasit, entomologi forensik dan kawalan vektor.

Bacaan Asas

Advances in Parasitology. Edited by JR Baker ,R Muller and D Rollinson. Elsevier Academic Press.

- Annals of Tropical Medicine & Parasitology. Liverpool School of Tropical Medicine Publishers.
- Encyclopedia of Arthropod-transmitted Infections of Man and Domesticated Animals Edited by MW Service (2001). CABI Publishing New York.
- Heelan JS & Ingersoll FW (2002). Essentials of Human Parasitology. New York: Delmar Thompson Learning
- Strickland, T (1995). Hunter's Tropical Medicine 7th Edition Philadelphia: WB Saunders Company.
- Transactions of the Royal Society of Tropical Medicine and Hygiene. The Royal Society of Tropical Medicine and Hygiene Publishers.
- Trends in Parasitology (formerly Parasitology Today). Editor Sally Hirst. Elsevier Science London.

NNNB5183 Teknik Makmal dan Lapangan Parasitologi & Entomologi

Kursus ini merangkumi kerja makmal serta melakukan kerja lapangan. Kursus ini memberi penekanan kepada teknik-teknik makmal dan lapangan parasitologi dan entomologi perubatan. Ini bertujuan memberi pendedahan secukupnya kepada para pelajar supaya mampu menjalankan ujikaji dan penyiasatan.

Bacaan Asas

- Advances in Parasitology. Edited by JR Baker, R Muller and D Rollinson. Elsevier Academic Press.
- Chemical methods for the control of vectors and pests of public health importance. Eds : Chavasse & Yap. WHO Pesticide Evaluation Scheme. WHO/CTD/WHOPES/97.2
- Encyclopedia of Arthropod-transmitted Infections of Man and Domesticated Animals Edited by MW Service (2001). CABI Publishing New York.
- Trends in Parasitology (formerly Parasitology Today). Editor Sally Hirst. Elsevier Science London.

NNNB501C Penyelidikan Sains Bioperubatan

Projek yang telah dipilih dan telah diluluskan oleh Jabatan dilakukan di bawah panduan seorang, atau lebih penyelia. Hasil kerja kemudian disampaikan dalam satu disertasi.

Program Sarjana Psikologi Klinikal

Pengenalan

Psikologi klinikal merupakan satu bidang psikologi yang mengaplikasikan pendekatan psikologi di dalam pencegahan, penilaian, pendiagnosan dan rawatan kecelaruan psikologi, serta juga masalah emosi, pembelajaran dan tingkah laku yang memberi kesan kepada kefungsihan hidup seharian dan kehidupan sosial. Pengamal profesional psikologi klinikal adalah dipanggil *Clinical Psychologists*. *Clinical psychologists* bekerja di hospital (umum, psikiatri, rehabilitasi), di klinik pesakit luar (komuniti, perkhidmatan pakar psikologi), perkhidmatan kurang upaya (intelektual dan fizikal), perkhidmatan kebajikan di komuniti, organisasi bukan kerajaan, perkhidmatan undang-undang, institusi pengajian dan amalan persendirian/perundingan. Pekerjaan seorang *clinical psychologist* termasuk penilaian dan diagnosis; intervensi psikologi, pengajaran dan penyeliaan; perundingan dan pembinaan program; pentadbiran dan pengurusan; penyelidikan dan penaksiran, dan juga pembentuk polisi dan perundangan. *Clinical psychologist* adalah sangat diperlukan di Malaysia. Program Sarjana Psikologi Klinikal adalah bertujuan untuk memenuhi keperluan yang semakin meningkat di negara ini.

Objektif

- Mampu melaksanakan dan menilai keputusan yang diperolehi dari alat-alat ujian Psikologi untuk penaksiran psikologi dengan kompeten.
- Mampu mengdiagnos dan merawat masalah psikologi kanak-kanak dan dewasa.
- Mempunyai pengetahuan asas mengenai ubat-ubatan yang diberikan untuk masalah psikiatri.
- Mempunyai minat dalam satu bidang yang khusus dalam bidang Psikologi Klinikal.
- Mampu untuk merekabentuk dan menilai dari aspek statistik projek yang melibatkan penaksiran dan intervensi terhadap masalah psikologi.
- Mempunyai kefahaman mengenai isu-isu etika yang melibatkan kesihatan mental individu dan komuniti.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 50 unit.

Kurikulum Program Sarjana Psikologi Klinikal**Tahun Satu****Semester I**

Kod	Tajuk Kursus	Unit
NNNC5012	Metodologi Penyelidikan dan Biostatistik	2
NNNC5013	Ujian dan Penaksiran Psikologi	3
NNNC5033	Penaksiran Tingkahlaku	3
NNNC5053	Psikologi Klinikal Kanak-Kanak & Remaja I	3
NNNC5073	Psikologi Klinikal Dewasa I	3
NNNC5093	Pendekatan Terapi dan Kemahiran Interpersonal	3
	Jumlah Unit	17 unit

Semester II

Kod	Tajuk Kursus	Unit
NNNC5021	Psikofarmakologi dan Psikologi Silang Budaya	1
NNNC5023	Neuropsikologi	3
NNNC5043	Psikologi Kesihatan dan Kesihatan Mental Komuniti	3
NNNC5063	Psikologi Klinikal Kanak-Kanak & Remaja II	3
NNNC5083	Psikologi Klinikal Dewasa II	3
NNNC5015	Penempatan Klinikal I	5
	Jumlah Unit	18 unit

Tahun Dua**Semester I**

Kod	Tajuk Kursus	Unit
NNNC6011	Seminar Psikologi Klinikal	1
NNNC6012	Projek Penyelidikan Psikologi Klinikal I	2
NNNC6015	Penempatan Klinikal II	5
	Jumlah Unit	8 unit

Semester II

Kod	Tajuk Kursus	Unit
NNNC6022	Projek Penyelidikan Psikologi Klinikal II	2
NNNC6025	Penempatan Klinikal III	5
	Jumlah Unit	7 unit

Jumlah unit keseluruhan adalah 50 unit

Sinopsis Kursus Program Sarjana Psikologi Klinikal

NNNC5012 Metodologi Penyelidikan dan Biostatistik

Kursus ini bertujuan untuk menyediakan pelajar dalam menjalankan tesis akhir program Sarjana Psikologi Klinikal. Pelajar akan didedahkan dengan teknik menulis kertas kerja tesis, menentukan rekabentuk kajian yang bersesuaian dengan objektif kajian, mengenalpasti analisis statistik yang berkaitan dengan tujuan kajian, dan mempelajari kaedah asas menganalisis data menggunakan program statistik kuantitatif dan kualitatif. Pelajar diperlukan memilih satu kajian dalam bidang psikologi kesihatan atau psikologi klinikal untuk dijalankan sepanjang tempoh pengajian.

Bacaan Asas

- Chris, B., Pistrang, N., & Elliot, R. 2002. *Research Methods in Clinical Psychology: An Introduction for Students and Practitioners*, Ed. ke-2. West Sussex: John Wiley & Sons.
- Denzin, N.K., & Lincoln, Y.S. (Pnyt.).2000. *Handbook of Qualitative Research*. Ed. ke-2. London: Sage.
- Marks, D.F., & Yardley, L. (Pnyt.).2004.*Research Methods for Clinical and Health Psychology*. London: Sage Publications.
- Pagano, R.R. 2006. *Understanding Statistics in the Behavioral Sciences*, Ed. ke-8. Belmont, CA: Thomson & Wadsworth.
- Ritchie, J., & Lewis, J. (Pnyt.).2003.*Qualitative Research Practice: A Guide for Social Science Students and Reseachers*.London: Sage

NNNC5013 Ujian dan Penaksiran Psikologi

Satu kepakaran utama bagi bidang psikologi klinikal adalah memberikan perkhidmatan penilaian psikologi dalam mengenalpasti kefungsiian psikologi seseorang individu dari segi kognitif, emosi, pembelajaran dan motivasi. Kursus ini mencakupi penilaian asas psikologi seperti skala kecerdasan, inventori personaliti, skala tingkahlaku adaptif, ujian kemampuan pembelajaran dan penyaringan emosi, kesihatan mental dan kualiti hidup. Pengajaran kursus ini melibatkan kuliah, bengkel demonstrasi praktikal mengenai penggunaan alat psikometri, terjemahannya dan juga penulisan laporan dan pembentangan klinikal.

Bacaan Asas

- Craig, R.J. 2000. *Interpreting personality test: A clinical manual for the MMPI-2, MCMI-III, CPI-R, and 16PF*. New York: John Wiley
- Gregory, R.J. 2006. *Psychological testing: History, principles, and applications*. Ed. antarabangsa. Boston: Allyn & Bacon.

- Groth-Marnat, G. 2009. *Handbook of psychological assessment*. Ed. ke-5. New York: John Wiley.
- Kirk, U. 2000. *Essentials of NEPSY assessment (Essentials Of Psychological Assessment Series)*. New York: John Wiley.
- Sattler, J.M. 2008. *Assessment of children: Cognitive foundation*. Ed. ke-5. San Diego: Jerome M. Sattler.

NNNC5033 Penaksiran Tingkah Laku

Penaksiran tingkah laku adalah bahagian penting dalam amalan psikologi klinikal di mana ia membantu pengamal memahami faktor penyebab, serta faktor pengekal sesuatu tingkah laku. Ini dapat membawa kepada rumusan dalam modifikasi tingkah laku secara bersistematik. Kursus ini mengulangkaji teori pembelajaran dalam psikologi dari segi aplikasi ke atas penaksiran dan modifikasi tingkah laku. Pengkuliahan dalam kursus ini akan melibatkan penaksiran asas tingkah laku, konsep dan penggunaan peneguhan dan hukuman, serta strategi modifikasi tingkah laku supaya pada akhir kursus, para pelajar dapat merancang program modifikasi tingkah laku secara asas. Pengajaran melibatkan kuliah, demonstrasi, latihan praktikal serta perbincangan.

Bacaan Asas

- Baily, J.S., & Burch, M.R. 2005. *Ethics for behavior analysts: a practical guide to the behavior analyst certification board guidelines for responsible conduct*. New York: Lawrence Erlbaum.
- Cipani, E. & Schock, K.M. 2010. *Functional behavioral assessment, diagnosis, and treatment: a complete system for education and mental health settings*. Ed. ke-2. New York: Springer Publishing.
- Cooper, J.O., Heron, T.E. & Heward, W.L. 2007. *Applied behavior analysis*. Ed. ke-2. New York: Prentice-Hall.
- Kazdin, A.E. 2008. *Behavior modification in applied settings*. Ed. ke-6. Prospect Heights, IL: Waveland Press Inc.
- Miltenberger, R.G. 2011. *Behavior modification: principles and procedures*. Ed. ke-5. Belmont, CA: Wadsworth Publishing.

NNNC5053 Psikologi Klinikal Kanak-Kanak dan Remaja I

Kursus ini memberi pendedahan amalan psikologi kanak-kanak dan remaja dari segi definisi masalah dan kecelaruan psikologi, penilaian psikologi, diagnosis, serta kaedah-kaedah rawatan yang berkesan. Topik-topik yang dibincangkan dalam kursus ini termasuk kemurungan, kecelaruan anxiety, penderaan seksual, kecelaruan pembuangan air serta terapi mainan. Isu-isu terkini tentang diagnosis, penilaian dan rawatan akan dibincangkan berdasarkan *Diagnostic and Statistical Manual for Mental Disorders 4th Edition (DSM-IV)*, serta kajian yang terkini. Para pelajar akan didedahkan kepada cara mengemaskini pengetahuan klinikal dalam rawatan kecelaruan yang dibincangkan dalam kursus ini.

Bacaan Asas

- Anders, T.F. & Morrison, J. 2002. *Interviewing children and adolescents: skills and strategies for effective DSM-IV diagnosis*. New York: Guilford Press.
- Herbert, M. 2006. *Clinical child and adolescent psychology: from theory to practice*. New York: Wiley
- Kendall, P.C. (Pnyt.). 2010. *Child and adolescent therapy: cognitive-behavioral procedures*. Ed. ke-4. New York: Guilford Press.
- Mash, E.J., & Barkley, R.A. 2010. *Assessment of childhood disorders*. Ed. ke-4. New York: Guilford Press
- Wilmshurst, L. 2010. *Child and adolescent psychopathology: a casebook*. Ed. ke-2. London: Sage Publishing.

NNNC5073 Psikologi Klinikal Dewasa I

Kursus ini pada keseluruhannya mendalami pelbagai jenis kecelaruan psikologi di kalangan orang dewasa. Perbincangannya bermula daripada pengenalan psikologi klinikal sebagai satu cabang ilmu psikologi gunaan yang semakin popular kebelakangan ini. Manakala perkembangan orang dewasa dan warga tua ditumpukan sebelum isu-isu psikopatologi dibincangkan. Manual diagnostik DSM-IV (*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*) juga diterangkan.

Bacaan Asas

- American Psychiatric Association. 2000. *Diagnostic and statistical manual of mental disorders*. Ed. ke-4. Semakan Teks. Washington, DC: American Psychiatric Association.
- Andrews, G., Creamer, M., Crino, R., & Hunt, C. (Peny.). 2002. *The treatment of anxiety disorders: Clinician guides and patient manual*. Ed. ke-2. New York: Cambridge University Press.
- Dimaggio, G. & Lysaker, P.H. (Pnyt.) 2010. *Metacognition and adult severe mental disorders: from research to treatment*. London: Routledge.
- Lindsay, S., & Powell, G. (Pnyt.). 2007. *The Handbook of Clinical Adult Psychology*. Ed. ke-3. London: Routledge.
- Psychiatry*. Ed ke-10. Philadelphia, PA: Lippincott Williams & Wilkins
- Sadock, B. J., & Sadock, V. A. 2007. *Kaplan and Sadock's synopsis of psychiatry: Behavioural sciences/Clinical*

NNNC5093 Pendekatan Terapi dan Kemahiran Interpersonal

Kursus ini berfokus kepada isu dan topik yang perlu diberi perhatian semasa menjalankan psikoterapi. Ia dikendalikan dalam bentuk teori dan amali. Aspek teori tertumpu kepada mendalami lagi model-model kaunseling dan psikoterapi yang utama dari segi aplikasinya dalam keadaan klinikal. Isu-isu penting dalam proses terapeutik seperti temubual, perolehan maklumat, pembentukan kes, penamatan hubungan terapeutik dan sebagainya akan dibincangkan. Manakala aspek amali berfokus kepada latihan kemahiran psikoterapi yang diperlukan dalam psikoterapi individu dan psikoterapi kumpulan.

Bacaan Asas

- Corey, G. 2008. *Theory and practice of group counseling*. Ed. ke-7. Pacific Grove, CA: Thomson Brooks/Cole.
- Ingram, B. L. 2006. *Clinical case formulations: Matching the integrative treatment plan to the client*. New York: John Wiley & Sons, Inc..
- Jongsma, A.E., Peterson, L.M. & McInnis, W.P., Bruce, T.J. 2006. *The adolescent psychotherapy treatment planner*. Ed. ke-4. New York: John Wiley.
- Kotin, J. 2004. *Getting Started: An introduction to dynamic psychotherapy*. Lanham, MD: Jason Aronson Inc.
- Sommers-Flanagan, J., & Sommers-Flanagan, R. 2009. *Clinical interviewing*. Ed. ke-4. New York: John Wiley & Sons.

NNNC5021 Psikofarmakologi dan Psikologi Silang Budaya

Kursus ini terdiri daripada dua bahagian iaitu psikofarmakologi dan psikologi silang budaya. Bahagian pertama kursus membincangkan psikologi silang budaya serta isu-isu berkenaan pendekatan, kepercayaan dan rawatan tradisional bagi kecelaruan mental. Bahagian yang kedua mendedahkan pelajar kepada perubatan psikiatrik dan isu-isu berkenaan. Ubatan psikotropik seperti anti-depressants, anxiolytics, antipsychotics dan CNS stimulants akan diperkenalkan dari segi komposisi kimia, kesan klinikal dan rawatan kecelaruan mental.

Bacaan Asas

- Ansari, Z.A. & Haque, A. (Pnyt.). 2005. *Contemporary issues in Malaysian psychology*. Singapore: CENGAGE Learning Asia.
- Eshun, S., & Gurung, R.A.R. (Pnyt.). 2009. *Culture and mental health: sociocultural influences, theory and practice*. West Sussex, UK: Wiley-Blackwell.
- Gerstein, L.H., Heppner, P.P., Ægisdóttir, S., Leung, S-M.A., & Norsworthy, K.L. (Pnyt.) 2009. *International handbook of cross-cultural counseling*. Los Angeles: Sage.
- Julien, R.M., Advokat, C.D. & Comaty, J. 2010. *A primer of drug action: a concise, non-technical guide to the actions, uses, and side effects of psychoactive drugs*. Ed. ke-12. New York: Worth Publishers.
- Sadock, B.J., & Sadock, V.A. 2008. *Kaplan and Sadock's Concise textbook of clinical psychiatry*. Ed. ke-3 Philadelphia, PA: Lippincott Williams & Wilkins

NNNC5023 Neuropsikologi

Kursus ini mengandungi kuliah, pembentangan dan amali. Kursus ini memberi fokus mengenai neuroanatomi, fungsi otak dan kesan kognitif dan psikososial akibat kerosakan otak. Pelbagai kecelaruan fungsi otak dibincangkan seperti kecelaraan sensasi, persepsi, visuomotor, fungsi otak frontal, memori, inteligen, tumpuan, dan masalah bahasa. Penerangan juga diberikan mengenai penyakit neurologi yang paling kerap seperti kecederaan kepala, epilepsi, amnesia dan dementia, strok, dan disleksia. Ujian-ujian neuropsikologi untuk penilaian fungsi global dan fungsi setempat otak juga dibincangkan. Latihan peng-

gunaan alat ujian neuropsikologi dijalankan sebagai persediaan untuk pelajar memeriksa pesakit. Latihan amali memerlukan pelajar menemuduga pesakit, membuat pemerhatian terhadap tingkah laku pesakit, menjalankan penilaian neuropsikologi, menulis laporan terperinci mengenai masalah pesakit dan membentangkan kes. Pelajar juga akan didedahkan dengan rehabilitasi kognitif untuk pesakit neurologi.

Bacaan Asas

- Groth-Marnat, G. 2000. *Neuropsychological assessment in clinical practice: A practical guide to test interpretation and integration*. New York: Wiley.
- Halligan, P.W., KidchkaU., & Marshall, J.C. 2003. *Handbook of Clinical Neuropsychology*. New York: Oxford University Press
- Hodges, J.R. 2007. *Cognitive assessment for clinician*. New York : Oxford University Press
- Kolb, B. & Whishaw, I.Q. 2007. *Fundamentals of Human Neuropsychology*. New York: W.H. Freeman.
- Snyder, P.J., & Nussbaum P.D. (Pnyt.). 2005. *Clinical neuropsychology: A pocket handbook for assessment*. Ed. ke-2. WashingtonDC: American psychological Association.

NNNC5043 Psikologi Kesihatan dan Kesihatan Mental Komuniti

Kursus ini mengandungi kuliah, amali, seminar dan bengkel. Kursus ini melihat kepada kesan proses mental terhadap fungsi fisiologi telah terbukti melalui kajian-kajian lepas. Beberapa siri kuliah akan memfokuskan peranan pelbagai teknik psikologi dalam mengatasi simptom-simptom bersifat fisiologi dan juga kecelaruan seperti kesakitan, obesiti, insomnia, sakit kepala, onkologi, loya disebabkan kimoterapi, kecederaan pada tulang belakang, disfungsi pada sistem ginjal, masalah koronori, dan kematian. Keperluan pada pakar perubatan untuk memberikan kuliah akan diuruskan. Kursus Kesihatan Mental Komuniti membincangkan peranan Ahli Psikologi Klinikal yang lebih luas dalam komuniti serta pendekatan-pendekatan untuk menyebarkan kesihatan mental pada masyarakat.

Bacaan Asas

- Drench, M.E., Sharby, N., Noonan, A. & Ventura, S. 2011. *Psychosocial aspects of health-care*. Ed. ke-3. New York: Prentice-Hall.
- Kelly, T.A. 2009. *Healing the broken mind: transforming America's failed mental health system*. New York: NYU Press.
- Mackenzie, J.F., Pinger, R.R. & Kotecki, J.E. 2011. *An introduction to community health*. Ed. ke-7. Burlington, MA: Jones & Bartlett Learning.
- Rosenberg, S. & Rosenberg, J. (Pnyt.). 2006. *Community mental health: challenges of the 21st century*. London: Routledge.
- Sarafino, E.P. & Smith, T.W. 2010. *Health psychology: biopsychosocial interactions*. Ed. ke-7. New York: Wiley.

NNNC5063 Psikologi Klinikal Kanak-Kanak dan Remaja II

Kursus ini memberi pendedahan amalan psikologi kanak-kanak dan remaja dari segi definisi masalah dan kecelaruan psikologi, penilaian psikologi, diagnosis, serta kaedah-kaedah rawatan yang berkesan. Topik-topik yang dibincangkan dalam kursus ini termasuk masalah pembelajaran, kecelaruan perkembangan, buli, isu persekolahan, kemahiran keibubapaan, latihan kemahiran hidup dan isu perkhidmatan bagi kanak-kanak dan remaja kurang upaya. Isu-isu terkini tentang diagnosis, penilaian dan rawatan akan dibincangkan berdasarkan Diagnostic and Statistical Manual for Mental Disorders 4th Edition (DSM-IV), serta apa-apa kajian yang terkini. Para pelajar akan didedahkan kepada cara mengemaskinikan pengetahuan klinikal dalam rawatan kecelaruan yang dibincangkan dalam kursus ini.

Bacaan Asas

- Bloomquist, M.L. & Schnell, S.V. 2005. *Helping children with aggression and conduct problems: best practices for intervention*. New York: Guilford Press.
- Bloomquist, M.L. 2005. *Skills training for children with behavior problems: a parent and practitioner guidebook*. Ed. semak. New York: Guilford Press.
- Dendy, C.A.Z. 2006. *Teaching teens with ADD, ADHD and executive function deficits: a quick reference for teachers and parents*. Bethesda, MD: Woodbine House.
- Maurice, C., Green, G., & Luce, S.G. 1996. *Behavioral intervention for young children with autism: a manual for parents and professionals*. Austin, TX: PRO-ED, Inc.
- McClannahan, L.E. & Krantz, P. 2010. *Activity schedules for children with autism: teaching independent behaviour*. Ed. ke-2. Bethesda, MD: Woodbine House.

NNNC5083 Psikologi Klinikal Dewasa II

Kursus ini adalah lanjutan daripada kursus Psikologi Klinikal Dewasa I yang ditawarkan pada Semester 1. Topik-topik berkenaan dengan kecelaruan psikologi orang dewasa akan terus didalami seperti kecelaruan personaliti, konflik perkahwinan, isu-isu seksual, masalah psikologi warga tua dan sebagainya. Di samping itu, topik-topik pilihan aplikasi psikoterapi dalam konteks psikologi klinikal dewasa akan dibincangkan dengan menumpukan perhatian kepada pendekatan psikodinamik dan terapi kognitif tingkah laku.

Bacaan Asas

- Gabbard, G. O., Beck, J. S., Holmes, J. (Pnyt.). 2005. *Oxford textbook of psychotherapy*. Oxford University Press.
- Jongsma Jr, A.E., Peterson, L.M., Bruce, T.J. 2006. *The complete adult psychotherapy treatment planner*. Ed. ke-4. New York: Wiley.
- Kennedy, G.J. 2001. *Geriatric mental health care*. New York: Guilford Press.
- Rholes, W.S. & Simpson, J.A. 2006. *Adult attachment: theory, research and clinical implications*. New York: Guilford Press.
- Yalom, I.D. 2005. *Theory and practice of group psychotherapy*. Ed. ke-5. New York: Basic Books.

NNNC5015 Penempatan Klinikal I

Penempatan klinikal ini dijalankan secara dalaman di Klinik Psikologi Kesihatan. Pelatih Sarjana Psikologi Klinikal diberi pendedahan kepada asas pengurusan kes psikologi dari segi temubual klinikal, penilaian psikologi dan intervensi psikologi serta penulisan laporan klinikal. Pelatih juga akan dinilai dari segi profesionalisme dan amalan etika. Dalam penempatan ini, pelatih perlu mengambil 10 kes penilaian, dan 3 kes intervensi untuk 3 hari seminggu selama 3 hingga 4 bulan.

NNNC6011 Seminar Psikologi Klinikal

Kursus ini dikendalikan dalam bentuk seminar. Semua pelajar (pelatih ahli psikologi klinikal) akan membentangkan kes-kes klinikal yang mereka kendalikan untuk dibincangkan bersama. Seminar pembentangan kes klinikal ini melatih pelajar untuk memilih maklumat penting dan berkenaan yang diperolehi daripada klien atau pesakit, seterusnya membentuk pemahaman ke atas kes dan merancang pelan intervensinya. Untuk kes klinikal yang dalam proses intervensi, seminar ini memberi peluang kepada pelatih untuk memantau proses intervensi bersama-sama dengan rakan sekerja. Semua pensyarah dalam program akan terlibat dalam memberi perspektif berlainan mengikut kepakaran masing-masing ke atas sesuatu kes melalui seminar ini.

NNNC6012 Projek Penyelidikan Psikologi Klinikal I

Tesis Sarjana Psikologi Klinikal melaporkan dapatan suatu penyelidikan bermakna yang menyiasat sebahagian aspek psikologi gunaan terutama dalam bidang psikologi klinikal dan kesihatan. Kandungan tesis Sarjana Psikologi Klinikal termasuk hasil penyiasatan yang sistematik dan inovatif bersifat psikologi gunaan. Penyelidikan ini mungkin berbentuk pendekatan kuantitatif atau kualitatif. Tesis yang siap sepatutnya menunjukkan kebolehan calon untuk merancang, menyusun dan melaporkan satu laporan bermakna kajian penyelidikan pada tahap yang boleh diterbitkan, sumbangan asli dan inovatif kepada pengetahuan dan perkembangan professional. Kursus ini akan memfokus lebih kepada bahagian permulaan tesis.

NNNC6015 Penempatan Klinikal II

Penempatan klinikal ini dijalankan secara luaran di agensi penempatan yang mempunyai penyelia klinikal yang berkelayakan dan dijalankan pada Semester I bagi Tahun Dua Sesi Akademik Program Sarjana Psikologi Klinikal. Pelatih Sarjana Psikologi Klinikal diberi latihan lanjutan dalam pengurusan kes kesihatan mental. Pelatih juga akan dinilai dari segi profesionalisme dan amalan etika. Dalam penempatan ini, pelatih perlu mengambil sekurang-kurangnya 15 kes penilaian, dan 6 kes intervensi untuk 4 hari seminggu selama 5 bulan.

NNNC6022 Projek Penyelidikan Psikologi Klinikal II

Tesis Sarjana Psikologi Klinikal melaporkan dapatan suatu penyelidikan bermakna yang menyiasat sebahagian aspek psikologi gunaan terutama dalam bidang psikologi klinikal

dan kesihatan. Kandungan tesis Sarjana Psikologi Klinikal termasuk hasil penyiasatan yang sistematik dan inovatif bersifat psikologi gunaan. Penyelidikan ini mungkin berbentuk pendekatan kuantitatif atau kualitatif. Tesis yang siap sepatutnya menunjukkan kebolehan calon untuk merancang, menyusun dan melaporkan satu laporan bermakna kajian penyelidikan pada tahap yang boleh diterbitkan, sumbangan asli dan inovatif kepada pengetahuan dan perkembangan professional. Kursus ini akan memfokus lebih kepada keseluruhan tesis sebagai lanjutan daripada kursus NNNC6012.

NNNC6025 Penempatan Klinikal III

Penempatan klinikal ini akan dijalankan pada Semester II bagi Tahun dua Sesi Akademik Program Sarjana Psikologi Klinikal. Ia juga dijalankan secara luaran di agensi penempatan yang mempunyai penyelia klinikal yang berkeelayakan. Pelatih Sarjana Psikologi Klinikal diberi latihan lanjutan dalam pengurusan kes kesihatan mental. Pelatih juga akan dinilai dari segi profesionalisme dan amalan etika. Dalam penempatan ini, pelatih perlu mengambil sekurang-kurangnya 15 kes penilaian, dan 6 kes intervensi untuk 4 hari seminggu selama 5 bulan. Pelatih perlu lulus setiap komponen praktikal dalaman dan luaran (NNNC6015 & NNNC6025) untuk lulus keseluruhan Program Sarjana.

Program Sarjana Sains Kesihatan (Pemakanan Klinikal)

Pengenalan

Kemajuan profesyen Perubatan, Kesihatan, Pemakanan dan Dietetik serta industri produk klinikal memerlukan tenaga pekerja yang mahir, cekap dan terlatih. Peningkatan pengetahuan saintifik, teknologi dan penyelidikan terkini dalam bidang Pemakanan Klinikal, merupakan aset berharga yang membolehkan profesional Kesihatan meningkatkan lagi kualiti perkhidmatan mereka. Penghasilan tenaga mahir dalam bidang penyelidikan klinikal akan memperkayakan lagi penemuan saintifik terutama penyakit baru berkaitan dengan pemakanan.

Objektif

Objektif utama program ini ialah:

- Memberi latihan lanjut kepada profesyen Kesihatan yang terlibat dalam penjagaan pesakit dan pemberian pemakanan sokongan iaitu Pegawai Dietetik, Pegawai Perubatan dan seumpamanya.
- Menyediakan pelajar dengan pengetahuan dan pemahaman Pemakanan Klinikal yang melebihi tahap yang ditawarkan di peringkat prasiswazah.
- Melalui pengumpulan pengetahuan dan pemahaman khusus dalam bidang Pemakanan Klinikal yang merangkumi Sains Pemakanan, Metabolisme Makro dan Mikronutrien, Fisiologi Tubuh, Aspek Perubatan dalam Pemakanan, Formulasi Keperluan Pemakanan Pesakit dan Pengurusan Pemakanan Pesakit dengan mengambilkira aspek rawatan berdasarkan bukti saintifik terkini dan aplikasi teknologi terkini bakal melahirkan graduan yang cekap dalam menangani isu pemakanan kesihatan dan berkemahiran mengendalikan kes yang memerlukan bantuan pemakanan.
- Membekalkan asas yang kukuh dalam kemahiran dan teknik penyelidikan dalam situasi klinikal.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 40 unit.

Kurikulum Program Sarjana Sains Kesihatan (Pemakanan Klinikal)

Semester I

Kod	Tajuk Kursus	Unit
NNND6033	Keperluan Pemakanan dan Penilaian Status Pemakanan	3
NNND6053	Fisiologi Tubuh dan Metabolisme Nutrien Bagi Penyakit dan Kesihatan	3
NNND6073	Aspek Perubatan Dalam Pemakanan	3
NNND6453	Rekabentuk Penyelidikan Klinikal dan Statistik	3
	Jumlah Unit	12 unit

Semester II

Kod	Tajuk Kursus	Unit
NNND6024	Projek Penyelidikan Pemakanan Klinikal I	4
NNND6213	Isu-Isu Kontemporari Dalam Pemakanan dan Kesihatan	3
NNND6413	Terapi Pemakanan Perubatan Lanjutan	3
NNND6433	Aplikasi Sokongan Pemakanan	3

Elektif (Pilih satu kursus elektif sahaja)

NNND6363	Tingkh laku Organisasi dan Pengurusan Sumber Personel	3
NNND6373	Amalan Pemakanan Klinikal	3
NNND6393	Penilaian Kritikal Dalam Pemakanan Klinikal	3
	Jumlah Unit	16 unit

Semester III

Kod	Tajuk Kursus	Unit
NNND641C	Projek Penyelidikan Pemakanan Klinikal II	12
	Jumlah Unit	12 unit

Jumlah unit keseluruhan adalah 40 unit

SENARAI KURSUS MENGIKUT MATRIKS HASIL PEMBELAJARAN IJAZAH SARJANA SAINS KESIHATAN (PEMAKANAN KLINIKAL)

Program Ijazah Sarjana Sains Kesihatan (Pemakanan Klinikal) bertujuan untuk:

- PO1:** Melahirkan graduan yang berpengetahuan luas, mampai dan berkebolehan dalam bidang masing-masing.
- PO2:** Melatih graduan yang kompeten dalam menilai dan mengaplikasikan protokol dan prosedur.
- PO3:** Melahirkan graduan yang kreatif, inovatif, sensitif dan bertanggungjawab terhadap komuniti, budaya dan persekitaran.
- PO4:** Memajukan graduan yang mana boleh memainkan peranan dalam memimpin perancangan dan implimentasi sesuatu tugas.
- PO5:** Melatih graduan dengan kerjasama, komunikasi, penyelesaian masalah dan kemahiran saintifik yang baik.
- PO6:** Menghasilkan graduan yang boleh menjalankan penyelidikan dengan penyeliaan yang minima.
- PO7:** Mengembangkan kemahiran ICT, kepimpinan dan keusahawanan graduan.
- PO8:** Menggalakkan pembelajaran sepanjang hayat pada graduan.

Semester I

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6033	3	Keperluan Pemakanan dan Penilaian Status Pemakanan	√	√	√	√	√	√		√
2	NNND6053	3	Fisiologi Tubuh dan Metabolisme Nutrien Bagi Penyakit dan Kesihatan	√		√	√		√		
3	NNND6073	3	Aspek Perubatan Dalam Pemakanan	√			√		√		
4	NNND6453	3	Rekabentuk Penyelidikan Klinikal dan Statistik	√				√	√		√

Semester II

Kursus Wajib

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6024	4	Projek Penyelidikan Pemakanan Klinikal I	√	√		√	√		√	√
2	NNND6213	3	Isu-isu Kontemporari Dalam Pemakanan dan Kesihatan	√	√	√	√	√	√	√	√
3	NNND6413	3	Terapi Pemakanan Perubatan Lanjutan	√	√	√	√		√		√
4	NNND6433	3	Aplikasi Sokongan Pemakanan	√		√	√	√	√		√

Sinopsis Kursus Program Sarjana Sains Kesihatan (Pemakanan Klinikal)

NNND6033 Keperluan Pemakanan dan Penilaian Status Pemakanan

Kursus ini memberikan kefahaman kepada saranan dan keperluan pemakanan untuk populasi dan individu mengikut kitaran hayat kehidupan. Pelajar akan berpeluang meneliti rational di sebalik setiap saranan dalam Saranan Pengambilan Makanan. Kursus ini juga meliputi perbincangan mengenai beberapa kaedah penilaian status pemakanan yang bersesuaian bagi menilai status pemakanan beberapa populasi yang berbeza di komuniti dan pusat jagaan kesihatan. Pelajar berpeluang mendalami beberapa teknik secara langsung termasuk analisis kandungan nutrien menggunakan perisian komputer, penggunaan alat antropometri dan komposisi tubuh serta teknik kalorimetri untuk menganggar keperluan tenaga.

Bacaan Asas

- Fidanza, F. 1991. Nutritional status assessment: A manual for population studies. London: Chapman & Hall.
- Gibson, R.S. 2005. Principles of nutritional assessment. 2nd Edition. Oxford: Oxford University Press.
- Lee, R.D. & Nieman, D.C. 2006. Nutritional assessment. 4th Ed. USA: McGraw-Hill Education.
- NCCFN. 2005. Recommended Nutrient Intakes for Malaysia. A Report of the Technical Working Group on Nutritional Guidelines. Putrajaya: National Coordinating Committee on Food and Nutrition, Ministry of Health Malaysia.
- Sauberlich, H.E. 2000. Laboratory tests for the assessment of nutritional status. Florida: CRC Press.

NNND6053 Fisiologi Tubuh dan Metabolisme Nutrien Berkaitan Penyakit dan Kesihatan

Kursus ini membincangkan proses fisiologi yang dialami oleh tubuh sepanjang hayat bermula dari pembentukan dan pertubuhan embrio, fetus dan ubahsuaian fisiologi semasa mengandung, laktasi dan penuaan, terutama yang berhubungkait dengan pemakanan. Ini akan diikuti dengan perbincangan terperinci mengenai pertumbuhan tubuh secara keseluruhan dan juga fungsi gastrousus, termasuk penghadaman dan penyerapan nutrien. Keseimbangan tenaga dan adaptasinya mengikut penggunaan tenaga, peringkat usia dan stres akibat penyakit ; dan juga kawalan selera makan neurologikal dan pengaruh makan terhadap 'mood' dan tingkahlaku juga akan dibincangkan. Fokus kursus seterusnya adalah kepada kefahaman terperinci berhubung dengan mekanisme tubuh memetabolismekan makro dan mikro nutrien di bawah beberapa keadaan diet, status pemakanan dan stres

seperti berpuasa, kebuluran, diet tinggi protein dan penyakit kronik. Seminar dan perbincangan kes berkaitan dengan ketidakseimbangan fungsi fisiologi dan kawalan tenaga tubuh seperti obesiti, anoreksia nervosa dan bulimia akan diadakan sebagai sebahagian dari keperluan kursus.

Bacaan Asas

- Berdanier, C.D. 1998. *Advanced nutrition micronutrients*. Florida: CRC Press.
Berdanier, C.D. 2001. *Advanced nutrition macronutrients*. Florida: CRC Press.
Brody T. 1999. *Nutritional Biochemistry*. 2nd edition. Academic Press
Garewal, H.S. 1997. *Antioxidants and disease prevention*. Florida: CRC Press.
Sareen S. Gropper, Jack L. Smith & James L. Groff. 2005. *Advanced Nutrition and Human Metabolism*. Ed. Ke-4. Wadsworth: Thomson

NNND6073 Aspek Perubatan Dalam Pemakanan

Fokus kursus ini adalah kepada pemahaman kesan penyakit akut dan kronik ke atas metabolisme tubuh, kekurangan nutrien dan keperluan pemakanan. Ini merangkumi aspek patologi dan patogenesis penyakit dan bagaimana komponen diet bersama dengan faktor lain seperti genetik dan persekitaran boleh mengakibatkan penyakit tertentu. Aspek terapi perubatan bagi penyakit endokrin, gastrousus, kardiovaskular, hipertensi, renal, hepar, onkologi dan neurologi. Keperluan pemakanan semasa keadaan klinikal tertentu seperti pesakit terbakar dan AIDS juga akan diberi penekanan. Seminar dan perbincangan kes berkaitan dengan aspek ini akan diadakan sebagai sebahagian dari keperluan kursus

Bacaan Asas

- Boon, N.A., Colledge, N.R., Walker, B.R., Hunter, J. 2006. *Davidson's Principles and Practice of Medicine: with STUDENT CONSULT Access*. Ed. Ke-20, USA: Churchill Livingstone
Chaudhry, H.J., Grieco, A.J., Macklis, R.M., Mendelsohn, M.E. 2004. *Fundamentals of Clinical Medicine: An Introductory Manual*. USA: Lippincott Williams & Wilkins
Escott-Stump, S. 2007. *Nutrition and Diagnosis Related Care*. USA: Lippincott Williams & Wilkins
Ganong, W.F. 2005. *Review of Medical Physiology*. USA: The McGraw-Hill Companies
Longmore, M., Wilkinson, I., Turmezei, T., Cheung, C.K. 2007. *Oxford Handbook of Clinical Medicine (Oxford Handbooks Series)*. Ed. Ke-7, USA: Oxford University Press

NNND6453 Rekabentuk Penyelidikan Klinikal dan Statistik

Objektif kursus ini adalah untuk menghasilkan pelajar yang berkebolehan melakukan statistik deskriptif, inferensial dan lanjutan. Mereka juga akan diajar untuk menjalankan analisa statistik menggunakan perisian SPSS. Memahami teori dan konsep statistik yang relevan dan dengan itu boleh memilih kaedah statistik yang sesuai untuk merekabentuk

eksperimen dan analisis. Memahami konsep kaedah statistik dan berupaya mengaplikasi untuk analisis data mengikut jenis data. Berupaya melakukan analisis data dan ujian statistik menggunakan perisian statistik seperti SPSS.

Bacaan Asas

- Blair, R.C. & Taylor, R.A. 2008. Biostatistics for the health Sciences. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. Doing data analysis with SPSS Version 14. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. SPSS: Analysis without Anguish. Version 15.0 for Windows. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. Basic & Clinical Biostatistics. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. Experimental Design using ANOVA. Duxbury Press.

NNND6024 Projek Penyelidikan Pemakanan Klinikal I

Pelajar akan menjalankan satu projek penyelidikan di bawah penyeliaan pensyarah. Pelajar boleh memilih untuk melakukan kajian lapangan atau kajian makmal yang bersesuaian dalam bidang pemakanan klinikal. Pada semester ini, pelajar dikehendaki membuat ulasan kepustakaan berkaitan topik penyelidikan yang dipilih, menyediakan proposal penyelidikan dan memohon untuk kelulusan etika. Proses yang akan dipelajari termasuklah perkembangan persoalan penyelidikan, hipotesis kajian dan kerangka konsep yang sesuai dengan topik penyelidikan. Pelajar juga akan merancang rekabentuk kajian dan metodologi yang sesuai. Sekiranya perlu, pelajar akan membentuk dan membuat prauji atau menentusahkan borang soalselidik atau alat kajian lain yang perlu dihantar kepada Jawatankuasa Penyelidikan Perubatan dan Etika, UKM dan (sekiranya perlu) jawatankuasa etika institusi yang lain.

Bacaan Asas

- Altman D.G. 1995. Practical statistics for medical research. London: Chapman & Hall.
- Friedland, A.J. & Folt, C.L. 2000. Writing successful science proposals. New Hampshire: Yale University Press.
- Margetts B.M. & Nelson M. 1991. Design concepts in nutritional epidemiology. New York: Oxford University Press.
- Ogden, T.E. & Goldberg, I. A. 2002. Research proposal: a guide to success. Third edition. California:Academic Press.
- Pusat Pengajian Siswazah. 2009. Panduan menulis tesis gaya UKM. Ed. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

NNND6213 Isu-Isu Kontemporari Dalam Pemakanan dan Kesihatan

Kursus ini mengupas evolusi persoalan atau permasalahan berkaitan sains dalam pemakanan dan hubungannya dengan perkembangan kesihatan komuniti. Kursus ini

juga akan memberi pengetahuan dan kefahaman mengenai isu pemakanan semasa serta perkaitannya dengan fungsi tubuh. Pelajar perlu menjalankan tinjauan yang melibatkan pandangan dan persepsi orang awam terhadap isu-isu kontemporari. Seterusnya, pelajar akan berbincang dan berhujah tentang hasil tinjauan dengan berasaskan bukti saintifik dalam seminar dan forum yang akan di adakan sebagai sebahagian dari keperluan kursus.

Bacaan Asas

- Caballero, B. & Popkin, B.M. 2002. *Nutrition transition: Diet-related diseases in the modern world*: Academic Press.
- Garrow, J.S. & James, W.P.T. 2000. *Human nutrition and dietetics*. Ed. Ke-10. Edinburgh: Churchill Livingstone.
- Ungar, P.S. & Teaford, M.F. (eds). 2002. *Human diet: Its origin and evolution*. Greenwood Publishing Group.
- World Health Organization. 2003. *Diet, nutrition and the prevention of chronic diseases*. Geneva: WHO Technical Report Series 797.

NNND6413 Terapi Pemakanan Perubatan Lanjutan

Kursus ini merupakan kursus lanjutan terapi pemakanan perubatan yang membincangkan secara komprehensif berorientasikan bukti saintifik terkini tentang penilaian status pemakanan klinikal, penentuan keperluan pemakanan dan nutrien pesakit, aspek pengurusan pemakanan pesakit, interaksi dadah-nutrien, pencegahan malpemakanan dan pengekal status pemakanan dalam keadaan penyakit akut dan kronik. Ini meliputi penyakit yang memerlukan diet terapeutik seperti endokrin, gastrousus, hepatobiliari, pediatrik, onkologi, renal, kardiovaskular, AIDS, trauma dan terbakar. Seminar dan perbincangan kes berkaitan dengan penyakit-penyakit yang dibincangkan akan diadakan sebagai sebahagian dari keperluan kursus. Pelajar juga akan mendapat pengalaman praktikal menyediakan diet terapeutik sebagai kerja kumpulan.

Bacaan Asas

- Escott-Stump, S. 2008. *Nutrition and Diagnosis – Related Care*. 6th Ed. Lippincott Williams & Wilkins. Philadelphia. USA.
- Medical Nutrition & Therapy Guidelines. 2005. Malaysian Dietitian Association.
- Nelms MN & Anderson SL. 2004. *Medical Nutrition therapy A Case study approach*. 2nd edition. Thomson Wadsworth, USA
- Shaw, V & Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Ed. Blackwell Publishing. Oxford. United Kingdom.
- Thomas, B. 2007. *Manual of Dietetic Practice*. Oxford: Blackwell Scientific Publications. London.

NNND 6433 Aplikasi Sokongan Pemakanan

Kursus ini memperkenalkan pelajar kepada pemakanan khusus yang terdapat di hospital, terutamanya untuk pesakit yang memerlukan sokongan pemakanan. Pelajar akan dapat

membentuk pemahaman tentang konsep dietetic lanjutan kepada pesakit kritikal yang mungkin berada di unit rawatan rapi, atau melalui penyakit akut atau yang menghadapi keadaan immunocompromised akibat morbidity akut/kronik Tajuk yang akan diajar termasuk asas kepada pencegahan melalui pemakanan sokongan untuk kekurangan nutrient disebabkan penyakit kritikal atau keperluan pemakanan khusus. Pengurusan perubatan berkenaan penjagaan pemakanan dan pendekatan kumpulan kesihatan bagi pengurusan pesakit adalah ditekankan semasa pelajar mengikuti latihan klinikal.

Bacaan Asas

- A.S.P.E.N. Board of Directors and The Clinical Guidelines Task Force (2002) Guidelines for the Use of Parenteral and Enteral Nutrition in Adult and Pediatric Patients: Journal Of Parenteral And Enteral Nutrition. 26:1:supplement January–February
- Nelms, MM & Anderson, SL (2004). Medical Nutrition Therapy- A case based approach. 2nd edition. Thomson Wadsworth Pub.
- Nutrition Support Service (2000) A practical guide to nutrition support in adults and children. UMMC
- Rombeau JL & Caldwell , MD (1990). Clinical Nutrition: Enteral and Tube Feeding, 2nd edition W.B. Saunders Co. Philadelphia
- Rombeau JL & Caldwell , MD (1993). Clinical Nutrition: Parenteral Nutrition, 2nd edition W.B. Saunders Co. Philadelphia
- Shaw, V & Lawson, M. (1994) Clinical Pediatric Dietetics. Blackwell Scientific Pub.
- The ASPEN Nutrition Support Practice Manual, 2nd Edition

NNND6363 Tingkahlaku Organisasi dan Pengurusan Sumber Personel

Kursus ini menyentuh teori dan praktis dalam menjelaskan, menganggar dan mengawal tingkahlaku dan suasana dalam organisasi. Penekanan diberikan kepada aspek kepimpinan, motivasi, komunikasi dan dinamik kumpulan dalam organisasi. Kursus ini juga membincangkan kaitan organisasi dengan kakitangan termasuk analisis pekerjaan, kecekapan, keberkesanan, latihan dan pengembangan kakitangan.

Bacaan Asas

- Bernardin, H.J. 2010. Human Resource Management: An Experiential Approach. 5th Ed. New York: McGraw-Hill.
- Ivancevich, J.M., Konopaske, R. & Matteson, T.M. 2005. Organizational Behavior and Management. 7th Ed. Singapore: McGraw-Hill Higher Education.
- Jaafar, M. 2003. Kelakuan Organisasi. 5th Ed. Petaling Jaya: Leeds Publication.
- Kreitner, R. & Kinicki, A. 2009. Organizational Behaviour. 9th Ed. Boston: McGraw-Hill College.
- Shortell, S.M. & Kaluzny, A.D. 2005. 5th Ed. Health Care Management: Organization Design and Behavior. Albany, NY: Delmar Cengage Learning.

NNND6373 Amalan Pemakanan Klinikal

Kursus ini memberi peluang kepada pelajar yang berlatarbelakang dietetik dan perubatan menjalani latihan pemakanan klinikal mengikut subpengkhususan yang dipilih samada pemakanan geriatrik, renal, pediatrik, onkologi atau penjagaan pesakit kritikal di hospital tertentu dalam tempoh yang ditetapkan. Manakala bagi graduan selain dari dietetik atau perubatan akan mengikuti latihan pemakanan klinikal di klinik diet pesakit luar. Pelajar dikehendaki memahami peranan kumpulan perubatan dan kesihatan pelbagai disiplin dalam penjagaan pesakit samada geriatrik, renal, pediatrik, atau penjagaan pesakit luar. Kursus ini memberi penekanan kepada kemahiran dalam pengurusan dan penjagaan pemakanan pesakit tertentu berdasarkan aplikasi teknologi dietetik terkini dan amalan pengurusan berdasarkan bukti perubatan (evidence based medicine) mutakhir. Penulisan dan pembentangan kajian kes merupakan sebahagian dari keperluan kerja kursus.

Bacaan Asas

- Cataldo, C.B., DeBryne, L.K. & Whitney, E.N. 2003. *Nutrition and Diet Therapy*. Ed. Ke-6. Belmont, USA: Wadsworth/Thomson Learning.
- Katz, L. 2008. *A Comprehensive, Evidence-Based Manual for the Practitioner (Nutrition in Clinical Practice)*. 2nd ed. Philadelphia: Lippincott Williams & Wilkins.
- Lysen, L.K. 2006. *Quick Reference to Clinical Dietetics*. 2nd Ed. London: Jones & Bartlett Publishers
- Shaw, V & Lawson, M. 2007. *Clinical Paediatric Dietetic*. London: Blackwell Publishing
- Thomas, B & Bishop J. 2009. *Manual of Dietetic Practice*. British Dietetic Association. UK: Blackwell Scientific.

NNND6393 Penilaian Kritikal Dalam Pemakanan Klinikal

Pemikiran kritikal membawa maksud kebolehpercayaan ilmu yang diperoleh.. Melalui kursus ini, pelajar akan mempelajari sains dan pseudoscience dan bagaimana untuk membezakan dan menilai kebolehpercayaan informasi berkaitan dengan pemakanan dan penggunaan suplemen. Di dalam proses ini, pelajar akan mengembangkan kemahiran memahami penulisan saintifik berkaitan 'food claim'. Kursus ini dibentuk bagi membantu perkembangan pemikiran kritikal dan kemahiran menyelesaikan masalah dalam penjagaan kesihatan dan pemakanan dengan memerlukan pelajar menganalisis dan menyelesaikan masalah konseptual dan praktikal yang berkait-rapat dengan profession penjagaan pemakanan. Pembelajaran berdasarkan masalah (PBL) digunapakai di mana pelajar perlu bekerja sendiri atau di dalam kumpulan kecil bagi mengumpul maklumat yang relevan kepada penyelesaian masalah, dan menggunakan pendekatan hipotesis dalam menyelesaikan masalah. Di akhir kursus ini, pelajar harus mempunyai pemikiran berasaskan bukti bersesuaian dengan kepelbagaian suplemen pemakanan yang boleh diperoleh oleh masyarakat.

Bacaan Asas

- Nestle, M. 2002. Food politics: how the industry influences nutrition and health. California: University of California Press.
- Sanders, TAB & Emery, P. 2003. Molecular basis of human nutrition. Taylor & Francis.
- Stephen Jay Gould. 1981. The mismeasure of man. WW Norton & Company. New York.
- Walter, P (ed.) 1995. The scientific basis for vitamin intake in human nutrition. Karger S Inc.
- Widmer, PL. 1997. Diets for reducing obesity including diet therapy research: index of new information for reference and practice. Washington DC: Abbe Pub Assn.

NNND641C Projek Penyelidikan Pemakanan Klinikal II

Pelajar akan menjalankan satu projek penyelidikan di bawah penyeliaan pensyarah. Pelajar boleh memilih untuk melakukan kajian lapangan atau kajian makmal yang bersesuaian dalam bidang pemakanan klinikal. Pada semester ini, pelajar dikehendaki melaksanakan kerja-kerja pengumpulan data. Pelajar juga akan mempelajari kaedah pengurusan data, termasuk proses kemasukan data, pembersihan data, analisis data dan interpretasi data. Pelajar perlu menulis laporan penyelidikan dalam bentuk tesis. Selain itu, pelajar juga akan membentangkan hasil penyelidikan dan mempertahankan penyelidikan melalui ujian lisan. Pelajar juga akan menghasilkan draf manuskrip yang boleh diterbitkan dalam jurnal saintifik.

Bacaan Asas

- Alley, M. 2002. The craft of scientific presentations: critical steps to succeed and critical errors to avoid. New York: Springer.
- Altman D.G. 1995. Practical statistics for medical research. London: Chapman & Hall.
- Matthews, J.R., Bowen, J.M. & Matthews, R.W. 2001. Successful scientific writing: A step-by-step guide for biomedical scientists. Cambridge: Cambridge University Press.
- Phelps R, Fisher K & Ellis AE. 2007. Organizing and Managing Your Research: A Practical Guide for Postgraduates. London: Sage Publications Ltd.
- Pusat Pengajian Siswazah. 2009. Panduan menulis tesis gaya UKM. Ed. Ke-6. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

Program Sarjana Sains Kesihatan (Pemakanan Komuniti)

Pengenalan

Perkembangan sumber manusia dalam bidang Sains Pemakanan telah melampaui pengkhususan tradisional yang berasaskan disiplin. Perkembangan dalam bidang Sains Pemakanan telah melampaui pelbagai bidang bukan sekadar pengkhususan berasaskan disiplin semata-mata. Cabaran kerjaya di alaf baru kini menyaksikan ahli-ahli Pemakanan menjalankan pelbagai fungsi khusus yang merangkumi: penjagaan kesihatan, perancangan polisi dan program pencegahan, kepakaran industri, komunikasi, penyelidikan dan pendidikan pemakanan. Program ini akan memberi peluang untuk menambah ilmu pengetahuan bukan sahaja kepada graduan baru yang ingin melanjutkan pelajaran dalam bidang pilihan mereka malahan dapat membantu mempertingkatkan ilmu dan pengetahuan ahli Pemakanan yang sudah berada dalam perkhidmatan. Graduan-graduan program Sarjana Sains Kesihatan (Pemakanan Komuniti) akan dapat memenuhi keperluan pengkhususan di institusi-institusi yang memerlukan pengetahuan Pemakanan Kesihatan Komuniti. Ini merangkumi keperluan dalam sistem jagaan kesihatan, pendidikan kesihatan dan industri-industri yang melibatkan makanan.

Objektif

Objektif utama program ini ialah:

- Menghasilkan graduan yang berpengetahuan dan mempunyai pemahaman tinggi dalam bidang pemakanan dan kesihatan komuniti sesuai dengan keperluan semasa.
- Menghasilkan graduan yang berpengetahuan secara menyeluruh dalam bidang sains pemakanan, epidemiologi, sains sosial, keperluan fisiologi dan perkhidmatan kesihatan masyarakat.
- Menyediakan asas yang kukuh dalam kemahiran dan teknik penyelidikan.
- Melahirkan graduan yang berkualiti dan kritikal dalam menangani isu-isu pemakanan semasa dan akan datang secara profesional.
- Membuka peluang kepada perkembangan kerjaya dalam bidang Pemakanan.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 41 unit.

Kurikulum Program Sarjana Sains Kesihatan (Pemakanan Komuniti)

Semester I

Kod	Tajuk Kursus	Unit
<i>Kursus Wajib (12 unit)</i>		
NNND6023	Epidemiologi Pemakanan	3
NNND6033	Keperluan Pemakanan dan Penilaian Status Pemakanan	3
NNND6053	Fisiologi Tubuh dan Metabolisme Nutrien Bagi Penyakit dan Kesihatan	3
NNND6093	Rekabentuk Penyelidikan dan Statistik	3
<i>Kursus Pilihan (2 unit)</i>		
NNND6082	Pemakanan Penuaan	2
NNND6192	Polisi Makanan dan Pemakanan	2
Jumlah Unit Semester I		14 unit

Semester II

Kod	Tajuk Kursus	Unit
<i>Kursus Wajib (12 unit)</i>		
NNND6124	Projek Penyelidikan Pemakanan Komuniti I	4
NNND6213	Isu-Isu Kontemporari Dalam Pemakanan dan Kesihatan	3
NNND6243	Penilaian Kritikal Makanan, Diet dan Suplemen	3
NNND6262	Pendidikan dan Intervensi Pemakanan	2
<i>Kursus Pilihan (3 unit)</i>		
NNND6363	Tingkh laku Organisasi dan Pengurusan Personel	3
NNND6413	Terapi Pemakanan Perubatan Lanjutan	3
Jumlah Unit Semester II		15 unit

Semester III

Kod	Tajuk Kursus	Unit
NNND601C	Projek Penyelidikan Pemakanan Komuniti II	12
	Jumlah Unit Semester III	12 unit

Jumlah unit keseluruhan adalah 41 unit

SENARAI KURSUS MENGIKUT MATRIKS HASIL PEMBELAJARAN IJAZAH SARJANA SAINS KESIHATAN (PEMAKANAN KOMUNITI)

Program Ijazah Sarjana Sains Kesihatan (Pemakanan Komuniti) bertujuan untuk:

- PO1:** Melahirkan graduan yang berpengetahuan luas, berkepakaran dan berkebolehan dalam bidang Pemakanan Komuniti.
- PO2:** Melatih graduan yang kompeten dalam menilai dan mengaplikasikan protokol dan prosedur.
- PO3:** Melahirkan graduan yang kreatif, inovatif, sensitif dan bertanggungjawab terhadap komuniti, budaya dan persekitaran.
- PO4:** Memajukan graduan yang mana boleh memainkan peranan dalam memimpin perancangan dan implimentasi sesuatu tugas.
- PO5:** Melatih graduan dengan kerjasama, komunikasi, penyelesaian masalah dan kemahiran saintifik yang baik.
- PO6:** Menghasilkan graduan yang boleh menjalankan penyelidikan dengan penyeliaan yang minima.
- PO7:** Mengembangkan kemahiran ICT, kepimpinan dan keusahawanan graduan.
- PO8:** Menggalakkan pembelajaran sepanjang hayat pada graduan.

Semester I

Kursus Wajib

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6023	3	Epidemiologi Pemakanan	√	v	√	√	√	v		√
2	NNND6033	3	Keperluan Pemakanan dan Penilaian Status Pemakanan	√	√	√	√	√	√		√
3	NNND6053	3	Fisiologi Tubuh dan Metabolisme Nutrien Bagi Penyakit dan Kesihatan	√		√	√		√		
4	NNND6093	3	Rekabentuk Penyelidikan dan Statistik	√				√	√		√

Kursus Pilihan

Bil	Kod Kursus	Kredit	Nama Kursus	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6082	2	Pemakanan dan Penuaan	√	√	√	√	√	√		√
2	NNND6192	2	Polisi Makanan dan Pemakanan	√	√	√			√		

Sinopsis Kursus Program Sarjana Sains Kesihatan (Pemakanan Komuniti)

NNND6023 Epidemiologi Pemakanan

Kursus ini memperkenalkan asas dan prinsip epidemiologi pemakanan. Kursus ini membolehkan pelajar menginterpretasikan data epidemiologi, mengenalpasti kaedah dan pendekatan yang digunakan dalam penyelidikan serta kekuatan dan limitasi rekabentuk kajian. Kursus ini juga membincangkan epidemiologi penyakit yang berkaitan dengan pemakanan serta pemantauan wabak penyakit. Pelajar didedahkan kepada pemakanan berasaskan bukti saintifik. Kursus ini meliputi kuliah, tugas, penilaian kritikan artikel jurnal dan penulisan laporan.

Bacaan Asas

- Institute of Public Health, IPH (2008). The third National Health Morbidity Survey (NHMS III. 2006. Ministry of Health Malaysia.
- Malaysia NCD Surveillance 1. 2006. NCD risk factors in Malaysia. Ministry of Health Malaysia.
- Margetts, B.M. and Nelson, M. 1997. Design Concepts in Nutritional Epidemiology. Second Edition. Oxford: Oxford University Press.
- Rothman KJ & Greenland S 1998. Modern Epidemiology. Ed. 2, Philadelphia: Lippincott Raven Publishers.
- Willett W 1998. Nutritional Epidemiology. Ed 2. Oxford: Oxford University Press.

NNND6033 Keperluan Pemakanan dan Penilaian Status Pemakanan

Kursus ini memberikan kefahaman kepada saranan dan keperluan pemakanan untuk populasi dan individu mengikut kitaran hayat kehidupan. Pelajar akan berpeluang meneliti rational di sebalik setiap saranan dalam Saranan Pengambilan Makanan. Kursus ini juga meliputi perbincangan mengenai beberapa kaedah penilaian status pemakanan yang bersesuaian bagi menilai status pemakanan beberapa populasi yang berbeza di komuniti dan pusat jagaan kesihatan. Pelajar berpeluang mendalami beberapa teknik secara langsung termasuk analisis kandungan nutrien menggunakan perisian komputer, penggunaan alat antropometri dan komposisi tubuh serta teknik kalorimetri untuk menganggar keperluan tenaga.

Bacaan Asas

- Fidanza, F. 1991. Nutritional status assessment: A manual for population studies. London: Chapman & Hall.
- Gibson, R.S. 2005. Principles of nutritional assessment. 2nd Edition. Oxford: Oxford University Press.

- Lee, R.D. & Nieman, D.C. 2006. *Nutritional assessment*. 4th Ed. USA: McGraw-Hill Education.
- NCCFN. 2005. *Recommended Nutrient Intakes for Malaysia. A Report of the Technical Working Group on Nutritional Guidelines*. Putrajaya: National Coordinating Committee on Food and Nutrition, Ministry of Health Malaysia.
- Sauberlich, H.E. 2000. *Laboratory tests for the assessment of nutritional status*. Florida: CRC Press.

NNND6053 Fisiologi Tubuh dan Metabolisme Nutrien Bagi Penyakit dan Kesihatan

Kursus ini membincangkan proses fisiologi yang dialami oleh tubuh sepanjang hayat bermula dari pembentukan dan pertubuhan embrio, fetus dan ubahsuaian fisiologi semasa mengandung, laktasi dan penuaan, terutama yang berhubungkait dengan pemakanan. Ini akan diikuti dengan perbincangan terperinci mengenai pertumbuhan tubuh secara keseluruhan dan juga fungsi gastrousus, termasuk penghadaman dan penyerapan nutrien. Keseimbangan tenaga dan adaptasinya mengikut penggunaan tenaga, peringkat usia dan stres akibat penyakit; dan juga kawalan selera makan neurologikal dan pengaruh makan terhadap 'mood' dan tingkahlaku juga akan dibincangkan. Fokus kursus seterusnya adalah kepada kefahaman terperinci berhubung dengan mekanisme tubuh memetabolismekan makro dan mikro nutrien di bawah beberapa keadaan diet, status pemakanan dan stres seperti berpuasa, kebuluran, diet tinggi protein dan penyakit kronik. Seminar dan perbincangan kes berkaitan dengan ketidakseimbangan fungsi fisiologi dan kawalan tenaga tubuh seperti obesiti, anoreksia nervosa dan bulimia akan diadakan sebagai sebahagian dari keperluan kursus.

Bacaan Asas

- Berdanier, C.D. 1998. *Advanced nutrition micronutrients*. Florida: CRC Press.
- Berdanier, C.D. 2001. *Advanced nutrition macronutrients*. Florida: CRC Press.
- Brody T. 1999. *Nutritional Biochemistry*. 2nd edition. Academic Press
- Garewal, H.S. 1997. *Antioxidants and disease prevention*. Florida: CRC Press.
- Sareen S. Gropper, Jack L. Smith & James L. Groff. 2005. *Advanced Nutrition and Human Metabolism*. Ed. Ke-4. Wadsworth: Thomson

NNND6093 Rekabentuk Penyelidikan dan Statistik

Objektif kursus ini adalah untuk menghasilkan pelajar yang berkebolehan melakukan statistik deskriptif, inferensial dan lanjutan. Mereka juga akan diajar untuk menjalankan analisa statistik menggunakan perisian SPSS. Memahami teori dan konsep statistik yang relevan dan dengan itu boleh memilih kaedah statistik yang sesuai untuk merekabentuk eksperimen dan analisis. Memahami konsep kaedah statistik dan berupaya mengaplikasi untuk analisis data mengikut jenis data. Berupaya melakukan analisis data dan ujian statistik menggunakan perisian statistik seperti SPSS.

Bacaan Asas

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish. Version 15.0 for Windows*. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics*. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design using ANOVA*. Duxbury Press.

NNND6082 Pemakanan Penuaan

Kursus ini membincangkan aspek penuaan dari pespektif transisi demografi, psikososial, fisiologikal, pemakanan dan kesihatan. Masalah kesihatan dan pemakanan berkaitan penuaan termasuk kegagalan kognitif, sindrom geriatrik, sarkopenia, malpemakanan, kekurangan androgen, menopaus dan osteoporosis akan dibincangkan secara terperinci. Pelajar akan dilatih dari segi penilaian status pemakanan dan fungsian. Kursus ini juga akan membincangkan aspek lain berkaitan dengan penjagaan warga tua termasuk ergogeriatric, program intervensi dan suplementasi pemakanan, senaman dan kecergasan, dan juga program rehabilitasi, perkhidmatan kesihatan dan kebijakan warga tua khususnya di Malaysia dan umumnya di luar Negara.

Bacaan Asas

- Niedert, K.C. ed. 1998. *Nutrition Care of the Older AdultCare*. USA: The American Dietetic Association.
- Noor Safiza Mohamad Nor, Khor Geok Lin, Suzana Shahar, Kee Chee Cheong, Jamaiyah Haniff, Geeta Appannah, Rahmah Rasat, Alan Wong Nam Foong, Ahmad Ali Zainuddin, Jamalludin Ab Rahman , Ruzita Abd. Talib, Ahmad Faudzi Haji Yusoff. 2008. Chapter II: Nutritional Status of Adults (Aged 18 years and above). In *The Third National Health and Morbidity Survey 2006 (NHMS III)*. Nutritional Status. Institute for Public Health, National Institutes of Health, Ministry of Health.
- Suzana Shahar, Noor Aini Mohd Yusoff, Nik Shanita Safii, Rafidah Ghazali, Roslina A. 2009. *Atlas Makanan: Pertukaran dan Saiz Porsi (Food Atlas: Exchanges and Portion Sizes) (Second Edition)*. MDC Publisher, Kuala Lumpur.
- Suzana Shahar, Zuriati Ibrahim, Suriah Abdul Rahman, Siti Nur'Asyura Adznam (eds). 2007. *Pemakanan dan Penilaian Kesihatan Warga Tua (Nutrition and Health Assessment among Older People)*. Penerbit UKM, Bangi.
- Watson, R.R. ed. 2000. *Handbook of Nutrition in the Aged*. 3rd ed. Florida: CRC Press.

NNND6192 Polisi Makanan dan Pemakanan

Kursus ini mengupas polisi dan program makanan dan pemakanan yang dijalankan oleh kerajaan, agensi-agensi bilateral dan multilateral. Ia juga akan membincangkan kesan polisi dan program tersebut terhadap kebolehdapatan dan mutu makanan serta status kesihatan penduduk, samada secara langsung atau tidak langsung. Contoh-contoh akan diambil daripada negara-negara membangun dan juga negara maju. Topik-topik mengenai kemiskinan, hak asasi, liberalisasi perdagangan, reformasi kesihatan, senaraiimbangan makanan, komposisi makanan, panduan diet, Akta makanan, Codex dan kod etika formula bayi akan dibincangkan oleh pensyarah jabatan dan pensyarah jempunan yang mempunyai pengalaman berkaitan. Pelajar juga dikehendaki memilih topik semasa dan menyediakan satu kertas polisi pemakanan serta membuat pembentangan.

Bacaan Asas

- Goel, S.L.. 2005. *Public health policy and administration*. New Delhi:Deep and Deep Publications.
- Gormley, K. 1999. *Social policy and health care*. Edinburgh Churchill Livingstone.
- Min. Of Agriculture, 1999. *Third National Agricultural Policy (1998-2010)*. Kuala Lumpur: Ministry of Agriculture Malaysia.
- MOH (2006) *National Plan of Action for Nutrition, Malaysia*. Ministry of Health Malaysia, Putrajaya
- WHO, 2004. *5th. Report on the world nutrition situation: Nutrition for improved development outcomes*. SCN, WHO, Switzerland.

NNND6124 Projek Penyelidikan Pemakanan Komuniti I

Pelajar akan menjalankan satu projek penyelidikan selama dua semester di bawah penyeliaan pensyarah. Pada semester ini, pelajar dikehendaki menyediakan proposal penyelidikan dan memohon untuk kelulusan etika. Pelajar dikehendaki membuat ulasan kepustakaan berkaitan topik penyelidikan. Proses yang akan dipelajari termasuklah perkembangan persoalan penyelidikan, hipotesis kajian dan kerangka konsep yang sesuai dengan topik penyelidikan. Pelajar juga akan merancang rekabentuk kajian dan metodologi yang sesuai. Sekiranya perlu, pelajar akan membentuk dan membuat prauji atau menentusahkan borang soalselidik atau alat kajian lain yang perlu dihantar kepada Jawatankuasa Penyelidikan Perubatan dan Etika, UKM dan/atau Jawatankuasa Etika yang lain.

Bacaan Asas

- Altman D.G. 1995. *Practical statistics for medical research*. London: Chapman & Hall.
- Friedland, A.J. & Folt, C.L. 2000. *Writing successful science proposals*. New Hampshire: Yale University Press.
- Margetts B.M. & Nelson M. 1991. *Design concepts in nutritional epidemiology*. New York: Oxford University Press.

- Ogden, T.E. & Goldberg, I. A. 2002. *Research proposal: a guide to success*. Third edition. California: Academic Press.
- Pusat Pengajian Siswazah. 2009. Panduan menulis tesis gaya UKM. Ed. terkini. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

NNND6213 Isu-Isu Kontemporari Dalam Pemakanan dan Kesihatan

Kursus ini mengupas evolusi persoalan atau permasalahan berkaitan sains dalam pemakanan dan hubungannya dengan perkembangan kesihatan komuniti. Kursus ini juga akan memberi pengetahuan dan kefahaman mengenai isu pemakanan semasa serta perkaitannya dengan fungsi tubuh. Pelajar perlu menjalankan tinjauan yang melibatkan pandangan dan persepsi orang awam terhadap isu-isu kontemporari. Seterusnya, pelajar akan berbincang dan berhujah tentang hasil tinjauan dengan berasaskan bukti saintifik dalam seminar dan forum yang akan di adakan sebagai sebahagian dari keperluan kursus.

Bacaan Asas

- Caballero, B. & Popkin, B.M. 2002. *Nutrition transition: Diet-related diseases in the modern world*: Academic Press.
- Garrow, J.S. & James, W.P.T. 2000. *Human nutrition and dietetics*. Ed. Ke-10. Edinburgh: Churchill Livingstone.
- Ungar, P.S. & Teaford, M.F. (eds). 2002. *Human diet: Its origin and evolution*. Greenwood Publishing Group.
- World Health Organization. 2003. *Diet, nutrition and the prevention of chronic diseases*. Geneva: WHO Technical Report Series 797.

NNND6243 Penilaian Kritikal Makanan, Diet dan Suplemen

Pemikiran kritikal membawa maksud kebolehpercayaan ilmu yang diperoleh.. Melalui kursus ini, pelajar akan mempelajari sains dan pseudoscience dan bagaimana untuk membezakan dan menilai kebolehpercayaan informasi berkaitan dengan pemakanan dan penggunaan suplemen. Di dalam proses ini, pelajar akan mengembangkan kemahiran memahami penulisan saintifik berkaitan 'food claim'. Kursus ini dibentuk bagi membantu perkembangan pemikiran kritikal dan kemahiran menyelesaikan masalah dalam penjagaan kesihatan dan pemakanan dengan memerlukan pelajar menganalisis dan menyelesaikan masalah konseptual dan praktikal yang berkait-rapat dengan profession penjagaan pemakanan. Pembelajaran berdasarkan masalah (PBL) digunapakai di mana pelajar perlu bekerja sendiri atau di dalam kumpulan kecil bagi mengumpul maklumat yang relevan kepada penyelesaian masalah, dan menggunakan pendekatan hipotesis dalam menyelesaikan masalah. Di akhir kursus ini, pelajar harus mempunyai pemikiran berasaskan bukti bersesuaian dengan kepelbagaian suplemen pemakanan yang boleh diperoleh oleh masyarakat.

Bacaan Asas

- Nestle, M. 2002. *Food politics: how the industry influences nutrition and health*. California: University of California Press.
- Sanders, TAB & Emery, P. 2003. *Molecular basis of human nutrition*. Taylor & Francis.
- Stephen Jay Gould. 1981. *The mismeasure of man*. WW Norton & Company. New York.
- Walter, P (ed.) 1995. *The scientific basis for vitamin intake in human nutrition*. Karger S Inc.
- Widmer, PL. 1997. *Diets for reducing obesity including diet therapy research: index of new information for reference and practice*. Washington DC: Abbe Pub Assn.

NNND6262 Pendidikan dan Intervensi Pemakanan

Kursus ini memperkenalkan model untuk merancang, membangun, implemen dan menilai program pendidikan dan intervensi pemakanan di komuniti terpilih. Pelajar akan mempelajari aplikasi proses pendidikan yang melibatkan penentuan objektif pembelajaran dan tingkahlaku, dan pemilihan intervensi yang sesuai berdasarkan kepada teori pembelajaran, dan pembentukan strategi arahan berpusat untuk populasi sasaran yang khusus. Kursus ini juga meliputi pendidikan pemakanan dan program-program intervensi pemakanan yang terdapat di Malaysia.

Bacaan Asas

- Bartholomew L.K., Parcel G.S., Kok G. & Gottfried N.H. 2006. *Planning health promotion programs. An intervention mapping approach*. John Wiley & Sons, Inc.
- Cottrell, R.R., Girvan, J.T. & Mckenzie, J.F. 2001. *Principles and foundations of health promotion and education*. Ed. ke-2. Pearson Education.
- Glanz, K., Lewis, F.M. & Rimer, B.K. 1996. *Health behavior and health education: Theory, research and practice*. Ed. ke-2. Jossey-Bass Inc. Publishers.
- Kreuter, M.W., Green, L.W. & Lezin, N.A. 2003. *Community health promotion ideas that work*: Jones & Bartlett Publishers Inc.
- Mckenzie, J.F., Neiger, B.L. & Smeltzer, J.L.. 2005. *Planning, implementing, and evaluating health promotion programs: A primer*. Ed. Ke-4. Pearson Education.

NNND6363 Tingkahlaku Organisasi dan Pengurusan Personel

Kursus ini menyentuh teori dan praktis dalam menjelaskan, menganggar dan mengawal tingkahlaku dan suasana dalam organisasi. Penekanan diberikan kepada aspek kepimpinan, motivasi, komunikasi dan dinamik kumpulan dalam organisasi. Kursus ini juga membincangkan kaitan organisasi dengan kakitangan termasuk analisis pekerjaan, kecekapan, keberkesanan, latihan dan pengembangan kakitangan.

Bacaan Asas

- Bernardin, H.J. 2010. *Human Resource Management: An Experiential Approach*. 5th Ed. New York: McGraw-Hill.

- Ivancevich, J.M., Konopaske, R. & Matteson, T.M. 2005. *Organizational Behavior and Management*. 7th Ed. Singapore: McGraw-Hill Higher Education.
- Jaafar, M. 2003. *Kelakuan Organisasi*. 5th Ed. Petaling Jaya: Leeds Publication.
- Kreitner, R. & Kinicki, A. 2009. *Organizational Behaviour*. 9th Ed. Boston: McGraw-Hill College.
- Shortell, S.M. & Kaluzny, A.D. 2005. 5th Ed. *Health Care Management: Organization Design and Behavior*. Albany, NY: Delmar Cengage Learning.

NNND6413 Terapi Pemakanan Perubatan Lanjutan

Kursus ini merupakan kursus lanjutan terapi pemakanan perubatan yang membincangkan secara komprehensif berorientasikan bukti saintifik terkini tentang penilaian status pemakanan klinikal, penentuan keperluan pemakanan dan nutrien pesakit, aspek pengurusan pemakanan pesakit, interaksi dadah-nutrien, pencegahan malpemakanan dan pengekal status pemakanan dalam keadaan penyakit akut dan kronik. Ini meliputi penyakit yang memerlukan diet terapeutik seperti endokrin, gastrousus, hepatobiliari, pediatrik, onkologi, renal, kardiovaskular, AIDS, trauma dan terbakar. Seminar dan perbincangan kes berkaitan dengan penyakit-penyakit yang dibincangkan akan diadakan sebagai sebahagian dari keperluan kursus. Pelajar juga akan mendapat pengalaman praktikal menyediakan diet terapeutik sebagai kerja kumpulan

Bacaan Asas

- Escott-Stump, S. 2008. *Nutrition and Diagnosis – Related Care*. 6thEd. Lippincott Williams & Wilkins. Philadelphia. USA.
- Medical Nutrition & Therapy Guidelines*. 2005. Malaysian Dietitian Association.
- Nelms MN & Anderson SL. 2004. *Medical Nutrition therapy A Case study approach*. 2nd edition. Thomson Wadsworth, USA
- Shaw, V & Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Ed. Blackwell Publishing. Oxford. United Kingdom.
- Thomas, B. 2007. *Manual of Dietetic Practice*. Oxford: Blackwell Scientific Publications. London.

NNND601C Projek Penyelidikan Pemakanan Komuniti II

Pelajar akan menjalankan satu projek penyelidikan di bawah penyeliaan pensyarah. Pelajar boleh memilih untuk melakukan kajian lapangan atau kajian makmal yang bersesuaian dalam bidang pemakanan komuniti. Pada semester ini, pelajar dikehendaki melaksanakan kerja-kerja pengumpulan data. Pelajar juga akan mempelajari kaedah pengurusan data, termasuk proses kemasukan data, pembersihan data, analisis data dan interpretasi data. Pelajar perlu menulis laporan penyelidikan dalam bentuk tesis. Selain itu, pelajar juga akan membentangkan hasil penyelidikan dan mempertahankan penyelidikan melalui ujian lisan. Pelajar juga akan menghasilkan draf manuskrip yang boleh diterbitkan dalam jurnal saintifik.

Bacaan Asas

- Alley, M. 2002. *The craft of scientific presentations: critical steps to succeed and critical errors to avoid*. New York: Springer.
- Altman D.G. 1995. *Practical statistics for medical research*. London: Chapman & Hall.
- Matthews, J.R., Bowen, J.M. & Matthews, R.W. 2001. *Successful scientific writing: A step-by-step guide for biomedical scientists*. Cambridge: Cambridge University Press.
- Phelps R, Fisher K & Ellis AE. 2007. *Organizing and Managing Your Research: A Practical Guide for Postgraduates*. London: Sage Publications Ltd.
- Pusat Pengajian Siswazah. 2009. *Panduan menulis tesis gaya UKM. Ed. Ke-6. Bangi: Penerbitan Universiti Kebangsaan Malaysia*.

Program Sarjana Sains Kesihatan (Pendidikan Kesihatan)

Pengenalan

Program ini mengambil masa sekurang-kurangnya tiga semester. Ia merupakan bidang Pendidikan Kesihatan. Ia menerangkan konsep dari segi strategi, pendekatan dan komunikasi yang dapat mengubah tingkahlaku dan individu ataupun masyarakat. Kegiatan kerja Pendidikan Kesihatan dititikberatkan pada kumpulan yang khas dengan memperhatikan ciri-ciri dan tingkahlaku mereka. Pendidikan Kesihatan bukan hanya dalam bidang penyebaran maklumat sahaja akan tetapi merangkumi proses khidmat nasihat, pengikut sertaan yang aktif dari perseorangan, keluarga dan masyarakat. Pegawai Pendidikan Kesihatan mampu dalam melakukan perancangan, pelaksanaan dan menganalisa program Pendidikan Kesihatan dalam menyokong/menunjang program kesihatan yang dilaksanakan oleh Kementerian Kesihatan Malaysia.

Objektif

Untuk menghasilkan Sarjana yang memahami pengetahuan tentang Pendidikan dan Promosi Kesihatan yang merangkumi hubungan tingkah laku manusia dan kesihatan, modul kepercayaan kesihatan dan kaedah Pendidikan dan Promosi Kesihatan yang boleh digunakan pada individu, keluarga dan masyarakat.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 42 unit.

Kurikulum Program Sarjana Sains Kesihatan (Pendidikan Kesihatan)

Semester I

Kod	Tajuk Kursus	Unit
NNNH6013	Anatomi, Fisiologi dan Perkembangan Manusia	3
NNNH6053	Sains Tingkahlaku	3
NNNH6213	Biotik, Penyakit dan Epidemiologi	3
NNNH6423	Teori Komunikasi dan Penyampaian	3
NNNH6613	Kesihatan Masyarakat	3
NNNH6623	Perancangan Program Peningkatan Pendidikan Kesihatan	3
	Jumlah Unit	18 unit

Semester II

Kod	Tajuk Kursus	Unit
NNNH6023	Pendidikan Kesihatan Dalam Sistem Penjagaan Kesihatan	3
NNNH6033	Media Pendidikan	3
NNNH6043	Pengurusan Kesihatan dan Perkhidmatan Masyarakat	3
NNNH6063	Latihan dan Peningkatan Pengetahuan Tenaga Kerja	3
NNNH6223	Strategi Pendidikan Kesihatan	3
NNNH6413	Kaedah Penyelidikan Sosial dan Statistik	3
	Jumlah Unit	18 unit

Semester III

Kod	Tajuk Kursus	Unit
NNNH6016	Projek Penyelidikan	6
	Jumlah Unit	6 unit

Jumlah unit keseluruhan adalah 42 unit

Sinopsis Kursus Program Sarjana Sains Kesehatan (Pendidikan Kesehatan)

NNNH6013 Anatomi, Fisiologi dan Perkembangan Manusia

Kursus ini mengandung syarahan dan tutorial. Kursus ini memberi pengenalan kepada anatomi dan fisiologi tubuh badan manusia dan keseluruhan sistem dalam tubuh badan, koordinasi dan penyakit yang dihadapi dalam keadaan tidak normal. Ini juga termasuklah keperluan dan kepentingan nutrisi dalam tubuh badan.

Bacaan Asas

- Golombok, S. & Firush, R. 1994. *Gender development*. New York: Cambridge University Press.
- Guyton, A.C. 1990. *Textbook of medical physiology*. Philadelphia: W.B.Saunders.
- Noback, C.H.1992. *Human anatomy and physiology (Ed. Ke-2)*. New York: Mc Graw Hill.
- Shier, D., Butler J & Lewis R. 2002. *Human anatomy & physiology*. New York: Mc Graw Hill.
- Wilson, K.J. 1990. *Anatomy and physiology, health and illness*. London: Longmans.

NNNH6053 Sains Tingkahlaku

Modul ini akan membolehkan pelajar memahami asas sains tingkahlaku dan aplikasinya kepada promosi kesihatan. Konsep dan teori berkaitan yang boleh mengubah tingkahlaku juga diperkenalkan. Isu-isu etika dalam pendidikan kesihatan juga dibincangkan.

Bacaan Asas

- Glanz, K., Lewis, M.F. & Rimer, B.K. 1990. *Health behaviour and health education*. San Francisco: Oxford University Press.
- Hawkins, D.J., Best, R.J. & Coney, K.A. 2001. *Consumer behaviour*. USA: Irwin Mc Graw Hill.
- London, D.L. & Della Bitta, A.J. 1993. *Consumer behaviour. (Ed. Ke-4)*. New York: Mc Graw Hill. Int. Ed.
- Spezzano, C. 1992. *What to do between birth and death. The art of growing up*. New York: William Morrow.
- Taylor, S.E. 1997. *Health psychology. (Ed. Ke-4)*. New York: Mc Graw Hill.
- Tolman, C.W. & Maiers, W. 1991. *Critical psychology. Contributions to a historical science of the subject*. Cambridge: Cambridge University Press.

NNNH6213 Biotik, Penyakit dan Epidemiologi

Kursus ini mengandungi syarahan dan kerja kursus. Kursus ini menekankan aspek-aspek asas seperti pengelasan dan ciri-ciri penyebab kejadian dan penyebaran penyakit, epidemiologi, penyakit berjangkit serta tidak berjangkit. Di samping itu, para pelajar akan didedahkan dengan maklumat berkenaan penyakit-penyakit yang sering berlaku di Malaysia, penyelidikan epidemiologi serta Program Kawalan Penyakit di Kementerian Kesihatan Malaysia.

Bacaan Asas

- Ann, A. George, R.S. 2006. *Essentials of Epidemiology in Public Health*. Jones & Bartlett, Boston.
- Hanson, F.A. 1993. *Testing, social consequences of the examined life*. Berkeley: University California
- Phoon, W.O. & Cion, P.C.Y. 1996. *Textbook of community medicine in South East Asia*. Singapore: John Wiley & Sons.
- Rothman, J.K. 1996. *Modern epidemiology*. London: Boston Little Brown.
- Thomas, C.T. 2006. *An Introduction to Epidemiology (3rd Ed)*. Jones & Bartlett, Boston.

NNNH6423 Teori Komunikasi dan Penyampaian

Modul ini akan mendedahkan para pelajar konsep komunikasi kesihatan dan komunikasi risiko. Para pelajar akan dapat mengaplikasikan teori-teori komunikasi kesihatan dalam program promosi kesihatan. Para pelajar juga dapat menyediakan dan menangani komunikasi risiko sebelum krisis, semasa krisis dan selepas krisis. Kursus ini mengandungi syarahan, pengalaman, perbincangan kumpulan dan kerja kursus.

Bacaan Asas

- Alan, B. 2007. *Improve Your Communication Skills 2nd. Edition*. London: Replika Press Pert. Ltd.
- Dianne, B. 2007. *Health Communication: theory and practice*. New York: Mc Graw Hill- Open University Press.
- Karen, G., Barbara, K.R., Kasisomay, A.V. 2008. *Health Behaviour and Health Education*. San Francisco: Jossey Bass.
- Kevin, B.W., Lisa, S., Dan, O.. 2007. *Health Communication in the 21st. Century*. USA: Blackwell Publication, Inc.
- Owen, D.W.H. 2006 *The Handbook of Communication Skills 3rd. Edition*. New York: Routledge Publications.
- Renata, S. 2007. *Health Communication: From Theory to Practice*. San Francisco: Jossey Bass.

NNNH6613 Kesihatan Masyarakat

Kursus ini membincangkan tentang konsep, falsafah dan prinsip-prinsip asas kesihatan awam, ekologi manusia serta hubungannya dengan penyakit dan kesihatan. Selain daripada itu, penerangan turut diberikan mengenai aspek fizikal, psikososial dan budaya yang menjadi penentu kejadian sesuatu penyakit, keperluan kesihatan komuniti, corak organisasi kesihatan dan program sistem kesihatan di Malaysia, program perkembangan komuniti, program informasi awam serta program-program khas seperti kesihatan sekolah dan sebagainya.

Bacaan Asas

- Baum, F. 2008. *The New Public Health 3rd Edition*, Oxford University Press.
- Blas, E., Sommerfeld, J and Kurup, A.S. 2011. *Social Determinants to Public Health*, WHO
- Hancock, J. 1993. *Health, human development and the community ecosystem*. Health Promotion International, 8, 1, 41-47.
- Phoon, W.O & Chen, P.C.Y. 1996. *Textbook of community medicine in South East Asia*. Singapore: John Wiley & Sons.
- Program Kesihatan, Perubatan, Sokongan & Teknikal Negara-Negara di bawah WHO. 2001.
- Program Kesihatan, Perubatan, Sokongan & Teknikal. 2001. Kementerian Kesihatan Malaysia.

NNNH6623 Perancangan Program Peningkatan Pendidikan Kesihatan

Kursus ini mendedahkan para pelajar mengenai konsep perancangan program promosi kesihatan, pelbagai komponen dan langkah-langkah dalam membentuk perancangan program. Para pelajar juga akan dapat mengaplikasikan model-model yang berkaitan perancangan program promosi kesihatan. Kursus ini mengandungi syarahan, tutorial dan kerja kursus.

Bacaan Asas

- Bartholomew, L.K., Guy, S.P., Gerjo, K. & Nell, H.G. 2006. *Planning Health Promotion Programs: An Intervention Mapping Approach*. (2nd edition). Jossey-Bass, a Wiley Imprint.
- Green, L.W. & Kreuter M.W. 1999. *Health promotion planning: An educational and ecological approach*. (Ed. Ke 3). London: Mayfield Publication Company.
- James, F.M., Brad, L.N., Rosemary, T. 2009. *Planning, implementing & evaluating health promotion programs: a primer*. (5th edition). Pearson International Edition.
- Karen, G., Barbara, K.R., Frances, M.L. 2002. *Health behaviour and health education: theory, research and practice*. (3rd edition). Jossey-Bass, a Wiley Imprint.
- Ralph, J.D., Riachard, A.C., Michelle, C.K. 2002. *Emerging theories in health promotion practice and research: strategies for improving public health*. Jossey-Bass, a Wiley company.

NNNH6023 Pendidikan Kesihatan dalam Sistem Penjagaan Kesihatan

Kursus ini merangkumi skop dan peranan pendidikan dalam penjagaan kesihatan, 'sick-role behaviour', tingkahlaku penyakit, strategi dan pendekatan dalam mengubah tingkahlaku, serta kaedah dalam pendidikan dan promosi kesihatan. Para pelajar juga dapat menjalankan program intervensi pendidikan kesihatan dalam sistem penjagaan pesakit.

Bacaan Asas

- Annette Bender and Martha Byington, December 2008. *Communicating with Patients Issue Editors*, Risk Management Foundation Harvard Medical Institutions
- Barbara Klug Redman, 2009. *The Practice of Patient Education, 11th Edition*, Mosby
- Joanne Desmond, 2008. *Communicating with Today's Patient: Essentials to Save Time, Decrease Risk, and Increase Patient Compliance*, Lanny R Copeland.
- Margaret Comerford Freda, 2008. *Issues in Patient Education, Journal of Midwifery & Women's Health*, Journal Midwifery Womens Health.
- Rankin, S.H, Stallings, K.D & London,F, 2009 (6th Edition), *Patient Education in Health and Illness (patient education: issues, principle & practices)*, Lippincott Williams & Wilkins

NNNH6033 Media Pendidikan

Kursus ini merangkumi konsep media pendidikan termasuk proses komunikasi massa, bentuk dan teknik media. Kursus ini menekankan keberkesanan dan faktor-faktor yang mempengaruhi media berdasarkan kepada pelbagai jenis-jenis sumber media Para pelajar akan diajar bagaimana untuk menjalankan pra uji dan penilaian dalam perkembangan sumber media. Pada akhir kursus ini, para pelajar dapat menghasilkan media pendidikan yang berkesan dan kredibel (media elektronik dan cetak).

Bacaan Asas

- Downing, J.D. 2001. *Radical media*. USA Sage Publishers.
- Henry, J. 2006. *Convergence Culture, Where Old and New Media Collide*. New York University Press.
- Joan, G. 2010. *Annual Edition: Mass media (10th Edition)* McGraw-Hill/Dushkin.
- Joseph, R. D. 2010. *Dynamics of Mass Communication Media In Transition. (11th Edition)*. McGraw-Hill.
- Joseph, R.D., Fritzz, M., Barry, L. S. 2007. *Broadcasting, cable, The Internet and Beyond.: An Introduction to*
- Michael, O. Stepahnie, A. J, Robert, M..2010. *Educational Media and Techonology Yearbook. (First Edition)*. Colorado:Littleton

NNNH6043 Pengurusan Kesihatan dan Perkhidmatan Masyarakat

Para pelajar akan didedahkan dengan beberapa aspek penting seperti teori pengurusan dan praktikal, pentadbiran kesihatan dan program perkembangannya, Prosedur Pentadbiran Kerajaan Malaysia yang berkaitan dengan pengurusan kesihatan, penyeliaan dan kepimpinan, sistem maklumat kesihatan, bentuk institusi serta kerjasama daerah,

kebangsaan dan antarabangsa dalam penjagaan kesihatan.

Bacaan Asas

- Azizi, Y. 2010. *Gelagat Organisasi: Satu Pendekatan Strategik*. Universiti Utara Malaysia.
- Bateman, S. 2002. *Management. (Ed. Ke-5)*. New York: Mc Graw Hill.
- Garvin, D.A. 2002. *General management*. New York: . Mc Graw Hill Irvian.
- Gayla, D., Gibson D. & Ivancerich, D.L. 1998. *Fundamentals of management*. New York: Mc Graw Hill.
- Robbins, S.P. & Coulter, M. 1999. *Management.(Ed. Ke-6)*. New York: Prentice Hall.

NNNH6063 Latihan dan Peningkatan Pengetahuan Tenaga Kerja

Kursus ini merangkumi teori-teori pendidikan, penilaian keperluan, prinsip pembelajaran, pendekatan sistem kepada latihan, perkembangan kurikulum, latihan dalam perkhidmatan, perancangan kursus latihan, metodologi sistem penyampaian, teknik-teknik dan kemahiran pengajaran-pembelajaran serta pengurusan program latihan.

Bacaan Asas

- Ferri, B. 2006. Teaching to trouble. In S. Danforth & S. Gabel (Eds.), *Vital questions facing disability studies in education* (pp. 289 – 306). New York, NY: Peter Lang.
- Klein S.B., 2009. Learning: principles and application fifth edition. Mississippi: sage publication inc
- Posner, G.J., & rudnitsky A.N. 2006. Course Design : A Guide to Curriculum Development for Teacher. Allyn & Bacon Inc
- Seifert, L. & Stacey M. 1998. *Trouble shooting for trainers*. London: Gower Pub.Ltd.
- Slavin, R.E. 1997. *Educational psychology: Theory & practice*. London: Allyn & Bacon

NNNH6223 Strategi Pendidikan Kesihatan

Kursus ini merangkumi strategi promosi kesihatan. Antara perkara-perkara penting yang akan dimuatkan dalam kursus ini adalah promosi kesihatan di Malaysia dan pengalaman beberapa negara terpilih.

Bacaan Asas

- Dines, A. & Cribb, A. 1993. *Health promotion: Concepts & practice*. San Francisco: Blackwell Scientific Publications.
- Egger, G., Spark R & Lawson, J. 1990. *Health promotion strategies & methods*. New York: Mc Graw-Hill.
- Gilbert, G.G. & Sawyer, R.G. 1995. *Health education: creating strategies for school and community health*. London: Jones & Bartlett Publication.
- Glantz, K., Lewis, F.M & Rimer B.K. 1990. *Health behaviour & health education: Theory, research & practice*. London: Jossey-Bass Publishers.

- Green, L.W. & Kreuter, M.W. 1991. *Health promotion planning: An educational & environmental approach*. London: Mayfield Publishing.
- World Health Organisation. 1990. *General Concepts of Health Education*. Health Education In The Control Of Schistosomiasis. Geneva.

NNNH6413 Kaedah Penyelidikan Sosial dan Statistik

Kursus ini meliputi syarahan, sesi makmal dan tutorial. Kursus ini juga merangkumi kaedah kuantitatif dan kualitatif statistik kesihatan, metodologi penyelidikan seperti perancangan, kaedah persampelan, pengumpulan data, analisis dan interpretasi data.

Bacaan Asas

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish. Version 15.0 for Windows*. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics. 4th edition*. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design using ANOVA*. Duxbury Press.

NNNH6016 Projek Penyelidikan

Projek penyelidikan merupakan kesinambungan kepada kursus kaedah penyelidikan sosial dan statistik. Ia adalah satu-satunya latihan praktikal untuk mendedahkan pelajar kepada penyelidikan yang sebenar dalam komuniti. Para pelajar diwajibkan menjalankan satu projek dan dikehendaki membentangkan cadangan penyelidikan dalam bentuk seminar. Setelah projek selesai, sekali lagi para pelajar dikehendaki membentangkan hasil penyelidikan untuk dinilai.

Program Sarjana Sains Kesihatan (Linguistik Klinikal)

Pengenalan

Linguistik Klinikal adalah salah satu bidang yang terangkum di dalam bidang Sains Pertuturan. Ia mengintegrasikan kedua-dua bidang linguistik dan bidang patologi bahasa dan pertuturan kerana setiap kecelaruan bahasa dan pertuturan dimanifestasikan melalui kelengahan atau kecelaruan komponen bahasa daripada aspek penggunaan kata, frasa, ayat, artikulasi bunyi, sistem fonologi, semantik, serta pragmatik. Linguistik klinikal melibatkan antara disiplin seperti linguistik, patologi pertuturan dan bahasa, pemerolehan bahasa normal dan pengurusan pendidikan khas bagi individu yang menghadapi masalah komunikasi. Kegiatan kerja melibatkan pelajar menyelidik aspek-aspek linguistik klinikal di samping didedahkan kepada pemerhatian klinikal dalam klinik ataupun menjalankan amali dalam klinik. Penyelidikan tertumpu kepada menganalisis aspek linguistik yang terdapat dalam kecelaruan bahasa atau pertuturan, membentuk alat-alat penilaian dan intervensi, mendirikan norma bahasa dan pertuturan bagi bahasa-bahasa tempatan, serta aspek pengajaran/pembelajaran kanak-kanak yang menghadapi masalah komunikasi dan sebagainya.

Objektif

Untuk menghasilkan Sarjana yang berpengetahuan dalam Linguistik Klinikal dan berkemampuan untuk menganalisis kecelaruan bahasa dan pertuturan yang merangkumi bahasa-bahasa tempatan di Malaysia dan membantu individu yang bermasalah bahasa dan pertuturan dalam mengatasi kecelaruan bahasa mereka agar dapat berkomunikasi dengan keluarga dan masyarakat serta berupaya untuk menyumbang khidmat bakti kepada negara.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 40 unit.

Kurikulum Program Sarjana Sains Kesihatan (Linguistik Klinikal)

Semester I

Kod	Tajuk Kursus	Unit
NNNS5013	Kecelaruan Perkembangan Bahasa	3
NNNS5033	Kecelaruan Perolehan Bahasa	3
NNNS5053	Pemprosesan & Pemerolehan Bahasa	3
NNNS5082	Seminar Linguistik Klinikal	2
NNNS5093	Metodologi Penyelidikan & Statistik	3
Pilih 2 kursus berikut:		
NNNS5012	Morfologi & Sintaksis	2
NNNS5032	Fonetik & Fonologi	2
NNNS5052	Semantik & Pragmatik	2
Pilih 1 kursus berikut:		
NNNS5011	Penilaian Linguistik Dalam Klinik	1
NNNS5031	Amali Klinik	1
	Jumlah Unit	19

Semester II

Kod	Tajuk Kursus	Unit
NNNS5023	Isu Penyelidikan Kecelaruan Komunikasi	3
NNNS5024	Projek Disertasi I	4
NNNS5043	Aspek Linguistik Dalam Kecelaruan Komunikasi	3
NNNS5063	Kecelaruan Pertuturan Motor	3
NNNS5073	Masalah Pendengaran	3
Pilih 1 kursus berikut:		
NNNS5021	Penilaian Linguistik Dalam Klinik	1
NNNS5041	Amali Klinik	1
	Jumlah Unit	17

Semester III

Kod	Tajuk Kursus	Unit
NNNS5044	Projek Disertasi II	4
	Jumlah Unit	4

Jumlah unit keseluruhan adalah 40 unit

Sinopsis Kursus Program Sarjana Sains Kesehatan (Linguistik Klinikal)

NNNS5013 Kecelaruhan Perkembangan Bahasa

Kursus ini membincangkan jenis kecelaruhan perkembangan bahasa kanak-kanak; etiologi, simptom, sifat dan jenis intervensi yang boleh diberikan. Pelajar akan didedahkan kepada model-model penilaian dan melakukan penilaian sampel bahasa. Prosedur dalam membuat keputusan pengendalian dan prinsip intervensi akan juga dibincangkan. Pelajar akan dikehendaki membaca bacaan jurnal bagi setiap jenis kecelaruhan perkembangan dan menghasilkan analisis kritikan mengenainya secara berkumpulan.

Bacaan Asas

Gilliam et al. 2000. *Communication Sciences and Disorders- From Science to Clinical Practice*. Singular Publishing Group.

Goldstein, H., Kaczmarek, L. & English, Kri. 2001. *Promoting social communication: children with developmental disabilities from birth to adolescence*. (Communication and language intervention series, 1). London: Brookes.

Leonard, L. 2000. *Children with specific language impairment*. Massachusetts: MIT Press.

Paul, R. & Paul, VI. 2001. *Language disorders from infancy through adolescence: assessment and intervention*. New York: Mosby.

Weissenborn, J. & Hohle, B. 2001. *Approaches to bootstrapping: phonological, lexical, syntactic and neurophysiological aspects of early language acquisition* (language acquisition and language disorders, V23). Amsterdam: John Benjamins.

NNNS5033 Kecelaruhan Perolehan Bahasa

Kursus ini memberi tumpuan kepada penilaian dan pengendalian afasia, kecelaruhan hemisfera kanan, dementia, kecederaan traumatik otak, disartria dan apraksia pertuturan. Hubungan kait antara simptom-simptom disfagia dan kecelaruhan motor akan juga disentuh. Kursus ini juga member penekanan ke atas hubungkait antara etiologi, organisasi motor, lokalisasi, simptomatologi dan pendekatan perawatan. Penekanan juga diberikan kepada isu-isu diagnosis. Kaedah komunikasi alternatif seperti komunikasi augmentatif akan disentuh.

Bacaan Asas

Beukelman, D., Yorkston, K. & Reichle, J. 2000. *Augmentative and alternative communication for adults with acquired neurologic disorder*. London: Paul H. Brookes.

- Freed, D. 2000. *Motor Speech Disorders: Diagnosis & Treatment*. Singular Publishing Group.
- Hedge, M.N. 2006. *A Coursebook on Aphasia and Other Neurogenic Language Disorders*. Ed. Ke-3. Thomson Delmar Learning.
- Helm-Estrabrooks, N. & Albert, M.L. 2004. *Manual of Aphasia and Aphasia Therapy*. Ed. Ke-2. Austin, TX:Pro-ED.
- Kosta, J. 2005. *Communication Interaction with Elderly Japanese in Nursing Care Settings*. In *Perspective on Gerontology*. American Speech Language Hearing Association. V10, N1, pgs 11-14.

NNNS5053 Pemrosesan dan Pemerolehan Bahasa

Kursus ini akan membicarakan interaksi antara pemerolehan bahasa dan fitur input pemrosesan seperti dalam proses persepsi pertuturan. Ia berkisar sekitar pengetahuan tentang keupayaan berbahasa kanak-kanak mengikut perspektif teoritis seperti hipotesis kognisi, pendekatan fungsian, pembinaan parameter dalam rangka pembelajaran dan sebagainya. Tema kursus adalah hubungkait antara otak, minda, bahasa, pertuturan, dan komunikasi dalam pemerolehan bahasa.

Bacaan Asas

- Bowman, M. & Levinson, S. 2001. *Language acquisition and conceptual development*. Cambridge: Cambridge Univ. Press.
- Guasti, M. 2002. *Language acquisition – The growth of grammar*. Cambridge: MIT Press.
- Kess, J. 1992. *Psycholinguistic – Psychology, linguistics, and the study of natural language*. Amsterdam: John Benjamins.
- McLaughlin, S. 1998. *Introduction to language development*. San Diego: Singular Publishing Group.
- Naremore, R. & Hopper, R. 1996. *Children learning language. A practical introduction to Communication Development*. Ed Ke-3. San Diego: Singular Publishing Group.

NNNS5082 Seminar Linguistik Klinikal

Kursus seminar membolehkan seseorang pelajar itu menjalankan penyelidikan perpustakaan yang mendalam dan menjalankan 'independent study' tentang sesuatu topik pengkhususan di bawah bimbingan pensyarah kursus. Penilaian kursus merupakan pembentangan yang akan diadakan dan penilaian laporan pembacaan yang diserahkan pada bahagian akhir kursus. Bidang pengkhususan yang boleh dipilih adalah antaranya diagnostik, rekabentuk modul pengajaran pendidikan khas, analisis pertuturan spontan, afasia, kecelaruan kelancaran suara, autisme, disleksia, masalah pendengaran.

NNNS5093 Metodologi Penyelidikan & Statistik

Kursus ini memperkenalkan beberapa metodologi penyelidikan seperti perbualan bebas, elisitasi berstruktur, eksperimental, survei, dsb. Perancangan berperingkat dalam penyelidikan seperti pemilihan topik, tinjauan kajian, pemilihan subjek, pengutipan data,

penganalisan data akan disentuh. Bahagian statistik akan memperkenalkan pelajar kepada penggunaan statistik dalam kajian linguistik klinikal seperti konsep kebarangkalian, inferens statistik, konsep ko-varians dan ko-efisien dsb. Penyampaian data (grafik), beberapa prinsip statistik deskriptif merangkumi kebarangkalian, asas model dan inferens, ujian hipotesis populasi duaan, kolerasi dan sebagainya juga akan disentuh.

Bacaan Asas

- Gravetter, F. & Wallnau, L. 2004. *Statistics for the Behavioral Sciences*. Australia: Thomson Wadsworth
- Kothari, C.R. 2004. *Research Methodology: Methods & Techniques*. New Delhi: New Age International Ltd.
- Lum, C. 2001. *Scientific thinking in speech and language therapy*. London: Lawrence Erlbaum.
- Silverman, F. 1997. *Research and evaluations in speech-language pathology and audiology*. New York: Allyn & Bacon.
- Windsor, F., Kelly, L. & Hewlett, N. 2000. *Investigations in clinical phonetics and linguistic*. London: Lawrence Erlbaum.
- Woods, A., Fletcher, P., Hughes, A. 1986. *Statistics in language studies*. London: Cambridge University Press.

NNNS5012 Morfologi & Sintaksis

Kursus ini membincangkan aspek linguistik – skop, tujuan, dan persoalan yang menyentuh keuniversalan bahasa atau kesejagatan bahasa dalam bidang morfologi dan sintaksis. Pada awalnya perbincangan tentang proses morfologi seperti sistem infleksi, derivasi, pemajmukan dan perkaitan antara operasi morfologifonologi dan kekangan fonologi ke atas rumus morfologi akan dihuraikan. Hubungan antarmuka akan disentuh. Sedikit pendedahan kepada morfologi dalam pemerolehan bahasa, morfologi dan kecelaruan bahasa seperti afasia akan dibuat. Bahagian kedua akan membincangkan prinsip pergabungan struktur dalaman sintaksis seperti frasa dan klausa akan dihuraikan. Prinsip pergabungan yang menggunakan prinsip luaran ayat akan juga dibincangkan. Hubungkait antara morfologi dan sintaksis dalam proses pemahaman dan penghasilan bahasa akan dihuraikan.

Bacaan Asas

- Lasnik, H. et al. 2000. *Syntactic structures revisited – Contemporary lectures on classic transformational theory*. Massachusetts: MIT Press.
- McDaniel, D., McKee, C. & Caims, H. 1998. *Methods for Assessing Children's Syntax*. Cambridge, Massachusetts: MIT Press.
- Ouhalla, J. 1999. *Transformational grammar: From principles and parameters to minimalis*. Ed. Ke-2. London: Arnold.
- Radford, A. 1998. *Syntax: A minimalist introduction*. Cambridge Univ. Press.
- Spencer, A & Zwicky, a. 1998. *The handbook of morphology*. Massachusetts: Blackwell.

NNNS5032 Fonetik & Fonologi

Kursus ini mendedahkan pelajar secara terus kepada aspek-aspek fonologi moden yang merangkumi fonetik, variasi fonetik, pengelompokan kelas bunyi natural, alternasi, sistem rumus, fonologi prosodi juga aspek-aspek teori fonologi moden seperti pendekatan leksikal, autosegmental, *dependency and government*, dan sebagainya. Kursus ini akan memperlihatkan aspek pemerolehan fonetik (pemerolehan bunyi-bunyi bahasa) dan perkembangan fonologi (cara bunyi-bunyi tersebut disusun menjadi bunyi pertuturan) di kalangan kanak-kanak. Proses-proses fonologikal yang digunakan oleh kanak-kanak akan juga disentuh. Juga membincangkan kecelaruan fonologi atau kecelaruan artikulasi. Pelajar akan menjalani latihan amali di makmal pertuturan. Aplikasi konsep fonetik dan fonologi akan memperlihatkan kepada aspek-aspek kecelaruan bahasa yang tertentu.

Bacaan Asas

- Bowen, C. 1998. *Developmental phonological disorders*. Melbourne: ACER Press.
- Grunwell, P. 1997. Natural phonology. In M. Ball & R. Kent (Eds.), *The new phonologies : Developments in clinical linguistics*. San Diego: Singular Publishing Group, Inc.
- Lof, G.L. 2004. Confusion about speech sound norms and their use. *Thinking Publications Online Conference*. [http: thinkingpublications.com/LangConf04/OLCIntro.html](http://thinkingpublications.com/LangConf04/OLCIntro.html).
- Schiller, O. & Meyer, A. 2003. *Phonetics and Phonology in Language Comprehension and Language Production*. Walter de Gruyter.
- Singh, S. & Singh, K. 2000. *Phonetic – Principles and practices*. Ed. Ke-3. San Diego: Singular Publishing Group.

NNNS5052 Semantik & Pragmatik

Kursus ini memberikan membincangkan pelbagai isu yang dikaitkan dalam pengkajian semantik/makna. Topik perbincangan merangkumi pragmatik (deiksis, pra-andaian, implikatur, perlakuan pertuturan, dan sebagainya), hubungan antara semantik dan pragmatik dalam pemerolehan bahasa, isu wacana seperti perbualan, permainan simbolik, dsb yang digunakan oleh kanak-kanak dalam memperolehi bahasa akan juga disentuh. Aplikasi konsep semantik/pragmatik akan diperlihatkan dalam aspek-aspek kecelaruan bahasa seperti kecelaruan semantik-pragmatik.

Bacaan Asas

- Best, W. Bryan, K. & Maxim, J. 2001. *Semantic processing: Theory and practice*. London: Whurr.
- Bloom, P. 2000. *How children learn the meaning of words*. Cambridge: MIT Press.
- Cruse, D. & Cruse, A. 2000. *Meaning in language: An Introduction to Semantics and Pragmatics*. London: Oxford Univ. Press.
- Muller, N. (Ed). 2000. *Pragmatics in speech and language pathology*. Amsterdam: John Benjamins.
- Paradis, M. 1998. *Pragmatics in neurogenic communication disorders*. Pergamon Press.

NNNS5011/5021 Penilaian Linguistik Dalam Klinik

Sepanjang dua semester, pelajar (latarbelakang bukan-Sains Pertuturan) dilatih membuat pemerhatian dan rakaman sesi terapi individu antara kelayan dan ahli patologis pertuturan & bahasa di Klinik Audiologi & Sains Pertuturan. Pelajar kemudiannya akan menjalankan transkripsi sesi tersebut dan menghasilkan analisis bahasa terhadap sampel bahasa yang telah dikutip. Aktiviti ini adalah aktiviti berkumpulan yang melibatkan dua atau tiga orang pelajar. Mereka akan dilatih menggunakan teknik LARSP, PRISM, dan sebagainya untuk membina profil linguistik seorang kelayan. Pembentangan analisis dan profil linguistik tersebut akan diadakan kepada kumpulan rakan yang lain. Pelajar juga akan didedahkan kepada pelbagai aktiviti dalam klinik seperti sesi diagnostik, latihan /aktiviti bahasa yang digunakan dalam terapi, juga pengutipan dan analisis sampel bahasa. Pelajar juga akan didedahkan kepada pengendalian berpasukan antara ahli patologis bahasa & pertuturan, guru, pembantu terapis, psikologis, dan sebagainya dalam pengendalian kes kecelaruan komunikasi.

NNNS5031 / 5041 Amali Klinikal

Pelajar (berlatarbelakang Sains Pertuturan) akan menjalani latihan amali klinikal dengan menilai, merancang terapi dan pengendalian masalah bahasa dan pertuturan kelayan. Pelajar digalakkan memilih tipologi kecelaruan yang ingin dijadikan bidang pengkhususan tertakluk kepada kepakaran klinikal jabatan. Dalam kursus semester I pelajar akan mengambil kelayan pediatrik manakala kursus semester II akan melibatkan kelayan dewasa.

NNNS5023 Isu Penyelidikan Kecelaruan Komunikasi

Kursus ini bertujuan untuk membincangkan pembinaan alat dan bahan terapi berdasarkan populasi dan bahasa-bahasa tempatan di Malaysia. Ia menyentuh pembentukan data normatif bagi perkembangan bahasa normal, pembentukan alat ujian untuk tujuan saringan, pembentukan alat diagnosis dan penghasilan bahan-bahan terapi yang digunakan dalam terapi pertuturan-bahasa. Proses pembinaan alat ujian akan disentuh dengan mengambilkira faktor kebolehpercayaan dan kesahihan sesuatu alat yang dibina.

Bacaan Asas

- Cole, K. & Dale, D. 1996. *Assessment of Communication and Language*. Ed ke-6. Baltimore, MD: Paul H. Brookes.
- Cystal, D. 1991. *The grammatical analysis of language disability: A procedure for assessment and remediation*. London: Arnold.
- Cystal, D. 1991. *The grammatical analysis of language disability: A procedure for assessment and remediation*. London: Arnold.
- Luinge, M.R; Post, W.J; Wit, H.P; & Goorhuis-Brouwer, S.M (2006) The Ordering of Milestones in Language Development for Children From 1 to 6 Years. *Journal of Speech, Language, and Hearing Research*; Oct 2006; 49, 5; Health Module pg. 923.

- Paul, R. & Paul, VI. 2001. *Language disorders from infancy through adolescence: assessment and intervention*. New York: Mosby.
- Shipley, K.G. & McAfee, J.G. 2004. *Assessment in Speech-Language Pathology: A Resource Manual*. Ed ke-3. San Diego: Singular Publishing Group.

NNNS5024/5044 Projek Disertasi

Pelajar akan memilih sesuatu topik penyelidikan dalam bidang linguistik klinikal sejajar dengan kepakaran yang ada pada kakitangan akademik yang terlibat dalam penyeliaan projek disertasi ini. (Kakitangan adalah kakitangan akademik di jabatan ataupun di luar jabatan). Cadangan topik mula dibina pada semester II dan diperkembangkan dalam NS 5252 Seminar linguistik klinikal. Topik penyelidikan mestilah merupakan gabungan antara kedua-dua aspek teoritis dan klinikal. Pada semester III, pelajar akan membentangkan laporan akhir penyelidikan. Pembentangan ini adalah merupakan sebahagian daripada penilaian kursus. Format penyampaian disertasi adalah dalam bentuk sebuah artikel jurnal yang dihasilkan dan diterbitkan di dalam jurnal peringkat antarabangsa bertaraf ISI.

NNNS5043 Aspek Linguistik dalam Kecelaruhan Komunikasi

Kursus ini bertujuan memberikan kefahaman pelajar tentang penyelidikan terkini yang cuba memberikan penghuraian linguistik kepada sesuatu patologi bahasa terpilih. Contohnya afasia. Perbincangan akan tertumpu kepada konsep agramatisme, paragramatisme hasil daripada analisis kesilapan pertuturan dan data 'connected speech'; juga fungsi kata kerja dan argumen kata kerja dalam penghasilan pertuturan seorang afasik; analisis pemprosesan sintaksis dalam afasia Broca dan Wernicke; analisis konteks perbualan pertuturan afasik dan lain-lain.

Bacaan Asas

- Bastiaanse, R., Grodzinsky, Y. & Grodzky, Y. 2000. *Grammatical disorders in aphasia: A neurolinguistic perspective*. London: Whurr.
- Fava, E. (Ed). 2002. *Clinical linguistics: Theory and applications in speech pathology and therapy*. Amsterdam: John Benjamins.
- Grundy, K. 1989. *Linguistic in clinical practice*. London: Taylor & Francis
- Maasen, B. & Groenen, P. 1999. *Pathologies of speech and language: Advances in clinical phonetics and linguistics*. London: Whurr.
- Perkins, M. & Howard, S. 1995. *Case studies in clinical linguistics*. San Diego: Singular.

NNNS5063 Kecelaruhan Pertuturan Motor

Kursus ini akan membincangkan disartria iaitu kecelaruhan yang disebabkan oleh kecacatan pada sistem neuromuskular. Perbincangan akan merangkumi struktur terlibat dalam disartria, proses pertuturan akibat daripada kecacatan beberapa komponen dalam sistem neuromuskular, aetiologi, penilaian, sifat-sifat pelbagai jenis disartria, deskripsi apraksia, hasil penyelidikan instrumental kepada apraksia, dsb

Bacaan Asas

- Ball, M. & Kent, R. 1997. *The New Phonologies: Developments in Clinical Linguistics*. San Diego: Singular.
- Freed, D. 1999. *Motor Speech Disorders: Diagnostic & Treatment*. San Diego: Singular.
- Kent, R. & Weismer, G. (Eds). 2006. *Motor Speech Disorders*. Plural Publishing.
- Love, R. 1999. *Childhood Motor Speech Disability*. Ed. 2. New York: Allyn & Bacon.
- Tobin, Y. 1999. *Phonology as Human Behaviour: Theoretical Implications and Clinical Applications*. Vermont: Duke Univ. Press

NNNS5073 Masalah Pendengaran

Kursus ini memberikan perspektif masalah pendengaran; isu kontemporari dalam pendidikan kanak-kanak bermasalah pendengaran; sistem pengajaran, konteks pendidikan dan kaedah komunikasi dan implikasinya kepada kanak-kanak bermasalah pendengaran; bahasa dan kebudayaan komuniti bermasalah pendengaran; fungsi pendengaran, operasi asas alat-alat bantu dengar, akustik mendengar. Kesan kehilangan pendengaran kepada hubungkait proses perkembangan mendengar, pertuturan, bahasa dan komunikasi di kalangan kanak-kanak prasekolah dan sekolah akan juga disentuh.

Bacaan Asas

- Flexer, C. 1999. *Facilitating hearing and listening in young children*. New York: Singular.
- Mahsie, J., Moseley, M., Scott, S. & Lee, J. 2004. *Enhancing communication skills : Deaf and hard hearing children*. New York: Singular.
- McLean, J & McLean, L. 1999. *How children learn language : A guide for professionals in early childhood or special education*. New York: Singular.
- Nevins, M. & Chute, P. 1996. *Children with cochlear implants in educational settings*. New York: Singular.
- Paul, P. 2001. *Language and deafness*. New York: Singular. New York: Singular.

Program Sarjana Sains Kesihatan (Optometri Klinikal)

Pengenalan

Optometri Klinikal merupakan satu profesyen penjagaan kesihatan mata primer. Ia adalah profesyen yang bebas dan perkhidmatannya disediakan kepada orang ramai secara langsung. Seorang optometris adalah seorang pengamal penjagaan kesihatan mata yang mampu memeriksa, mendiagnos dan merawat gangguan sistem visual. Kebolehan seorang optometris untuk mengatasi masalah visual dan merawatnya akan dipertingkatkan melalui program Sarjana Sains Kesihatan (Optometri Klinikal).

Objektif

- Mampu memeriksa sistem visual dan menilai statusnya dengan lebih kompeten.
- Mampu mendiagnos dan merawat gangguan sistem visual yang kompleks.
- Mampu memberi perkhidmatan jagaan kanta sentuh lanjutan.
- Mampu memberi perkhidmatan penjagaan mata dan penglihatan kepada kanak-kanak dan warga tua.
- Mampu merekabentuk dan menilai dari aspek statistik projek yang melibatkan penaksiran dan intervensi terhadap masalah penglihatan.
- Mempunyai kefahaman mengenai isu etika yang melibatkan kesihatan mata individu dan masyarakat.

Jumlah Unit

Jumlah unit wajib yang ditetapkan bagi program ini ialah 40 unit.

Kurikulum Program Sarjana Sains Kesihatan (Optometri Klinikal)

Semester I

Kod	Tajuk Kursus	Unit
NNNV6014	Terapeutik Okular	4
NNNV6023	Kaedah & Etika Penyelidikan	3
NNNV6213	Optometri Klinikal Lanjutan I	3
NNNV6214	Kanta Sentuh Lanjutan	4
NNNV6224	Pengurusan Klinikal	4
	Jumlah Unit	18 unit

Semester II

Kod	Tajuk Kursus	Unit
<i>Kursus Teras</i>		
NNNV6024	Analisis Kes	4
NNNV6123	Klinik Khas	3
NNNV6323	Optometri Klinikal Lanjutan II	3
<i>Kursus Elektif (Pilih satu kursus elektif sahaja)</i>		
NNNV6124	Optometri Kesihatan Umum	4
NNNV6324	Penglihatan Binokular Lanjutan	4
NNNV6524	Optometri Pediatrik	4
NNNV6724	Optometri Geriatrik	4
	Jumlah Unit	14 unit

Semester I

Kod	Tajuk Kursus	Unit
NNNV6238	Projek	8
	Jumlah Unit	8 unit

Jumlah unit keseluruhan adalah 40 unit

Sinopsis Kursus Program Sarjana Sains Kesehatan (Optometri Klinikal)

NNNV6014 Terapeutik Okular

Matlamat kursus ini adalah untuk menyediakan pelajar dengan maklumat sains bioperubatan bagi memahami anomali dan kecelaruan. Kursus ini mengandungi asas-asas pengetahuan yang perlu untuk mendiagnos dan memahami pengurusan terapeutik pelbagai jenis penyakit mata. Kandungan kursus ini terdiri daripada kuliah, latihan praktikal dan posting di klinik-klinik terpilih sebagai langkah mendedahkan pelajar kepada kemahiran klinikal yang bagus dalam mendiagnos dan mempunyai pengetahuan tentang menguruskan penyakit mata. Di akhir kursus ini, pelajar mampu untuk mengendalikan pemeriksaan mata menggunakan teknik lanjutan, mampu mendiagnos penyakit mata dan mempunyai pengetahuan pengurusan pesakit tersebut. .

Bacaan Asas

- Doughty, M.J. 2001. *Ocular Pharmacology and Therapeutics : A Primary Care Guide*. BH/Optician.
- Levin, L.A. & Albert, D.M. 2010. *Ocular Disease: Mechanism and Management*. Saunders.
- Onofrey, B.E., Skopin, L., & Holdeman N.R. 2011. *Ocular Therapeutics Handbook: A clinical Manual*. 2rev ed. Lippincott Williams & Wilkins.
- Yurio 2007. *Ocular Therapeutics: Eye On New Discoveries*. Academic Press.

NNNV6023 Kaedah dan Etika Penyelidikan

Kursus ini mengandungi kuliah, sesi pembentangan dan assignment. Kursus ini akan memberi penekanan kepada prinsip asas dan lanjutan biostatistik serta reka bentuk kajian penyelidikan sains kesihatan. Dengan mamahami prinsip ini, pelajar akan dapat merangka penyelidikan dan memilih ujian statistic yang sesuai. Pelajar juga akan belajar cara menginterpretasi data. Pelajar akan diberi tunjukajar dalam cara penulisan report saintifik. Pada akhir kursus ini, pelajar berupaya melakukan, menulis, membentang dan melaporkan hasil tugas penyelidikan.

Bacaan Asas

- Bal Krishnan, N., Read, C.B., Vidakovic, B. Kotz, S., Johnson, N.L. 2010. *Methods and Applications of Statistics in the Life and Health Sciences*. WileyBlackwell.
- Campbell, M.J., Machin, D., Walters, S.J. *Medical Statistics: A Textbook for the Health Sciences*. 2007. Ed ke-4. WileyBlackwell.

- Creswell, J.W. 2008. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Ed ke-3. SAGE Publications Inc. Sugarman, J. & Sulmasy, D.P. 2010. *Methods in Medical Ethics*. 2nd ed. Georgetown Univ Pr.
- Kuzman, J.W. & Bohnenblust, S. 2005. *Basic Statistics for the Health Sciences*. Ed ke-5. McGraw-Hill Higher Education.
- Laake, P., Benestad, B. & Olsen, B.R. 2007. *Research Methodology in the Medical and Biological Sciences*. Academic Press.

NNNV6213 Optometri Klinikal Lanjutan I

Kursus ini mengandung kuliah, sesi pembentangan dan sesi workshop. Kursus ini akan memberi penekanan kepada teknik lanjutan dan perkembangan baru. Prosedur pemeriksaan optometri termasuk gonioskopi, funduskopi lampu slit, oftalmoskopi indirek binokular, depresi sclera, ultrasonografi, topografi kornea, fotografi kornea, analisis medan penglihatan berkomputer dan fungsi visual.

Bacaan Asas

- Benjamin, W.J. 2006. *Borish's Clinical Refraction*. 2nd ed. . Butterworth-Heinemann.
- DuBois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated. .
- Grosvenor, T. 2002. *Primary care optometry*. 4th ed. Boston: Butterworth-Heinemann.
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th ed.. Boston: Butterworth-Heinemann.
- Rosenfield, M. & Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. 2nd ed. . Butterworth-Heinemann.
- Van Boemel, G.B. 1999. *Special skills and techniques. The basic book shelf for eyecare professionals*. Thorofore: Slack.Eskridge.

NNNV6214 Kanta Sentuh Lanjutan

Kursus ini bertujuan untuk mendedahkan pelajar kepada aspek kanta khusus dari segi teori dan amali. Pelajar juga akan dikehendaki mengendalikan seminar yang berkaitan dengan penyelidikan masa kini mengenai kanta sentuh. Ia akan merangkumi kesan ke atas fisiologi mata, bahan bioerasi, kanta cecair, ortokeratologi pencepatan dan barang keluaran jagaan kanta. Workshop juga akan dijalankan untuk membolehkan pelajar belajar penggunaan serta penginterpretasian keputusan dari peralatan baru dan canggih dalam bidang kanta sentuh.

Bacaan Asas

- Bennett, E.S. & Weissman, B.A. 2004. *Clinical Contact Lens Practice*. Lippincott Williams & Wilkins.
- Efron, N. 2000. *The Cornea: Its examination in contact lens practice*. Oxford: Butterworth-Heinemann.
- Harris, M.G. 1996. *Contact Lenses: Treatment option for ocular disease*. St Louis: Mosby.

- Jones, L.W. & Jones, D.A. 2000. *Common Contact Lens Complications: Their Recognition and Management*. Oxford: Butterworth-Heinemann.
- Swartz, C. A. 1996. *Specialty Contact Lenses: A Fitter's Guide*. W.B. Saunders Company.
- Sweeney, D. 2000. *Silicone Hydrogels: The rebirth of continuous wear contact lenses*. Oxford: Butterworth-Heinemann.

NNNV6224 Pengurusan Klinikal

Kursus ini adalah lanjutan daripada kursus NV 6213 Optometri Klinikal Lanjutan I dan NV 6014 Terapeutik Okular . Ia merupakan attachment ke hospital.. Ia bertujuan untuk mendedahkan pelajar kepada pelbagai pesakit dengan pelbagai masalah rumit serta cara dan pendekatan pengurusan pesakit tersebut. Ia bertujuan memupuk keyakinan, kecekapan dan keikhtisasan pelajar sebagai pengamal optometri professional dalam bidang elektif yang tertentu. Sepanjang kursus, pelajar dikehendaki memerhati, memeriksa bila diberi peluang dan memberi cadangan pengurus pesakit dengan masalah penglihatan rumit yang diselia oleh penyelia klinik, dan membuat catatan log setiap pesakit. Di samping itu, pelajar juga dikehendaki membuat pemeriksaan khas menggunakan alat terkini di klinik. Penekanan kursus ini adalah kepada memantapkan kemahiran klinikal pelajar.

Bacaan Asas

- Casser, L. and Fingeret M.. 1997. *Atlas of Primary Eyecare Procedures*. 2nd ed. McGraw-Hill Medical. .
- Dubois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated
- Ettinger ER, Rouse MW. 1997. *Clinical decision making in optometry*. Boston: Butterworth-Heinemann.
- Grosvenor T. 2006. *Primary care optometry*. 5th ed. Butterworth-Heinemann.
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th Edition. Boston: Butterworth-Heinemann.
- Ledford, J.K. 1998. *The complete guide to ocular history taking*. Slack Incorporated,
- Levin, L.A. & Albert, D.M. 2010. *Ocular Disease: Mechanism and Management*. Saunders.

NNNV6024 Analisis Kes

Kursus ini adalah berupa pembentangan kes klinikal dan kajian terkini dalam berbagai bidang optometri. Pelajar akan diberi topik atau kertas jurnal untuk dikritis dan pelajar perlu bentang tentang kekuatan atau kelemahan kajian, atau cara pengurusan kes.

Bacaan Asas

- Ettinger ER, Rouse MW. 1997. *Clinical decision making in optometry*. Boston: Butterworth-Heinemann.
- Grosvenor T. 2002. *Primary care optometry*. Ed ke-4. Boston: Butterworth-Heinemann.

NNNV6123 Klinik Khas

Kursus ini adalah komponen klinikal kursus elektif. Ia bertujuan untuk memupuk keyakinan, kecekapan dan keiktisan pelajar sebagai pengamal optometri professional dalam bidang elektif yang tertentu. Sepanjang kursus, pelajar dikehendaki memeriksa dan mengurus pesakit dengan masalah penglihatan rumit yang diselia oleh penyelia klinik serta membuat catatan log setiap pesakit. Di samping itu, pelajar juga dikehendaki membuat pemeriksaan khas menggunakan alat terkini di klinik. Penekanan kursus ini adalah kepada memantapkan kemahiran klinikal pelajar.

Bacaan Asas

- Benjamin (2006). *Clinical Refraction*. 2nd Ed. Butterworth-Heinemann.
- Jackson AJ, Wolffsohn JS. (2007). *Low Vision Manual*. Butterworth-Heinemann
- Lueck AH (2004). *Functional Vision: A Practitioner's Guide to Evaluation and Intervention*. American Foundation for the Blind.
- Melore GG (1997). *Treating vision problem in the older adult*. *Mosby's optometric problem solving series*. St. Louis Missouri, Mosby.
- Rosenbloom AA, Morgan MW (2007). *Vision and aging*. Butterworth-Heinemann
- Rosenfield M., Logan N. 2009. *Optometry: Sceince, Techniques and Clinical Management*. Butterworth-Heinemann.

NNNV6323 Optometri Klinikal Lanjutan II

Kursus ini adalah sambungan dari kursus NV 6213. Ia mengandungi kuliah, sesi pembentangan dan sesi workshop. Kursus ini akan memberi penekanan kepada teknik lanjutan dan perkembangan baru. Prosedur pemeriksaan optometri termasuk funduskopi, pengukuran tekanan intraokular, analisis medan penglihatan berkomputer dan teknik elektrofisiologikal. Ia juga memberi penerangan tentangan aplikasi klinikal.

Bacaan Asas

- Benjamin, W.J. 2006. *Borish's Clinical Refraction*. 2nd ed. . Butterworth-Heinemann.
- Casser, L. and Fingeret M.. 1997. *Atlas of Primary Eyecare Procedures*. 2nd ed. McGraw-Hill Medical.
- DuBois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th ed.. Boston: Butterworth-Heinemann.
- Rosenfield, M. & Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. 2nd ed. . Butterworth-Heinemann.

- Van Boemel, G.B. 1999. *Special skills and techniques. The basic book shelf for eyecare professionals*. Thorofore: Slack.Eskridge.
- Zadnik, K. 1997. *The ocular examination*. Philadelphia: W.B. Saunders.

NNNV6124 Optometri Industri

Kursus ini mengandung kuliah, sesi pembentangan dan assignment. Kursus ini akan memberi penekanan kepada isu terkini yang perlu diteliti berkenaan kesihatan masyarakat berkaitan penglihatan.

Bacaan Asas

- Anshel, J. 1998. *Visual ergonomics in the workplace*. London: Taylor & Francis.
- Newcomb, R.D. & Marshall, E.C. (eds) 1990. *Public health and community optometry*. Ed. Ke-2. Boston: Butterworths.
- North, R.V. 2001. *Work and the Eye*. Oxford: Butterworth-Heinemann.
- Pitts, D.G. & Kleinstein, R.N. 1993. *Environmental Vision. Interactions of the Eye, Vision, and the Environment*. Butterworth-Heinemann.
- Sheedy, J.E. (ed) 1990. *Environmental optics. In: London R. (ed) Problems in Optometry*. 2(1). Philadelphia: J.B. Lippincott.

NNNV6324 Penglihatan Binokular Lanjutan

Kursus ini mengandung kuliah, sesi pembentangan dan sesi workshop. Ia bertujuan menghasilkan seorang ahli optometri yang mahir dalam bidang ortoptik dengan pengetahuan penglihatan binokular dan teknik terbaru.

Bacaan Asas

- Eperjesi F, Rundstrom MM. 2004. *Practical Binocular vision assessment*. Edinburgh: Butterworth-Heinemann.
- Evans B & Doshi S. 2001. *Binocular Vision & Orthoptics. Investigation and management*. London: BH Optician.
- Evans BJW. 1997. *Pickwell's Binocular vision anomalies: Investigation and treatment*. London: Butterworth-Heinemann.
- Press LJ. 1997. *Applied concept in vision therapy*. St Louis: Mosby
- Rutstein RP & Daum KM. 1998. *Anomalies of binocular vision: Diagnosis & management*. St Louis: Mosby Book Co.
- Scheiman M & Wick B. 2002. Ed ke-2. *Clinical Management of Binocular Vision Heterophoric, Accommodative, and Eye Movement Disorder*. Philadelphia: Lippincott Williams and Walkin.

NNNV6524 Optometri Pediatrik

Kursus ini terdiri dari kuliah, pembentangan dan workshop. Ia membincangkan perkembangan refraksi akuiti visual dan koordinasi binokular sejak lahir hingga lima tahun, teknik pengukuran visual di kalangan kanak-kanak dan pengesahannya, abnormality visual, etiologi dan pengurusannya. Tertalian visual dan aspek-aspek lain

dalam perkembangan kanak-kanak seperti perkembangan kognitif dan persepsi juga akan dibincangkan.

Bacaan Asas

- Leat S. J, Shute R. S & Westall C. A. 1999. *Assessing Children Vision*. Butterworth-Heinemann
- Rosenbloom A. A. & Morgan M. W. 1990. *Principles and Practice of Paediatric Optometry*. J. B. Lippincott Company.
- Rosner J & Rosner J. 1990. *Paediatric Optometry* . Butterworths
- Schramm K. D. 2000. *Dispensing Pediatric Eyewear*. Butterworth-Heinemann
- Shute R. H. 1991. *Psychology in Vision Care*. Butterworth-Heinemann.

NNNV6724 Optometri Geriatrik

Kursus ini mengandungi kuliah, pembentangan dan bengkel. Ia membincangkan perubahan fungsi visual di kalangan wargatua termasuklah sensitiviti kontras, penglihatan warna, transmisi cahaya melalui media mata, akuiti visual dan medan penglihatan. Teori perubahan psikologikal, definisi penglihatan terhad, insiden dan etiologi, pengurusan rutin, pembesaran sistem optik penglihatan terhad lanjutan juga ditekankan. Perkhidmatan untuk pesakit penglihatan terhad di Malaysia juga dibincangkan.

Bacaan Asas

- Benjamin 2006. *Clinical Refraction*. 2nd Ed. Butterworth-Heinemann.
- Jackson, A.J. dan Wolffsohn, J.S. 2007. *Low Vision Manual*. Butterworth-Heinemann
- Lueck, A.H. 2004. *Functional Vision: A Practitioner's Guide to Evaluation and Intervention*. American Foundation for the Blind.
- Melore, G.G. 1997. *Treating vision problem in the older adult*. *Mosby's optometric problem solving series*. St. Louis Missouri, Mosby.
- Rosenbloom, A.A., dan Morgan, M.W.(2007. *Vision and aging*. Butterworth-Heinemann
- Rosenfield, M., dan Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. Butterworth-Heinemann.

NNNV6238 Projek

Kursus ini melibatkan kerja penyelidikan ke atas topik yang dipilih oleh pelajar dan dipersetujui oleh penyelia. Topik untuk projek bergantung pada kepakaran pensyarah dalam bidang masing-masing. Pelajar harus menggunakan pengetahuan yang dipelajari pada tahun 1 untuk mereka (design) kajian sendiri berdasarkan topik yang diberi, melakukan pengumpulan data (data collection), penganalisan data serta menulis report projek dengan tunjuk-ajar seorang penyelia.

Bacaan Asas

- Campbell, M.J., Machin, D. & Walters, S.J. 2007. *Medical Statistics: A Textbook for the Health Sciences*. 4th ed. Wiley Interscience.
- Fink, F. 2009. *Conducting Reserach Literature Reviews: From the Internet to Paper*. 3rd ed. Sage Publications, Inc.
- Garrard, J. 2010. *Health Sciences Literature Review Made Easy: The Matrix Method*. 3rd ed. Jones & Bartlett Publishers.
- Jacobson, K.H. 2011. *Introduction to Health Research Methods*. Jones & Bartlett Learning.
- Katz, M.J. 2009. *From Research to Manuscript: A Guide to Scientific Writing*. 2nd ed. Springer.
- Lachin, J.M. 2010. *Biostatistical Methods: The Assessment of Relative Risks (Wiley Series in Probability and Statistics)*. 2nd ed. Wiley.
- Polgar, S. & Thomas, S.A. 2007. *Introduction to research in the health sciences*. 5th ed. Churchill Livingstone.
- Roberts, C.M. 2010. *The Dissertation Journey: A Practical and Comprehensive Guide to Planning, Writing, and Defending Your Dissertation*. 2nd ed. Corwin Press.

Graduate Studies Programmes
Faculty of Health Sciences
Academic Session 2011-2012

Graduate Study Programmes Faculty of Health Sciences

OBJECTIVES OF GRADUATE STUDIES

- To produce a pool of future leaders and researchers for the nation.
- To foster research culture in Health Sciences.
- To develop capability to do independent research.
- To produce key opinion expert in various profession in Health Sciences .
- To instill life long learning.

GRADUATE STUDY PROGRAMMES

For 2011-2012 academic session, Faculty of Health Sciences offers postgraduate study programmes through coursework only, or coursework and thesis, or thesis only.

A. Coursework

1. Postgraduate Diploma in Health Psychology
2. Postgraduate Diploma in Dietetics
3. Master of Health Science (Biomedical Science)
4. Master of Clinical Psychology
5. Master of Health Science (Health Education)
6. Master of Health Science (Clinical Linguistics)
7. Master of Health Science (Clinical Optometry)

B. Coursework and Thesis

1. Master of Health Science (Clinical Nutrition)
2. Master of Health Science (Community Nutrition)

C. Thesis

1. Master of Health Science (Biomedical Science)
2. Master of Health Science (Nutrition)
3. Master of Health Science (Dietetics)
4. Master of Health Science (Clinical Linguistics)
5. Master of Health Science (Optometry)

6. Master of Health Science (Hearing and Speech)
7. Master of Health Science (Diagnostic Imaging)
8. Master of Health Science (Radiotherapy)
9. Doctor of Philosophy (Biomedical Science)
10. Doctor of Philosophy (Nutrition)
11. Doctor of Philosophy (Dietetics)
12. Doctor of Philosophy (Clinical Linguistics)
13. Doctor of Philosophy (Optometry)
14. Doctor of Philosophy (Hearing and Speech)
15. Doctor of Philosophy (Diagnostic Imaging)
16. Doctor of Philosophy (Radiotherapy)

RECENT RESEARCH AREAS

1. **Biomedical Science**

- Anti-infectivity of natural products
- Antimicrobial activity and mechanisms of action
- Antimicrobial pharmacodynamic
- Bioactive peptides and polypeptides from plants and animal
- Biochemical toxicology
- Biochemistry of anticancer agent, liver protective, wound healing and other target diseases treatment from natural product
- Bioinsecticide
- Biology effects of natural products
- Biosensor for Tuberculosis
- Control of mosquitoes and flies using insecticides and biopesticides.
- Control of Vector-Borne Diseases particularly on dengue vectors
- Cosmeceuticals and products.
- Cytopathogenomical study
- Diagnosis of human pathogen
- Diagnostic electron microscopy for infectious diseases and bioterrorism
- DNA based detection and identification of fungi
- DNA damage and repair
- Ecology and population dynamics of mosquitoes
- Endophytic microbes
- Environmental microbiology
- Experimental pathology
- Food toxicology
- Forensic entomology
- Free radical pathology and antioxidant
- Genotoxicity testing on biomaterials, natural product, food and environmental samples following OECD and ISO guidelines

- Hematology
- Human anatomy
- Human psychophysics
- In vitro and in vivo antifungal activity of natural products
- In vitro fertilization
- Isolation and identification of endophytic fungi and their bioactive secondary metabolites
- Mathematical neuroscience
- Medical parasitology and entomology
- Medicinal chemistry
- Micronutrient supplementation intervention
- Molecular pathology
- Molecular toxicology and mechanisms of apoptosis
- Nosocomial infection, epidemiology and DNA typing
- Novel antibiotic from natural product
- Pesticide and lung function test
- Pharmacology
- Public and community health
- Reproductive physiology
- Schoolchildren health status and cognitive function
- Tissue engineering
- Trace element epidemiology
- Transmission of enteric pathogens
- Tropical medicine
- Vision science
- Visual electrophysiology and vision neuroscience
- Vitamin functions in human health and diseases
- Water borne diseases

2. Clinical Linguistics

- Acquisition and processing of (normal) language
- Aspects of sociolinguistics for example bilingualism, multilingualism, language choice, code mixing and code switching, etc
- Development of assessment and intervention tools
- Development of languages for local population in Malaysia
- Development of norms for speech and language of normal children for local languages like Malay, Mandarin and Tamil, local dialects and other local languages
- Linguistic analysis of speech, language and communication disorders

3. Diagnostics Imaging

- Community education in breast cancer awareness
- Computed and digital mammography

- Dosimetry in radiology
- Electro-impedance tomography
- Figure of merit in diagnostic imaging
- Forensic imaging
- Functional magnetic resonance imaging
- Human brain function
- Imaging neuroscience
- Interprofessional learning
- Magnetic resonance imaging physics
- Medical ultrasound
- Optimisation of radiation dose in diagnostic imaging
- Radiation dosimetry algorithm for digital mammography
- Reflection in clinical practice
- Water as an oral contrast medium for abdominopelvis con tomography

4. Health Psychology

- Behaviour fluency in basis academic skills
- Cross-cultural mental health and alcohol/drug abuse
- Dementia and reminiscence therapy
- Executive functioning and cognition in Alzheimer's disease
- Meditation and mental health
- Memory and epilepsy
- Obesity, body image and self-esteem
- Psychological factors in stroke recovery
- Psychological preparation for medical procedures
- Psychometric screening for mental illness
- Quality of life and illness perception in renal disease

5. Hearing and Speech

- Application of electrophysiological test on auditory processing disorders
- Balance and vestibular rehabilitation in general population
- Bilingual and multilingual phonological development
- Clinical education in speech sciences
- Communication health in the geriatric population
- Comparison of prescriptive method for hearing aids fitting
- Education and professional practice of speech-language pathologists in Malaysia
- Educational and vocational achievements of cochlear implant recipients
- Factors affecting the level of reaction to tinnitus

- Family-centered practice in early intervention
- Feeding in children with cleft lip and/or palate
- Hearing aids evaluation and fitting
- High frequency acoustic immittance and wideband reflectance tests in audiology practice
- Implication of auditory processing on auditory rehabilitation among geriatric population
- Perceptual and instrumental measures for assessing resonance
- Psychosocial well-being in population with hearing loss
- Quality of life of cochlear implant recipients and their family members
- Sound and speech perception through cochlear implant device – bimodal, unilateral, and bilateral fitting
- Specialization in vestibular diagnosis (vestibular evoked myogenic potentials , caloric irrigation, and posturography tests
- Speech and language issues in children with cleft lip and palate
- Stuttering
- Swallowing integrity in the geriatric population
- The effectiveness of high technology hearing aids on speech recognition
- Typical and atypical language development
- Vestibular diagnosis and rehabilitation
- Vocal fold physiology in health and diseases
- Vocal health in professional voice users

6. Nutrition and Dietetics

- Adolescent nutrition
- Antioxidants
- Childhood food allergy
- Childhood nutrition
- Clinical nutrition
- Community nutrition
- Design and calibration of eating frequency questionnaire
- Eating behavior
- Energy balance and physical activity
- Energy metabolism
- Energy requirement in certain population
- Geriatric nutrition
- Metabolic Nutrition
- Nutrition education
- Nutrition epidemiology
- Nutrition information system
- Nutritional status and body composition
- Obesity
- Sports nutrition

7. Optometry

- Amblyopia
- Binocular vision
- Colour Vision
- Contact lens solution efficacy
- Dyslexia
- Electrophysiology
- Keratoconus
- Myopia
- Orthokeratology
- Peripheral refraction
- Retinopathy of Prematurity
- Silicone hydrogel contact lens
- Vision and road safety
- Visual ergonomic
- Visual function in ocular disorders

8. Radiotherapy

- Dosimetry
- Effects of radiotherapy
- Emotion reflection and illness of patient underwent brachytherapy
- Image guided radiotherapy – ultrasound, CBCT
- Intensity-modulated radiotherapy planning
- Internal organ motion in cervical cancer patient
- Optimisation of delivered dose using Intensity Modulated Radiotherapy (IMRT)
- Quality of life outcomes after brachytherapy

FACULTY COURSE

It is compulsory for students who enroll for the Master (by research) and Doctor of Philosophy programmes to register and pass the Research Methodology & Statistic for Health Sciences (NNPD6014) course.

NNPD6014 Research Methodology & Statistic for Health Sciences

The main objective of this course is to enable students to carry out descriptive, inferential and advanced statistical analyses using SPSS software.

Basic Readings

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish. Version 15.0 for Windows*. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics. 4th edition*. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design Using ANOVA*. Belmont: Duxbury Press.

CONVERSION FROM MASTERS TO DOCTOR OF PHILOSOPHY

1. Criteria for the conversion from Masters to Doctor of Philosophy are as follows:
 - i. Master student by research mode (thesis only) registered in full time basis;
 - ii. Has published at least one paper and has presented his/her research findings;
 - iii. Shows satisfactory progress report supported by the supervisor;
 - iv. Present a new proposal for the Doctor of Philosophy research;
 - v. Approval by the Dean of the Faculty and the University Senate.

2. Process for the application of conversion:
 - i. Applications should be made before the fourth week of their third semester of the study. The applications will be processed in the third semester and the results of the application will be announced before the registration date of the fourth semester.
 - ii. The application must be enclosed with the new research proposal for the Doctor of Philosophy program. The proposal must include:
 - Additional research scope
 - The significance of the research
 - Additional research objectives
 - Additional time frame of the research
 - iii. The application should be submitted with the supporting documents to the supervisor for approval.
 - iv. The supervisor will forward the application to the Chairperson of the School.
 - v. The candidate is required to present a Doctor of Philosophy research proposal to academic staff and postgraduate students.
 - vi. If approved at the School level, the application will be forwarded to the Deputy Dean (Graduate & International Affairs) and the Graduate Status Conversion Committee (GSCC) will review the application.
 - vii. Applicant will be required to present the Doctor of Philosophy proposal in front of the GSCC and faculty members.
 - viii. If approved by the GSCC, the applicant will have to amend the proposal according to the suggestions given by the committee.

- ix. Applicant then will have to submit the new amended proposal to the Deputy Dean (Graduate & International Affairs) to be approved by the Graduate Committee and the Dean.
- x. The results of the conversion will be submitted to the Director, Centre for Graduate Management.
- xi. Results will be communicated to the applicant.

Postgraduate Diploma in Health Psychology

Introduction

The Program of Postgraduate Diploma in Health Psychology is a conversion program catered for the students without a psychology background but would like to enrol in a clinical and health oriented psychology program at the master and doctor of philosophy levels. Furthermore, this programme is very much relevant to some professions that require psychological knowledge in their work such as teachers, lecturers, nurses, police, army, government and nongovernmental staff who deal with the public and health officers. This program also offer courses in the study of human in cognitive and emotional contexts of human perception and their behavior. This will directly expose the students to all aspects of social-cognitive development, attitudes, behavior and individual characteristics, ecological factors influencing human behaviors, social influence, social groups and so on. This type of courses will support a balanced individual growth, sensitive to the public, skilled in communication and competent in making decision.

Programme Objective

- Open up opportunities for non-psychology postgraduate students to enroll in Health psychology field and continue their study at the Master and Doctor of Philosophy as their area of specialization.
- To increase the number of Health Psychology graduates to fulfill the need of the country.
- To train more graduates in Health Psychology who are committed to continue their study in psychology field based on Health Sciences.
- To meet the needs of specialized referrals to the Health Psychologists from other professions.
- The competency to promote Health Psychology by adapting the scientist-practitioner approach.

Total Unit

The total compulsory units that have been set for this programme is 35 units.

Curriculum for Postgraduate Diploma in Health Psychology

Semester I

Code	Course Name	Unit
NNNC4012	Research: Qualitative and Quantitative Methods	2
NNNC4013	Human Life Span	3
NNNC4014	Introduction and History of Psychology	4
NNNC4032	Mind and Social Behavior	2
NNNC4033	Perception, Cognition and Memory	3
NNNC4034	Personality: Theory and Application	4
NNNC4052	Learning and Motivation	2
Total Units		20 units

Semester II

Code	Course Name	Unit
NNNC4022	Principles and Ethics in Helping Profession	2
NNNC4023	Mental and Behavioral Disorders	3
NNNC4024	Psychological Assessment	4
NNNC4042	Health Psychology	2
NNNC4044	Health Psychology Project	4
Total Units		15 units

Grand total units is 35 units

Synopsis of Courses for Postgraduate Diploma in Health Psychology

NNNC4012 Research: Quantitative and Qualitative Methods

This course introduces several methods of conducting research based on quantitative and qualitative methods. Students will be exposed to research methodology from identification of research problem statement to the interpretation of the research findings. This course will also focus on descriptive and inferential statistical analysis. Emphasis will also be given on applied research related to case study and evaluation of treatment.

Basic Readings

- Coolican, H. 2004. *Research methods and statistics in psychology*. 4th ed. London: Hodder & Stoughton.
- Cozby, B. 2002. *Method in behavior research*. USA: Mc Graw-Hill.
- Goodwin, C.J. 2005. *Research in psychology methods and design*. 4th Ed. New Jersey: John Wiley.
- Neuman, W.L. 2004 *Basic of social research: Qualitative and quantitative approaches*. Boston, MA: Allyn & Baron.
- Pagano, R.K. 2004. *Understanding statistics in behavioral science*, 7th Ed. Belmont, Canada: Thompson & Wadsworth.

NNNC4013 Human Life Span

This course encompasses psychological development from infancy, childhood, adolescence, adult and elderly. Emphasis will be given toward each stages of emotional, cognitive and social development. Besides that genetic and environmental factors are emphasized as well as the theories on human development. Furthermore, the current problem in developmental adjustment and the influence from the surrounding environment in the life span will be explained further in this course.

Basic Readings

- Bee, H.L. 1996. *The developing child*. 8th ed. New York: Harper Collins College.
- Hoffman, L., Paris, S. & Hall, E. 1994. *Development psychology today*. 6th Ed. New York: McGraw-Hill.
- Papalia, D., Olds, W., & Feldman, D. 2007. *Human development*. 11th Ed. New York: Mc Graw Hill.
- Papalia, D., Sterns, R. & Seldman, E. 2002. *Adult development and aging*. 3rd. Ed. USA: Mc Graw-Hill.
- Richard, J. E. 2000. *Developmental psychology*. New Jersey: Ablex.

NNNC4014 Introduction and History of Psychology

This course introduces the basic knowledge and the history in psychology. Students will be exposed to the basic topics in the field of psychology and also the developmental history of the knowledge in psychology. Apart from that, through assignments and class discussions, students will be trained to apply the knowledge of psychology to better understand themselves and surroundings. After completing the course, students will be well-prepared to further deepen their knowledge in various specific fields of psychology.

Basic Readings

- Baron, R. A. 2005. *Psychology*. 5th Ed. Prentice-Hall of India.
Ciccarelli, S. K., & White, J. N. 2009. *Psychology*. 2nd Ed.. Pearson Education.
Coon, D., & Mitterer, J. O. 2010. *Introduction to Psychology: Gateways to Mind and Behavior*. 12th Ed. Wadsworth.
Lahey, B. B. 2009. *Psychology: An Introduction*. 10th Ed. McGraw-Hill.
Ma'rof R., & Haslinda A. 2008. *Psikologi*. 3rd Ed. McGraw-Hill Malaysia.

NNNC4032 Mind and Social Behavior

This course examines the relationship between cognitive and affect toward social perception and behavior. Students will be exposed on the influence of social cognitive, attitude, behavior, and individual characteristics, ecological factor, social influence, social groups toward human behaviors. Besides that, environmental and health influence on human behaviors will be emphasized in this course. The students will be able to see how social psychology can be applied in a wider scope and how it will improve human quality of life.

Basic Readings

- Baron, R.A., & Bryne, D. 1991 . *Social psychology understanding human interaction*. 6th Edition. Boston: Allyn Bacon
Bringham, J.C. 199 . *Social psychology*. New York: Harper Colin.
Michener, H.A. 1999. *Social psychology*. 4th Ed. Madison: Wadsworth.
Mohd Makhzan Musa. 1997. *Psikologi sosial*. Kuala Lumpur: Utusan Publication.
Worchel, S. 1999. *Social psychology*. USA: Wadsworth.

NNNC4033 Perception, Cognition and Memory

This course will introduce important psychological aspects to the students including perception, cognition and memory. This course will expose the students to the concept of perception, visual pattern observation, speech observation, and pattern recognition. Students will be exposed with memory process knowledge representation, language, problem solving, and human intelligence.

Basic Readings

- Coren, S., Ward, L.M., Enns, J.T. 1999. *Sensation and Perception*. 5th. Ed. Orlando, Florida: Harcourt.

- Ellis, A.W., & Andrew, W.Y. 1991. *Cognitive Neuropsychology*. East Sussex, UK. Lawrence Erlbaum.
- Reed, S.K. 2000. *Cogniton: Theory and Application*. Belmont, California: Wadsworth.
- Schiffman, H.R. 2001. *Sensation and Perception: An Integrated Approach*. New York: John Wiley & Sons.
- Stenberg, R.J. 2005. *Cognitive Psychology*. Belmont, California: Wadsworth.

NNNC4034 Personality: Theory dan Application

This is an introductory course on the personality psychology. It introduces the basic concepts and theory in the field of personality psychology. By completing the course, students are expected to be able to form their own understanding on human nature. This understanding will be deepened by taking into consideration the few perspectives which are used to understand the human functioning. Those perspectives include psychodynamics, humanistics, life cycle traits and cognitive.

Basic Readings

- Brody, N., & Ehrlichman, H. 1998. *Personality Psychology: The Science of Individuality*. New Jersey: Prentice Hall.
- Fiest, T. 2001. *Theories of personality*. 5th Ed. USA: Mc Graw – Hill.
- Funder, D. C. 2007. *The Personality Puzzle*. 4th Ed. New York: W W. Norton & Co.
- Ryckman, R. 2000. *Theories of personality*. 7th Ed. USA: Wadsworth.
- Schultz, D., & Schultz, S.E. 1998. *Theories of Personality*. 6th Ed. Florida: Brooks/Cole.

NNNC4052 Learning and Motivation

This course introduces the basic concepts and learning theories. Emphasis will be given to the aspect of classical conditioning, operant conditioning, stimulus-response, reinforcement, system, and learning through modeling. This course will expose the students to the application aspects of learning theories through behavior modification methods. Students will be exposed to basic motivational systems within human psychology such as arousal, sleep, sex, appetite, drug use and addictions.

Basic Readings

- Chance, P. 2009. *Learning and behavior*. 6th Ed. Belmont, CA, USA: Wadsworth
- Domjan, M. 2000. *Essentials of conditioning and learning*. 2nd Ed. USA :Thompson.
- Franken, R.E. 2006. *Human Motivation*. Wadsworth.
- Frieman, J. 2002. *Learning and adaptive behaviour*. 4th Ed. USA: Thompson.
- Kazdin, A.E. 2001. *Behavior modification in applied settings*. 6th Ed. Belmont, CA, USA: Wadsworth

NNNC4022 Principles and Ethics in Helping Profession

This course introduces the knowledge of counselling which is the fundamental knowledge in the profession that provides services to various clients. Introduction of counselling are

given from the perspective of its concepts, approaches, processes, models, ethics, professional issues, and also its practical aspects which emphasises on the various counselling skills and practice practicum. Students are required to link the counselling knowledge and techniques to health psychology and to master the knowledge and techniques in order to benefit themselves when dealing with clients in the future.

Basic Readings

- Egan G. 2006. *Essentials of skilled helping: Managing problems, developing opportunities*. Belmont, USA: Thomson Wadsworth.
- Gladding, S. T. 2008. *Counseling: A comprehensive profession*. 6th Ed. New Jersey: Prentice Hall.
- Ivey A. E., & Ivey M. B. 2007. *Intentional interviewing and counseling: Facilitating client development in a multicultural society*. 6th Ed. Belmont: Brooks/Cole.
- Kottler, J. A., & Shepard, D. S. 2008. *Introduction to counseling: Voices from the Field*. 6th Ed. Belmont: Thomson Brooks/Cole.
- Neukrug, E. 2007. *The world of the counselor: An introduction to the counseling profession*. 3rd Ed. Belmont: Thomson Brooks/Cole.

NNNC4023 Mental and Behavioral Disorders

This course introduces abnormal psychology with regards to psychological disorders. The focus will be given to the main disorders within the Diagnostic and Statistical Manual of Mental Disorders (DSM). Students will be exposed to psychological assessment and diagnosis with respects to formulations for treatment. This course also touches on abnormal behaviors according to their developmental stages from childhood, adolescence, adulthood and the elderly and some basic information on the types of treatment available for these disorders.

Basic Readings

- Barlow, DH, Durand, VM. 2010. *Essentials of Abnormal Psychology*. Belmont, CA, USA: Wadsworth
- Eshun, S., & Gurung, R.A.R. (Eds.) 2009. *Culture and mental health: sociocultural influences, theory and practice*. West Sussex, UK: Wiley-Blackwell.
- Steven, S. 2000. *Abnormal psychology: Discovery approach*. USA: Mc Graw-Hill.
- Susan, N. 2001. *Abnormal psychology*. USA: Mc Graw-Hill.

NNNC4024 Psychological Assessment

This course will expose the students to the process of information gathering which involves interviewing, behavioural observation, and administration of psychological tests. Students will be train to use basic measurement tools in psychology, understand the purpose of using them to interpret the cognitive, personality, emotional and behavioral aspects of human.

Basic Readings

- Gregory, R.J. 2004. *Psychological testing: History, principles, and applications*. 4th Ed. Needham Heights, MA: Allyn & Bacon.
- Groth-Marnat, G. 2006. *Neuropsychological Assessment in Clinical Practice: A Guide to Test Interpretation and Integration*. 5th Ed. New York: John Wiley & Sons.
- Kaplan, R.M. & Saccuzzo, D. P. 2005. *Psychological testing: Principles, applications, and issues*. 6th Ed. Belmont, CA: Wadsworth/Thomson.
- Lezak, M. D., Howieson, D.B. & Loring, D.W. 2004 *Neuropsychological assessment*. 4th Ed. New York: Oxford University Press.
- Sattler, J.M. 2004. *Assessment of children: Cognitive Foundations*. 5th Ed. San Diego, CA: Jerome M. Sattler, Publisher.

NNNC4042 Health Psychology

Psychophysiology is also known as physiological psychology, biopsychology or behavioral physiology focus on basic studies on the biology of behavior and mental. This course examines the association between psychological and physiological factors in human. This course will also explain on the brain functions, nervous systems, immune systems, hormone, endocrine glands, sensory system and human organs on human behavior and mental processes.

Basic Readings

- Feldman, R. S. 2010. *Understanding psychology*. 8th Ed. USA: Mc Graw-Hill.
- Kalat, J. W. 2002. *Biological psychology*. 7th Ed. USA: Thomson.
- Kent, G. & Dalglish, M. 1996. *Psychology and medical care*. London: WB Saunders.
- Sarafino, E. P. 2005. *Health psychology: Biopsychosocial interaction*. 5th Ed. USA: John Wiley & Son.
- Taylor, S. E. 2002. *Health psychology*. Ed. ke-8. New York: McGraw-Hill.

NNNC4044 Health Psychology Project

The students are required to conduct a mini project at the place they visit concerning problems or aspects faced by the Malaysian people pertaining to health psychology issues. The students also will present their case studies and write up a report on the study that they have conducted.

Postgraduate Diploma in Dietetics

Introduction

This program will be conducted for at least 1 year (2 Semester). The course will involve the acquisition of knowledge in health sciences and clinical nutrition practices. The program provides opportunity for Nutritionist inside and outside the country, either in service or just graduated in the field of Nutritional Sciences to improve their knowledge and skills in Dietetics. Students will be trained in patient nutritional care in hospital especially involving those who requires special nutrition. Expert in Dietetics will be able to provide excellent and quality services not only in hospital but also at community level in outpatient clinic as well as health clinics at Ministry of Health Malaysia. Graduate from this program can also function as consultant in the field related to nutrition and health care.

Objectives

To produce competent graduate with strong theoretical foundation as well as practical skills and comprehensive individual dietary management for individuals, family and the community. Graduates from this program are able to perform clinical work relating to nutrition for the patient wellbeing.

Total Unit

The total compulsory units that have been set for this programme is 33 units.

Curriculum for Postgraduate Diploma in Dietetics

Semester I

Code	Course Name	Unit
NNND5012	Medical Nutrition Therapy	2
NNND5013	Patient Education	3
NNND5014	Special Medical Topic	4
NNND5032	Therapeutic Diet Preparation	2
NNND5034	Outpatient Dietetic Service I	4
NNND5054	Inpatient Dietetic Service I	4
	Total Units	19 units

Inter - Semester

Code	Course Name	Unit
NNND5052	Food Service Posting	2
	Total Units	2 units

Semester II

Code	Course Name	Unit
NNND5024	Outpatient Dietetic Service II	4
NNND5044	Special Unit Dietetic Service I	4
NNND5064	Inpatient Dietetic Service II	4
	Total Units	12 units

Grand total units is 33 units

Synopsis of Courses for Postgraduate Diploma in Dietetics

NNND5012 Medical Nutrition Therapy

This is a core course for dietary principles and management of diseases. The course covers topics on pathogenesis, manifestation, physiology and biochemistry of diseases such as obesity, eating disorders, endocrine diseases (NIDDM and IDDM), cardiovascular diseases and micronutrient deficiency. Aspects of nutrition management for protein-energy malnutrition, diarrhea, metabolic disorder and the utilization of special products are also discussed. The lectures will cover the process of dietary management which includes nutrition assessment, planning, implementation and monitoring of prescribed diets.

Basic Readings

- Katz, D.L. 2008. *Nutrition in clinical practice*. 2nd Edition. Philadelphia: Lippincott William & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. 5th Edition. London: McGraw Hill.
- Mahan, L.K. & Escott-Stump, S. 2007. *Krause's food and nutrition therapy*. 12th Edition. Philadelphia: W.B.Saunders.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: diabetes, hyperlipidemia & hypertension*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

NNND5013 Patient Education

The aim of this course is to expose students to definition, duty scope and work ethics of dietetic profession in clinical, community catering and administration. Basic knowledge on patient education will be emphasized, including: patients' knowledge, attitudes and practices toward diseases; techniques in introducing dietary and lifestyles changes of the patients; documentation techniques; dietary counseling techniques; nutritional status assessment techniques in clinical scope and preparation of effective patient education package. Students will be trained with dietary counseling skills during 'mock counseling' sessions. Students will also be required to prepare a nutrition education package for a specific disease.

Basic Readings

- Behan E. 2005. *Therapeutic Nutrition: A Guide to Patient Education*. Lippincott Williams & Wilkins.
- Falvo, D.R. 2010. *Effective patient education: A guide to increased adherence*. 4th Edition. Jones & Bartlett Publishers.
- Gable, J. 2007. *Counseling skills for dietitians*. 2nd Edition. Massachusetts: Wiley-Blackwell Science.
- Holli, B.B., O'Sullivan, J. & Calabrese, R.J. 2003. *Communication and education skill for dietetics professionals*. 4th Edition. Illinois: Lippincott Williams & Wilkins.
- Redman, B.K. 2002. *Measurement tools in patient education*. 2nd Edition. New York: Springer

NNND5014 Special Medical Topic

This core course will involve various medical topics. It will define common medical terms normally use by physicians. It will also introduce the students with various analytical procedures to diagnoses certain diseases. This course will also discuss the pathophysiology and treatment of diseases. The diseases that will be taught include gastrointestinal, cardiovascular, endocrine, renal and nervous system diseases. Lectures will also cover medical aspects of geriatric, trauma, surgery and burns. Students will also be exposed to the management of patients in wards or clinics. This is to emphasise the clinical importance of treatment.

Basic Readings

- Hay, W., Levin, M., Deterding, R. & Sondheimer, J. 2008. *CURRENT Diagnosis and Treatment Pediatrics*. 19th Edition. McGraw-Hill Medical.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S., Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. 16th Edition. Boston: McGraw Hill Professionals.
- Kim E. Barrett, Susan M. Barman, Boitano, S. & Brooks, H. 2009. *Ganong's Review of Medical Physiology*, 23rd Edition. McGraw-Hill Medical.
- Kumar, P. & Clark, L.M. 2005. *Clinical Medicine: with STUDENT CONSULT Access*. 6th Edition. Saunders Ltd
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical

NNND5032 Therapeutic Diet Preparation

This course gives clinical exposure in modifying normal diet to therapeutic diet. Students will be exposed to special dietetic products available in the market. The ability to order food ingredients, calculating nutrient contents, preparing food and food testing will be emphasized. Lectures on how to apply theory learned in previous years will be given before each practical session. Assessment will be based on the ability to purchase food,

nutrient calculation, food preparation and demonstration as well as taste.

Basic Readings

- Drummond, K.E. & Brefer, L.M. 2009. *Nutrition for foodservice & culinary professionals*. 7th Edition. New Jersey: John Wiley & Sons.
- Escott-Stump, S. 2007. *Nutrition and diagnosis-related care*. 6th Edition. Philadelphia: Lippincott, Williams & Wilkins.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia, hypertension & chronic kidney disease*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Persatuan Pemakanan Malaysia. 2002. *Resepi sihat: Pilihan bijak*. Jilid I. Vol 2. Kuala Lumpur: Persatuan Pemakanan Malaysia.
- Tee, E.S., Ismail M.N., Nasir, M.A. & Khadijah, I. 1997. *Nutrient composition of Malaysian foods*. Kuala Lumpur: Institute for Medical Research.

NNND5034 Outpatient Dietetic Service I

This course is a practical clinical training course in out-patient dietetics. Students will start their training by observing dietary counseling session followed by assessing patient's nutritional status, planning, monitoring and giving dietary counseling to the patients. Students will also learn the process of patient referral, reading medical records and communicate with other health care professionals. Training will take place in Diet Clinic at Klinik Warga, HUKM.

Basic Readings

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. 5th Edition. Philadelphia: Lippincott, Williams & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. 5th Edition. London: McGraw Hill.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical.
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

NNND5054 Inpatient Dietetic Service I

This course is a practical training course in in-patient dietetics. Students will learn therapeutic diets and enteral-parenteral nutrition in the hospital setting. Students will be trained in nutrition status assessment, planning, implementation and monitoring of patients. Students will also learn the process of patient referral, reading medical records

and participate in multi disciplinary health care. Training will take place in the medical, gynae and surgical wards.

Basic Readings

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. 5th Edition. Philadelphia: Lippincott, Williams & Wilkins.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S. Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. 16th Edition. Boston: McGraw Hill Professionals.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical
- Rolandelli,R., Bankhead, R., Boullata, J. & Compher, C. 2004. *Clinical Nutrition: Enteral and Tube Feeding, Text with CD-ROM*. 4th Edition. Boston: Saunders.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

NNND5052 Food Service Posting

Students will undergo industrial training for 5 weeks at Nutrition and Dietetic Department in government or private hospitals. This training emphasize on managing of food service including staff management, purchasing, receiving, storing, serving, budgeting, quality assurance, work safety and food hygiene Students are also required to do related projects and programs which will be evaluated during the training.

Basic Readings

- Birchfield, J.C. & Sparrowe, R.T. 2003. *Design and layout of foodservice facilities*. New Jersey: John Wiley & Sons.
- Knight, J.B.L. & Kotschevar, L.H. 2000. *Quantity food production, planning and management*. 3rd Edition. New Jersey: John Wiley & Sons.
- Miller, J.E., Dopson, L.R. & Hayes, D.K. 2005. *Food & beverage: Cost control*. 3rd Edition. New Jersey: John Wiley & Sons.
- National Restaurant Association Educational Foundation. 2004. *Servsafe essentials*. 3rd Edition. Chicago: National Restaurant Association.
- Spears, M.C. & Gregoire, M.B. 2009. *Food service organization. A managerial and systems approach*. 7th Edition. New Jersey: Prentice Hall.

NNND5024 Outpatient Dietetic Service II

This course is an extension of ND 5034 Dietetik Services for Out-patient I. Students are sent for attachment in government hospital in selected discipliner such as medical, paediatrik, surgical and renal. Through this hospital attachment, student will be able to exchance their dietetic / clinical knowledge skill and achive greater confidence in patient nutritional status asesment dietary planning and conducting, dietary counseling under the dietitians supervision.

Basic Readings

- Escott-Stump, S. 2002. *Nutrition and diagnosis-related care*. 5th Edition. Philadelphia: Lippincott, Williams & Wilkins.
- Lee, R.D. & Nieman, D.C. 2009. *Nutritional assessment*. 5th Edition. London: McGraw Hill.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease*. Kuala Lumpur: Malaysian Dietitian Association.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

NNND5064 Inpatient Dietetic Service II

This course is an extension of N5054 In-Patient Dietetics I. Students will be placed in several hospitals under the supervision of dietitians and gain insight into the working environment of dietitians. Students will be exposed to patient records, diagnosis, laboratory/ diagnostic procedures as part of the nutritional care of the patient. Students will also be required to submit case studies and presentations.

Basic Readings

- Cresci, G. 2005. *Nutrition support for the critically ill patients: A guide to practice*. Florida: CRC Press.
- Kasper, D.L., Braunwald, E., Fauci, A., Hauser, S. Longo, D. & Jameson, J.L. 2004. *Harrison's principles of internal medicine*. 16th Edition. Boston: McGraw Hill Professionals.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical
- Rolandelli,R., Bankhead, R., Boullata, J. & Compher, C. 2004. *Clinical Nutrition: Enteral and Tube Feeding, Text with CD-ROM*. 4th Edition. Boston: Saunders.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

NNND5044 Special Unit Dietetic Service I

This is an extension of ND5024 Out Patient Dietetic Service II and ND5064 In-patient Dietetic Service II. The course is conducted in selected specialist hospitals in the Klang Valley. Students will be supervised by experienced dietitians. Students will receive exposure to cases in geriatrics, enteral nutrition, paediatrics, oncology, renal, gastro, liver, critical care and trauma.

Basic Readings

- Cresci, G. 2005. *Nutrition support for the critically ill patients: A guide to practice*. Florida: CRC Press.
- McPhee, S.J. & Papadakis, M.A. 2008. *Current medical diagnosis & treatment 2009*. Boston: McGraw-Hill Medical
- Ministry of Health Malaysia & Malaysia Dietitians' Association. 2005. *Medical nutrition therapy guidelines: Diabetes, hyperlipidemia & hypertension, chronic kidney disease & nutrition support in critically ill adults*. Kuala Lumpur: Persatuan Dietitian Malaysia.
- Mitch, W.E. & Klahr, S. 2002. *Handbook of nutrition and the kidney*. 4th Edition. Philadelphia: Lippincott Williams & Wilkins.
- Shaw, V. & and Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Edition. Wiley-Blackwell.

Masters of Health Science (Biomedical Science)

Introduction

UKM is the first local university to offer the Bachelor of Biomedical Science (Honours) programme which commenced in the 1992/93 academic year. The main feature of the Biomedical Science programme at the undergraduate level is that it is multidisciplinary with knowledge being imparted at the introductory or intermediate stage. The taught-course Masters in Health Science (Biomedical Science) programme at UKM is the first to be offered in Malaysia. It provides opportunities to graduates, especially those in biomedical science, to enhance their knowledge and skill in biomedical sciences. The information given and knowledge gained are more detailed and focused. There are elective modules that are selected by the student according to the student's interest. Students are also required to carry out a laboratory-based research project.

Objectives

Objectives of this programme are:

- To produce graduates at masters level who have the skill to fulfill the requirements and requests/demands in Malaysia in line with the demands of academia and in line with the current development of health services in developed country.
- To provide opportunities to first degree graduates in biomedical science and other approved biological sciences to further their studies at masters level in biomedical science with emphasis in certain fields.
- To provide opportunities for graduates to further their studies at postgraduate level at an affordable cost.
- To enlarge the scope and opportunities for jobs at local and overseas institutions and industries.

Total Unit

The total compulsory units that have been set for this programme is 38 units.

Curriculum for Masters of Health Science (Biomedical Science)

Semester I

Compulsory Module: Core Programme

Code	Course Name	Unit
NNNB5014	Laboratory Techniques in Biomedical Sciences	4
NNNB5034	Laboratory Techniques in Cellular and Molecular Biology	4
NNNB5053	Laboratory Management	3
NNNB5073	Research Methods & Biostatistics	3
	Total Units	14 units

Semester II

Elective Modules

Elective I: Chemical Pathology

Code	Course Name	Unit
NNNB5444	Metabolic Diseases	4
NNNB5464	Laboratory Techniques in Clinical Chemistry	4
NNNB5484	Interpretation of Data From Clinical Chemistry Laboratory	4
	Total Units	12 units

Elective II: Infectious Diseases

Code	Course Name	Unit
NNNB5022	Microbial Pathogenesis	2
NNNB5042	Environmental Microbiology	2
NNNB5062	Attachment in Diagnostic Medical Microbiology Laboratory	2
NNNB5083	Parasitic Diseases of Humans & Medical Entomology	3
NNNB5183	Laboratory Techniques and Field Work in Parasitology and Entomology	3
	Total Units	12 units

* Each student is required to pick 1 elective module.

Semester III

Compulsory Module: Research and Thesis writing

Code	Course Name	Unit
NNNB501C	Research in Biomedical Sciences	12
	Total Units	12 units
	Grand total units is 38 units	

Synopsis of Courses for Masters of Health Science (Biomedical Science)

NNNB5014 Laboratory Techniques in Biomedical Sciences

This course covers lectures and practicals on various techniques used in various fields of biomedical sciences. The lectures provide adequate background information on particular techniques in order that the students are able to use these techniques effectively and broadly. Practical classes give students the opportunity to carry out techniques in a hands-on fashion thus enhancing their laboratory skills and also allowing the students to acquire technical skills in specific equipment for research.

Basic Readings

- Clynes, M. 1998. Animal cell culture. New York: Springer-Verlag.
- Gallagher, S.R. & Wiley, E.A. 2008. Current Protocols in Essential Laboratory Techniques. New York : John Wiley & Sons.
- Hay, F.C. & Westwood, O. 2002. Practical immunology. 4th ed.. Oxford: Blackwell Science.
- Jones, P. 1995. Gel electrophoresis: Nucleic acids: Essential techniques. New York: John Wiley & Sons.
- Journal of Biomedical Science. BioMed Central Publishers.
- Malaysian Journal of Medical Sciences. School of Medical Sciences, Universiti Sains Malaysia Publisher.

NNNB5034 Laboratory Techniques in Cellular and Molecular Biology

This course covers lectures and practicals in various techniques in cellular and molecular biology. The lectures give adequate information on specific techniques. A hands-on approach is used in practicals so that students will acquire skills in cellular and molecular biology up to the level of research or diagnosis.

Basic Readings

- Ausubel, F.M., Brent, R., Kingston, R.E. & Moore, D.D. 1999. Short protocols in molecular biology. 4th ed. New York: Van Nostrand Reinhold.
- BMC Microbiology. BioMed Central Publishers.
- Journal of Biomedical Science. BioMed Central Publishers.
- Sambrook, J., MaCallum, P. & Russell, D. 2001. Molecular cloning: A laboratory manual. Ed. ke-3. New York: Cold Spring Harbour.
- Tait, RC. 1997. An introduction to molecular biology. New York: Horizon Scientific Press.

NNNB5053 Laboratory Management

This course encompasses lectures and study-visit to places where diagnostic laboratory management is practiced. This course covers various aspects that allow diagnostic laboratories to be managed efficiently and safely in addition to providing quality services. Students are exposed to procedure in purchase of reagents and equipments; storage of reagents and consumables; quality control, quality assurance and safety in laboratories; management, training and development of laboratory personnel.

Basic Readings

- Aamodt, A. 2009. *Industrial/organizational psychology : An Applied Approach*. 6th ed. New York: Wadsworth.
- Clinical Laboratory Science. American Society for Clinical Laboratory Science Publisher.
- Dent, N.J. & Carson, P.A. 1994. *Good laboratory and clinical practices*. London: Arnold Publication.
- Fischbach, F & Dunning, MB. 2008. *A Manual of Laboratory and Diagnostic Tests*. 8th ed. Lippincott Williams & Wilkins.
- Laboratory Medicine. American Society for Clinical Pathology Publisher.
- Lehmann, C.A.1998. *A Manual of Clinical Laboratory Science*. Philadelphia: W.B. Saunders.
- Stricoff, R.S. & Walters, D.B. 2011. *Handbook of laboratory health and safety*. 3rd ed. New York: John Wiley & Sons.

NNNB5073 Research Methods & Biostatistics

The Biostatistics submodule encompasses lectures, tutorials, assignments and also exercises in biostatistics using computers. The Research Methods submodule covers lectures and seminars in the following topics: principle of field epidemiology; types of research; various activities involved in a research: choosing the research area, deciding on the research questions, scientific collaboration, understanding ethical issues in research involving humans and animals, choosing appropriate statistical tests, preparing a complete research proposal for evaluation by the scientific and the ethics committees, monitoring of research activities and research fund usage; and writing of research results for oral and written communication.

Basic Readings

- Allen, P & Bennett K. 2008. *SPSS for the health and behavioural sciences*, 1st Ed. Australia: Cengage Learning.
- Bartlett, J.E., Kotrlik, J.W. & Higgins, C.C. 2001. *Organizational Research: Determining Appropriate Sample Size in Survey Research*. *Information Technology, Learning and Performance Journal*. Vol 19 (1):43-50.
- Brownson, R.C. & Petitti, D.B. 1998. *Applied epidemiology: Theory to practice*. Oxford: Oxford University Press.

- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics*. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Mappes, T.A. & De Grazia, D. 1996. *Biomedical ethics*. 4th edition. New York: McGraw-Hill.
- Milton, J.S. 1999. *Statistical methods in the biological and health sciences*. 3rd edition. New York: McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design Using ANOVA*. Duxbury Press.

NNNB5444 Applications of Chemical Pathology

This course contains lectures, seminars and self-learning packages. It emphasises the understanding of various pathophysiological changes that occur in various body systems. Students are also taught tests which use chemical pathology methods that are performed to detect a particular disease.

Basic Readings

- Annual Review of Clinical Chemistry. Saunders.
- Bishop, M.L., Fody, E.P. & Schoeff, L.E. 2009. *Clinical chemistry : Techniques, Principles, Correlations*. 6th ed. Philadelphia: Lippincott Williams & Wilkins.
- Journal of Clinical Chemistry. American Association of Clinical Chemistry Publishers.
- Journal of Clinical Pathology. British Medical Journal Publishers.
- Marshall, W.J. & Bagent, S.K. 2008. *Clinical biochemistry: Metabolic and clinical aspects*. 2nd ed. Edinburgh: Churchill Livingstone.
- Scriver, C.R. 2001. *The metabolic and molecular bases of inherited disease*. Ed. Ke-8 New York: McGraw-Hill.

NNNB5464 Laboratory Techniques in Chemical Pathology

This course contains practical sessions and demonstrations on various tests performed in chemical pathology laboratories to detect diseases. This course also emphasises the concept and rationale of a test being conducted, methods for detecting laboratory errors, and interpretation of results. The students will also be attached to a chemical pathology laboratory at a selected hospital for a designated period of time.

Basic Readings

- Bishop, M.L., Fody, E.P. & Schoeff, L.E. 2009. *Clinical chemistry : Techniques, Principles, Correlations*. 6th ed. Philadelphia: Lippincott Williams & Wilkins.
- Estridge, B.H., Reynolds, A.P. & Walters, N. J. 2007. *Basic clinical laboratory techniques*. 5th ed. Albany, USA : Delmar–Thomson Learning
- Godkar, P.B. 1996. *Textbook of medical laboratory technology*. Bombay : Bhalani.
- Journal of Clinical Chemistry. American Association of Clinical Chemistry Publishers.
- Journal of Clinical Pathology. British Medical Journal Publishers.
- Mayne, P.D. 1994. *Clinical chemistry in diagnosis and treatment*. London : Arnold.

Varcoe J.S. 2001. *Clinical biochemistry: techniques and instrumentation: A practical course*. Melbourne: World Scientific Publishing.

NNNB5484 Interpretation of Clinical Chemistry Laboratory Data

This course covers understanding of chemical pathology cases. Students are taught methods in interpreting chemical pathology test results and to correlate them with the patients' medical problems. Teaching encompasses discussion sessions of students with lecturers, presentations, and discussions during seminars.

Basic Readings

Annals of Clinical Biochemistry. United Kingdom Clinical Biochemistry Association Publishers.

Burtis, C.A., Ashwood, E.R. & Bruns, D.E. 2005. *Tietz textbook of clinical chemistry and molecular diagnostics*. 4th ed. Philadelphia: W.B. Saunders Co.

Journal of Clinical Pathology. British Medical Journal Publishers.

Kaplan, L.A. & Pesce, A.J. 2009. *Clinical chemistry: Theory, analysis and correlation*. 5th ed. St. Louis : Mosby.

Mayne, P.D. 1994. *Clinical chemistry in diagnosis and treatment*. London : Livingstone.

Walmsley, R.N. & White, G.H. 1994. *A guide to diagnostic clinical chemistry*. 3rd ed. Oxford: Blackwell Scientific.

NNNB5022 Microbial Pathogenesis

This course covers lectures, presentations, long essays and practicals. This course covers certain aspects relating to microbial pathogenesis such as microbial virulence factors and microbial evasion of the host's defense system, and also the pathogenesis of specific microbial diseases. Attention is given to infectious diseases important in Malaysia and the region currently, and also diseases that have the potential of achieve this status in the future.

Basic Readings

Benerke, E.S. & Rogers, A.L.. 1996. *Medical mycology and human mycoses*. California: Star Publishing Company.

Collier, L., Balows, A. & Sussman, M. 1998. *Topley & Wilson's micro biology & microbial infections*. Ed. ke-9. New York: Oxford University Press.

FEMS Immunology and Medical Microbiology. FEMS publishers.

Journal of Clinical Microbiology. ASM publishers.

Mims, C., Dockrell HM, Goering RV, Roitt I, Wakelin, D. and Zuckerman M. 2005. *Medical microbiology*. 3rd edition. Philadelphia: Elsevier Limited

Neal Nathanson. 1997. *Viral pathogenesis*. New York: Lippincott-Raven.

NNNB5042 Attachment to Mikrobiology Diagnostic Laboratory

Students will be taught how to identify bacteria of medical importance in a class practical session. Students will then be attaching to a bacteriology or serology laboratory with the aim of learning the processing of clinical specimens.

Basic Readings

- Fisher, F & Cook, N. 1999. *Fundamentals of Diagnostic Mycology*. New York: Springer
- O'Connor, L. 2006. *Diagnostic bacteriology protocols*. 2nd ed. New Jersey: Humana Press.
- Rose, N.R., Hamilton R.G. & Detrick, B. 2002. *Manual of clinical laboratory immunology*, 6th ed. Washington D.C: American Society for Microbiology Press
- Stephenson, J.R. & Warnes A. 1999. *Diagnostic virology protocols*. New Jersey: Humana Press
- Yap, K.L., A. Hamid A. Aziz & Mohd. Salleh Mohd. Yasin 1999. *Mikrobiologi makmal*. Bangi: Penerbit UKM.

NNNB5062 Environmental Microbiology

This course covered lectures, group presentations and practicals (laboratory and field works). The topics covers are current concepts and principles of environmental microbiology; water-borne pathogens; microbial air contamination; soil microorganisms; microbiology of water contamination (fresh and marine), biodegradation of dangerous chemical compounds; eutrofixation. Students will also learn how microbial ecology has been exploited by humans to rehabilitate land contaminated with toxic wastes, and water contaminated with agricultural, industrial and household residues, and the use of microbiology in solid waste management. Laboratory activities include water quality test and techniques and a numeration of water and soil microbes.

Basic Readings

- Jones, D.R., Board, R.G., Fredrick, A.S. 1992. *Identification Methods in Applied and Environmental Microbiology*. Oxford: Blackwell Science.
- Lightfoot, N.F. & Maier, E.A. 1998. *Microbiological analysis of food and water: Quideline for quality assurance*. Amsterdam: Elsevier Science.
- Mitchell, R. 1994. *Environmental Microbiology*. New York: Wiley, John & Sons.
- Pepper, I.L., Gerba, C.P. & Brendecke J.W. 1995. *Environmental Microbiology A Laboratory Manual*. New York: Academic Press.
- Rochelle, P.A. 2001. *Environmental molecular microbiology: protocols and applications*. Norfolk, UK: Horizon Scientific Press

NNNB5083 Parasitic Diseases of Humans and Medical Entomology

This course covers lectures, seminars, reviews of scientific papers and a mini project. The course contents include parasitic diseases that have become important as a result of changing human activities. This course also covers some aspects of entomology related to

human health such as insects as vectors of microbes and parasites, forensic entomology and vector control.

Basic Readings

- Bell, D.R. 1994. Tropical Medicine. 4th ed. Oxford: Blackwell Science.
- Gullan, T.J. & Cranston, P.S. 2000. The insect. Oxford: Blackwell Science.
- Heelan JS & Ingersoll FW. 2002. Essentials of human parasitology. New York: Delmar Thompson Learning.
- Neva, F.A. & Brown, H.W. 1994. Basic Clinical Parasitology. 6th ed.. Norwalk: Appleton & Lange.
- Strickland, T. 1995. Hunter's Tropical Medicine. Ed. 7th ed. Philadelphia: WB Saunders Company.

NNNB5183 Laboratory and Field Techniques in Parasitology and Entomology

This course emphasise laboratory and field techniques in medical parasitology and entomology. It is aimed at giving sufficient exposure to the students in order that they are able to perform experiments and investigations in the fields of protozoology, helminthology and entomology.

References

- Advances in Parasitology. Edited by JR Baker ,R Muller and D Rollinson. Elsevier Academic Press.
- Chemical methods for the control of vectors and pests of public health importance. Eds : Chavasse & Yap. WHO Pesticide Evaluation Scheme. WHO/CTD/WHOPES/97.2
- Encyclopedia of Arthropod-transmitted Infections of Man and Domesticated Animals Edited by MW Service (2001). CABI Publishing New York.
- Trends in Parasitology (formerly Parasitology Today). Editor Sally Hirst. Elsevier Science London.

NNNB501C Biomedical Science Research

Project which has been selected and approved by the Department is performed under the guidance of one or more supervisors. The results are then presented in a dissertation and defended in an oral session.

Masters of Clinical Psychology

Introduction

Clinical Psychology is a field of psychology that applies psychological approaches in preventing, assessing, diagnosing and treating psychological disorders, as well as emotional, learning and behaviour problems that affect daily living and social functioning. Professional practitioners of Clinical Psychology are called Clinical Psychologists. Clinical Psychologists work in hospitals (general, psychiatric, rehabilitation), outpatient clinics (community based, specialised psychological services), disability services (intellectual and physical), community based welfare services, non-government organizations (NGOs), corrective services (justice system), educational institutions and private practice/consultancies. The work of a Clinical Psychologist includes assessments and diagnoses; psychological intervention; teaching and supervision; consultation and program development; administration and management; research and evaluation; as well as policy-making and legislation. Clinical Psychologists are in very high demand in Malaysia. The Master of Clinical Psychology Program serves to meet this increasing demand.

Objectives

The objectives of the program are to produce graduates in clinical psychology who:

- are competent in choosing and carrying out psychological testing and measurements, as well as evaluating its results with sound clinical judgement
- are competent in formulating clinical diagnoses and providing intervention of psychiatric disorders in children and adults in the scientist-practitioner mode of accountability
- are able to demonstrate basic knowledge of psychological medicine in the treatment of psychiatric disorders
- have adequate research skills in designing and carrying out clinical research ethically and professionally
- can demonstrate a general understanding of ethical issues in research and clinical practice

Total Unit

The total compulsory units that have been set for this programme is 50 units.

Curriculum for Masters of Clinical Psychology

Year 1

Semester I

Code	Course Name	Unit
NNNC5012	Research Methodology & Biostatistics	2
NNNC5013	Psychological Testing & Assessment	3
NNNC5033	Behavior Assessment	3
NNNC5053	Child Clinical Psychology I	3
NNNC5073	Adult Clinical Psychology I	3
NNNC5093	Therapeutic Approaches & Interpersonal Skill	3
	Total Units	17 units

Semester II

Code	Course Name	Unit
NNNC5021	Psychopharmacology & Cross Cultural Psychology	1
NNNC5023	Neuropsychology	3
NNNC5043	Health Psychology & Community Mental Health	3
NNNC5063	Child Clinical Psychology II	3
NNNC5083	Adult Clinical Psychology II	3
NNNC5015	Clinical Placement I	5
	Total Units	18 units

Year 2

Semester I

Code	Course Name	Unit
NNNC6011	Clinical Psychology Seminar	1
NNNC6012	Clinical Psychology Project I	2
NNNC6015	Clinical Placement II	5
	Total Units	8 units

Semester II

Code	Course Name	Unit
NNNC6022	Clinical Psychology Project II	2
NNNC6025	Clinical Placement III	5
	Total Units	
	7 units	

Grand total units is 50 units

Synopsis of Courses for Masters of Clinical Psychology

NNNC5012 Research Methodology & Biostatistics

This course aims to prepare the students in conducting their final thesis of the Master in Clinical Psychology Program. Students will be exposed to the techniques of writing research proposal, determining the research design according to the study objectives, determining the appropriate statistical analysis for each of the research objective and learn the basic data analysis using qualitative and quantitative programs. Students are required to choose one topic to study in the health or clinical psychology field for the whole year.

Basic Readings

- Chris, B., Pistrang, N., & Elliot, R. 2002. *Research Methods in Clinical Psychology: An Introduction for Students and Practitioners*, 2nded. West Sussex: John Wiley & Sons.
- Denzin, N.K., & Lincoln, Y.S. (Eds.). 2000. *Handbook of Qualitative Research*. 2nded. London: Sage.
- Marks, D.F., & Yardley, L. (Eds.). 2004. *Research Methods for Clinical and Health Psychology*. London: Sage Publications.
- Pagano, R.R. 2006. *Understanding Statistics in the Behavioral Sciences*, 8thed. Belmont, CA: Thomson & Wadsworth.
- Ritchie, J., & Lewis, J. (Eds.). 2003. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: Sage

NNNC5013 Psychological Testing & Assessment

A principal speciality of clinical psychology is providing psychological assessment services in determining the psychological functionality of an individual with regards to cognition, emotion, learning and personality. This course covers basic psychological testing tools such as intelligence scales, personality inventories, adaptive behaviour scales, learning ability tests and screening for emotion, mental health and quality of life. Teaching of this course involves lectures and practical demonstration workshops on the use of psychometric tools, their interpretation as well as report writing and clinical presentation.

Basic Readings

- Craig, R.J. 2000. *Interpreting personality test: A clinical manual for the MMPI-2, MCMI-III, CPI-R, and 16PF*. New York: John Wiley
- Gregory, R.J. 2006. *Psychological testing: History, principles, and applications*. International Ed. Boston: Allyn & Bacon.

- Groth-Marnat, G. 2009. *Handbook of psychological assessment*. 5thed. New York: John Wiley.
- Kirk, U. 2000. *Essentials of NEPSY assessment (Essentials Of Psychological Assessment Series)*. New York: John Wiley.
- Sattler, J.M. 2008. *Assessment of children: Cognitive foundation*. 5thed. San Diego: Jerome M. Sattler.

NNNC5033 Behavior Assessment

Behaviour analysis forms a crucial part of the practice of clinical psychology in that it helps the practitioner understand the contributing factors as well as maintaining factors of behaviour, leading to the formulation for systematic change in behaviour. This course includes revisiting learning theories of psychology in applying them to behaviour analysis and modification. Lectures of this course covers basic behaviour analysis methods to designing behaviour modification programs. Students learn mainly from practical exercises, demonstrations and discussions.

Basic Readings

- Baily, J.S., & Burch, M.R. 2005. *Ethics for behavior analysts: a practical guide to the behavior analyst certification board guidelines for responsible conduct*. New York: Lawrence Erlbaum.
- Cipani, E. & Schock, K.M. 2010. *Functional behavioral assessment, diagnosis, and treatment: a complete system for education and mental health settings*. 2nded. New York: Springer Publishing.
- Cooper, J.O., Heron, T.E. & Heward, W.L. 2007. *Applied behavior analysis*. 2nded. New York: Prentice-Hall.
- Kazdin, A.E. 2008. *Behavior modification in applied settings*. 6thed. Prospect Heights, IL: Waveland Press Inc.
- Miltenberger, R.G. 2011. *Behavior modification: principles and procedures*. 5th ed. Belmont, CA: Wadsworth Publishing.

NNNC5053 Child Clinical Psychology I

The aim of this course is to prepare students for the practice of child and adolescent clinical psychology from problem definition, through assessment, selection of the best intervention alternative, implementation, monitoring, maintenance and evaluation over a range of different presenting problems. This course introduces psychiatric disorders of childhood and adolescence with regards to etiology and prevalence, assessment, diagnosis and intervention methods. The course will be run in lectures with practical assignments for students to update clinical knowledge on topics covered within the first semester such as depression, anxiety disorders, sexual abuse, elimination disorders and play therapy. Issues of diagnoses and assessment will be discussed based on the Diagnostic and Statistical Manual of Mental Disorders – 4th edition.

Basic Readings

- Anders, T.F. & Morrison, J. 2002. *Interviewing children and adolescents: skills and strategies for effective DSM-IV diagnosis*. New York: Guilford Press.
- Herbert, M. 2006. *Clinical child and adolescent psychology: from theory to practice*. New York: Wiley
- Kendall, P.C. (Ed.). 2010. *Child and adolescent therapy: cognitive-behavioral procedures*. 4thed. New York: Guilford Press.
- Mash, E.J., & Barkley, R.A. 2010. *Assessment of childhood disorders*. 4thed. New York: Guilford Press
- Wilmshurst, L. 2010. *Child and adolescent psychopathology: a casebook*. 2nded. London: Sage Publishing.

NNNC5073 Adult Clinical Psychology I

Overall this course explore varieties of psychological disorders among adults. Discussions begin from introduction to clinical psychology as a branch of applied psychological knowledge which is increasingly popular nowadays. Whereas the development of adults and elderly will be focused before the discussions on psychopathological issues. Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) will also be explained.

Basic Readings

- American Psychiatric Association. 2000. *Diagnostic and statistical manual of mental disorders*. 4thed. Text revision. Washington, DC: American Psychiatric Association.
- Andrews, G., Creamer, M., Crino, R., & Hunt, C. (Eds.). 2002. *The treatment of anxiety disorders: Clinician guides and patient manual*. 2nded. New York: Cambridge University Press.
- Dimaggio, G. & Lysaker, P.H. (Eds.) 2010. *Metacognition and adult severe mental disorders: from research to treatment*. London: Routledge.
- Lindsay, S., & Powell, G. (Eds.). 2007. *The Handbook of Clinical Adult Psychology*. 3rded. London: Routledge.
- Psychiatry*. 10thed. Philadelphia, PA: Lippincott Williams & Wilkins
- Sadock, B. J., & Sadock, V. A. 2007. *Kaplan and Sadock's synopsis of psychiatry: Behavioural sciences/Clinical*

NNNC5093 Therapeutic Approaches & Interpersonal Skill

This course will focus on issues and topics that needed to be highlighted while conducting psychotherapy. It will be conducted in the form of theory and practical. The theoretical aspects focused more in depth on the major counseling and psychotherapeutic models in terms of their application in clinical situations. Important issues in the therapeutic processes such as interviews, information gathering, case development, termination of therapeutic relationships and so on will be discussed. While the practical aspects focus on psychotherapy skills training required in individual and group psychotherapy.

Basic Readings

- Corey, G. 2008. *Theory and practice of group counseling*. 7thed. Pacific Grove, CA: Thomson Brooks/Cole.
- Ingram, B. L. 2006. *Clinical case formulations: Matching the integrative treatment plan to the client*. New York: John Wiley & Sons, Inc..
- Jongsma, A.E., Peterson, L.M. & McInnis, W.P., Bruce, T.J. 2006. *The adolescent psychotherapy treatment planner*. 4thed. New York: John Wiley.
- Kotin, J. 2004. *Getting Started: An introduction to dynamic psychotherapy*. Lanham, MD: Jason Aronson Inc.
- Sommers-Flanagan, J., & Sommers-Flanagan, R. 2009. *Clinical interviewing*. 4thed. New York: John Wiley & Sons.

NNNC5021 Psychopharmacology & Cross Cultural Psychology

This course is divided into two main areas: psychopharmacology and cross-cultural psychology. The first part of the course discuss on cross-cultural psychology as well as issues on approaches, beliefs and traditional treatment for mental disorders. The Psychopharmacology exposes the candidates to the role of medicine in the treatment of mental illness. The second part exposes the students to psychiatric medicine and related issues. Psychotropic drugs such as antidepressants, anxiolytics, antipsychotics and CNS stimulants will be introduced in terms of the chemical compositions, clinical effects and mental disorder treatments.

Basic Readings

- Ansari, Z.A. & Haque, A. (Eds.). 2005. *Contemporary issues in Malaysian psychology*. Singapore: CENGAGE Learning Asia.
- Eshun, S., & Gurung, R.A.R. (Eds.). 2009. *Culture and mental health: sociocultural influences, theory and practice*. West Sussex, UK: Wiley-Blackwell.
- Gerstein, L.H., Heppner, P.P., Ægisdóttir, S., Leung, S-M.A., & Norsworthy, K.L. (Eds.) 2009. *International handbook of cross-cultural counseling*. Los Angeles: Sage.
- Julien, R.M., Advokat, C.D. & Comaty, J. 2010. *A primer of drug action: a concise, nontechnical guide to the actions, uses, and side effects of psychoactive drugs*. 12thed. New York: Worth Publishers.
- Sadock, B.J., & Sadock, V.A. 2008. *Kaplan and Sadock's Concise textbook of clinical psychiatry*. 3rded. Philadelphia, PA: Lippincott Williams & Wilkins

NNNC5023 Neuropsychology

This course involves lectures, presentation and practicum. This course will focus on neuroanatomy, brain function, and the cognitive and psychosocial effects from the damaged brain. Various disorders of brain function will be discussed such as disorder of sensation, perception, visuomotor, frontal executive function, memory, intelligence, attention, and language problems. Explanation on the common neurological diseases will be discussed including head injury, epilepsy, amnesia and dementia, stroke and dyslexia.

Neuropsychological tests to assess the global and localized brain functioning will also be discussed. Training on the usage of neuropsychological tests will be conducted. Practical training required the students to interview the patient, observe the patient's behavior, administering neuropsychological assessment, writing a detail report on the patient's problem and to present the case. Students also will be exposed to cognitive rehabilitation of neurological patients.

Basic Readings

- Groth-Marnat, G. 2000. *Neuropsychological assessment in clinical practice: A practical guide to test interpretation and integration*. New York: Wiley.
- Halligan, P.W., Kidchka U., & Marshall, J.C. 2003. *Handbook of Clinical Neuropsychology*. New York: Oxford University Press
- Hodges, J.R. 2007. *Cognitive assessment for clinician*. New York : Oxford
- Kolb, B. & Whishaw, I.Q. 2007. *Fundamentals of Human Neuropsychology*. New York: W.H. Freeman.
- Snyder, P.J., & Nussbaum P.D. (Eds.). 2005. *Clinical neuropsychology: A pocket handbook for assessment*. 2nd Ed. Washington DC: American psychological Association.

NNNC5043 Health Psychology & Community Mental Health

This course will be conducted through lectures and self-learning package. Mental processes and their relation to the physiological function of the human body will be emphasised. A series of lectures will be focused on the mind and body interactions, the human behaviour toward well beings and illnesses, stress management, pain management, coping with terminal illnesses, grief therapy and other approaches of applied psychology in medical practice and health sciences. The technical aspects such as the psychological tests in hospital setting and research methodology in health psychology will also be learned by the students. Later in the course, the roles of clinical and health psychologist in promoting mental health and preventing illness will be discussed in the community mental health.

Basic Readings

- Drench, M.E., Sharby, N., Noonan, A. & Ventura, S. 2011. *Psychosocial aspects of healthcare*. 3rded. New York: Prentice-Hall.
- Kelly, T.A. 2009. *Healing the broken mind: transforming America's failed mental health system*. New York: NYU Press.
- Mackenzie, J.F., Pinger, R.R. & Kotecki, J.E. 2011. *An introduction to community health*. 7thed. Burlington, MA: Jones & Bartlett Learning.
- Rosenberg, S. & Rosenberg, J. (Eds.). 2006. *Community mental health: challenges of the 21st century*. London: Routledge.
- Sarafino, E.P. & Smith, T.W. 2010. *Health psychology: biopsychosocial interactions*. 7thed. New York: Wiley.

NNNC5063 Child Clinical Psychology II

The aim of this course is to continue to prepare students for the practice of child and adolescent clinical psychology from problem definition, through assessment, selection of the best intervention alternative, implementation, monitoring, maintenance and evaluation over a range of different presenting problems. This course follows from the previous semester in introducing more psychiatric disorders of childhood and adolescence with regards to etiology and prevalence, assessment, diagnosis and intervention methods. As before, the course will be run in lectures with practical assignments for students to update clinical knowledge on topics covered within the second semester such as learning disorders, developmental disabilities (e.g. autism), attention-deficit hyperactivity disorder, conduct disorder, oppositional defiant disorder, and school-based issues.

Basic Readings

- Bloomquist, M.L. & Schnell, S.V. 2005. *Helping children with aggression and conduct problems: best practices for intervention*. New York: Guilford Press.
- Bloomquist, M.L. 2005. *Skills training for children with behavior problems: a parent and practitioner guidebook*. Revised edition. New York: Guilford Press.
- Dendy, C.A.Z. 2006. *Teaching teens with ADD, ADHD and executive function deficits: a quick reference for teachers and parents*. Bethesda, MD: Woodbine House.
- Maurice, C., Green, G., & Luce, S.G. 1996. *Behavioral intervention for young children with autism: a manual for parents and professionals*. Austin, TX: PRO-ED, Inc.
- McClannahan, L.E. & Krantz, P. 2010. *Activity schedules for children with autism: teaching independent behavior*. 2nded. Bethesda, MD: Woodbine House.

NNNC5083 Adult Clinical Psychology II

This course is a continuation from the course on Adult Clinical Psychology I offered in Semester I. Topics related to adult psychological disorders will be discussed in depth such as personality disorders, marital conflicts, sexual issues, psychological problems in elderly and so on. Beside that, selected topics on applied psychotherapy in the adult clinical psychology contexts will be discussed with emphasis on psychodynamic and cognitive behavior therapy approaches.

Basic Readings

- Gabbard, G. O., Beck, J. S., Holmes, J. (Eds.). 2005. *Oxford textbook of psychotherapy*. Oxford University Press.
- Jongsma Jr, A.E., Peterson, L.M., Bruce, T.J. 2006. *The complete adult psychotherapy treatment planner*. 4thed. New York: Wiley.
- Kennedy, G.J. 2001. *Geriatric mental health care*. New York: Guilford Press.
- Rholes, W.S. & Simpson, J.A. 2006. *Adult attachment: theory, research and clinical implications*. New York: Guilford Press.
- Yalom, I.D. 2005. *Theory and practice of group psychotherapy*. 5thed. New York: Basic Books.

NNNC5015 Clinical Placement I

This clinical placement will be conducted internally at the Health Psychology Clinic. Clinical Psychology trainees will be exposed to the basics of psychological case management in terms of clinical interview, psychological assessment and psychological intervention as well as clinical report writing. Trainees also will be evaluated in terms of professional and practical ethics. In this placement, trainees are required to take 10 assessment cases, and 3 intervention cases for 3 days a week in 3 to 4 months.

NNNC6011 Clinical Psychology Seminar

The course is conducted in the form of seminar. All students (clinical psychology trainees) will present clinical cases that they have handled to be discussed together. This clinical case presentation seminar will train the students to select important and relevant information gathered from the clients or patients, following which to form and understanding on the case and to plan for intervention. For clinical cases still in the process of intervention, the seminar will give the opportunity for the trainees to monitor the intervention processes together with their peers. All lecturers in the programme will be involved in giving different perspectives according to their specialities on each case through this seminar.

NNNC6012 Clinical Psychology Project I

The Master of Clinical Psychology thesis reports the findings of a substantial research investigation into some aspect of applied psychology, particular in the field of clinical and health psychology. The content of the Master of Clinical Psychology thesis includes findings of systematic and innovative investigations of an applied psychological nature. These investigations may be quantitative or qualitative in approach. The completed thesis should demonstrate the candidate's ability to plan, coordinate and report on a substantial research study at a publishable level, making original and innovative contributions to professional knowledge and development. This course will focus more on the beginning part of the thesis.

NNNC6015 Clinical Placement II

This clinical placement will be conducted externally at placement agencies with a qualified clinical supervisor during the first semester of the second academic year of the Master Program. Master of Clinical Psychology trainees will be given advance training in mental health case management. Trainees also will be evaluated on professional and practical ethics. In this placement, trainees are required to take at least 15 assessment cases, 6 intervention cases for 4 days a week in 5 months.

NNNC6022 Clinical Psychology Project II

The Master of Clinical Psychology thesis reports the findings of a substantial research investigation into some aspect of applied psychology, particular in the field of clinical and health psychology. The content of the Master of Clinical Psychology thesis includes

findings of systematic and innovative investigations of an applied psychological nature. These investigations may be quantitative or qualitative in approach. The completed thesis should demonstrate the candidate's ability to plan, coordinate and report on a substantial research study at a publishable level, making original and innovative contributions to professional knowledge and development. This course will focus more on the thesis as a whole as a continuation from NNNC6012 course.

NNNC6025 Clinical Placement III

This clinical placement will be conducted externally at placement agencies with a qualified clinical supervisor. Master of Clinical Psychology trainees will be given advance training in mental health case management. Trainees also will be evaluated on professional and practical ethics. In this placement, trainees are required to take at least 15 assessment cases, 6 intervention cases for 4 days a week in 5 months. This clinical placement will begin during the second semester of the second year of the Master Program. Trainees need to pass each external placement components (NNNC6015 & NNNC6025) to pass the whole Master Program.

Masters of Health Sciences (Clinical Nutrition)

Introduction

The rapid development in Medical, Health, Nutrition and Dietetics also in industries involved in clinical products requires skilled, efficient and trained health professionals in clinical nutrition. Scientific knowledge, technology and current research in clinical nutrition, is a valuable asset in empowering health professionals in providing high quality services. Producing skilled workforce in clinical nutrition research will result in scientific discovery especially in new diseases in relation to nutrition.

Objectives

The main objectives of the programmes are:

- To offer advanced training for health professionals involved in patient care and nutritional support team, particularly Dietitians and Medical Officers.
- To equip candidates with knowledge, understanding and skills in Clinical Nutrition at a higher level than the undergraduate level.
- To produce professionals who are capable in handling issues related to nutrition, health and disease.
- To provide strong basis in skills and techniques in research clinical based research.

Total Unit

The total compulsory units that have been set for this programme is 40 units.

Curriculum of Masters of Health Sciences (Clinical Nutrition)

Semester I

Code	Course Name	Unit
NNND6033	Nutritional Requirements and Assessments	3
NNND6053	Human Physiology and Nutrient Metabolism in Health and Disease	3
NNND6073	Medical Aspects in Nutrition	3
NNND6453	Clinical Research Designs and Statistics	3
	Total Units	12 units

Semester II

Code	Course Name	Unit
NNND6024	Clinical Nutrition Research Project I	4
NNND6213	Contemporary Issues in Nutrition and Health	3
NNND6413	Advanced Medical Nutrition Therapy	3
NNND6433	Applications in Nutritional Supports	3

Elective (Choose only one elective course)

NNND6363	Organization Behavior and Personnel Management	3
NNND6373	Clinical Nutrition Practice	3
NNND6393	Critical Evaluation in Clinical Nutrition	3
	Total Units	16 units

Semester III

Code	Course Name	Unit
NNND641C	Clinical Nutrition Research Project II	12
	Total Units	12 units

Grand total unit is 40 units

LIST OF COURSES WITH PROGRAMME OUTCOMES FOR MASTER OF HEALTH SCIENCE (CLINICAL NUTRITION)

The aims of the programme Master of Health Science (Clinical Nutrition) are to:

- PO1:** Prepare graduates with enhanced knowledge, expertise and skills in specialised areas;
- PO2:** Train graduates with competencies in evaluating and adapting protocols and procedures;
- PO3:** Prepare graduates who are creative, innovative, sensitive and responsible towards the community, culture and environment;
- PO4:** Develop graduates who can take leadership role in planning and implementing tasks;
- PO5:** Train graduates with good teamwork, communication, problem-solving and scientific skills;
- PO6:** Generate graduates who can conduct research with minimal supervision;
- PO7:** Further enhance ICT, managerial and entrepreneurial skills in graduates; and
- PO8:** Instill lifelong learning skills in graduates.

Semester I

No	Course Code	Credit	Course Name	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6033	3	Nutritional Requirements and Assessments	√	√	√	√	√	√		√
2	NNND6053	3	Human Physiology and Nutrient Metabolism in Health and Disease	√		√	√		√		
3	NNND6073	3	Medical Aspects in Nutrition	√				√	√		√
4	NNND6453	3	Clinical Research Design and Statistics	√				√	√		√

Semester II

Core Courses

No	Course Code	Credit	Course Name	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6024	4	Clinical Nutrition Research Project I	√	√	√	√		√		√
2	NNND6213	3	Contemporary Issues in Nutrition and Health	√	√	√	√	√	√	√	√
3	NNND6413	3	Advanced Medical Nutrition Therapy	√	√	√	√		√		√
4	NNND6433	3	Applications in Nutritional Supports	√		√	√	√	√		√

Synopsis of Courses for Masters of Health Science (Clinical Nutrition)

NNND6033 Nutritional Requirements and Nutritional Status Assessment

This course provides understanding of nutritional requirements and recommendations for populations and individuals according to the life cycle. Students will have the opportunity to study the rationale for each recommendations made in the Recommended Nutrient Intakes. Discussions will also cover various methods of nutritional status assessments that are suitable for evaluation of various populations in the community and health care centers. Students will have hands-on experience in various techniques, including computer software analysis of nutrient intakes, anthropometric and body composition measurements, and calorimetric techniques for assessing energy expenditure.

Basic Readings

- Fidanza, F. 1991. Nutritional status assessment: A manual for population studies. London: Chapman & Hall.
- Gibson, R.S. 2005. Principles of nutritional assessment. 2nd Edition. Oxford: Oxford University Press.
- Lee, R.D. & Nieman, D.C. 2006. Nutritional assessment. 4th Ed. USA: McGraw-Hill Education.
- NCCFN. 2005. Recommended Nutrient Intakes for Malaysia. A Report of the Technical Working Group on Nutritional Guidelines. Putrajaya: National Coordinating Committee on Food and Nutrition, Ministry of Health Malaysia.
- Sauberlich, H.E. 2000. Laboratory tests for the assessment of nutritional status. Florida: CRC Press.

NNND6053 Human Physiology and Nutrient Metabolism in Health and Disease

This course discuss physiological process of human body throughout the lifecycles from foetal development, physiological adaptation during pregnancy, lactation and aging, specifically related to nutrition. This is follow by detail discussion about growth and gastrointestinal function including digestion and absorption of nutrient. Energy balance and its adaptation according to different level of energy expenditure and age, stress and disease condition; also neurological control of appetite and effect of food on mood. Another focus of the course is detail understanding of macro and micronutrient metabolism under different types of diet, nutritional status and stress such as fasting, hunger, starvation, high protein diet and chronic disease. Seminar and case discussion related to inbalance physiological function such as obesity, anorexia nervosa and bulimia will also be conducted.

Basic Readings

- Berdanier, C.D. 1998. *Advanced nutrition micronutrients*. Florida: CRC Press.
- Berdanier, C.D. 2001. *Advanced nutrition macronutrients*. Florida: CRC Press.
- Brody T. 1999. *Nutritional Biochemistry*. 2nd edition. Academic Press
- Garewal, H.S. 1997. *Antioxidants and disease prevention*. Florida: CRC Press.
- Sareen S. Gropper, Jack L. Smith & James L. Groff. 2005. *Advanced Nutrition and Human Metabolism*. Ed. Ke-4. Wadsworth: Thomson

NNND6073 Medical Aspects in Nutrition

The focus of this course is to understand pathological aspects and pathogenesis of diseases, symptoms and its medical management according to system such as endocrine, gastrointestinal, cardiovascular, renal, pulmonary, oncology, geriatric medicine, paediatrics. In addition enteral and parenteral feeding will also be covered. Students are required to produce an essay and make a presentation according to system chosen.

Basic Readings

- Boon, N.A., Colledge, N.R., Walker, B.R., Hunter. J. 2006. *Davidson's Principles and Practice of Medicine: with STUDENT CONSULT Access*. Ed. Ke-20, USA: Churchill Livingstone
- Chaudhry, H.J., Grieco, A.J., Macklis, R.M., Mendelsohn, M.E. 2004. *Fundamentals of Clinical Medicine: An Introductory Manual*. USA: Lippincott Williams & Wilkins
- Escott-Stump, S. 2007. *Nutrition and Diagnosis Related Care*. USA: Lippincott Williams & Wilkins
- Ganong, W.F. 2005. *Review of Medical Physiology*. USA: The McGraw-Hill Companies
- Longmore, M., Wilkinson. I., Turmezei, T., Cheung, C.K. 2007. *Oxford Handbook of Clinical Medicine (Oxford Handbooks Series)*. Ed. Ke-7, USA: Oxford University Press

NNND6453 Clinical Research Designs and Statistics

The objective of this course is to produce students who are able to do descriptive statistics, inferential and advanced statistics. They will also learn on how to do statistic analysis using SPSS. Understand the relevant concepts and theories of statistics, and hence will be able to choose the suitable statistical methods for design of experiment and analysis. Understand the concepts of statistical methods and able to apply them for analysis of data in type of data. Able to perform data analysis and statistical tests using a statistical package like SPSS.

Basic Readings

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.

- Carver, R.H. & Nash, J.G. 2006. Doing data analysis with SPSS Version 14. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. SPSS: Analysis without Anguish. Version 15.0 for Windows. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. Basic & Clinical Biostatistics. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. Experimental Design using ANOVA. Duxbury Press.

NNND6024 Clinical Nutrition Research Project I

Students are required to conduct research independently under the supervision of a lecturer. Students may choose to carry out field work or laboratory-based studies in areas related to clinical nutrition. In this semester, the student is required to conduct a literature review in relation to their selected topic of research, prepare a research proposal and apply for ethical approval. The processes that will be learnt include developing a research question, study hypothesis and conceptual framework that is suitable for the research topic. Students will also plan a study design and methodology that is suitable for the research. If necessary, the students will develop and pretest/validate questionnaires and/or any other tools that are required to be submitted with the proposal to the Medical Research and Ethics Committee of UKM or the ethics committee of other relevant institution(s).

Basic Readings

- Altman D.G. 1995. Practical statistics for medical research. London: Chapman & Hall.
- Friedland, A.J. & Folt, C.L. 2000. Writing successful science proposals. New Hampshire: Yale University Press.
- Margetts B.M. & Nelson M. 1991. Design concepts in nutritional epidemiology. New York: Oxford University Press.
- Ogden, T.E. & Goldberg, I. A. 2002. Research proposal: a guide to success. Third edition. California: Academic Press.
- Pusat Pengajian Siswazah. 2009. Panduan menulis tesis gaya UKM. Ed. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

NNND6213 Contemporary Issues in Nutrition and Health

This course discusses evolution of ideas in the science of Nutrition and its association with the community health development. This course also provides knowledge and understanding on current issues and its association with body function. Students have to conduct survey among the public on contemporary nutrition issues. Students will discuss and debate their survey findings based on scientific evidenced in seminars and forums that will be held as part of the course requirements.

Basic Readings

- Caballero, B. & Popkin, B.M. 2002. *Nutrition transition: Diet-related diseases in the modern world*: Academic Press.

- Garrow, J.S. & James, W.P.T. 2000. *Human nutrition and dietetics*. Ed. Ke-10. Edinburgh: Churchill Livingstone.
- Ungar, P.S. & Teaford, M.F. (eds). 2002. *Human diet: Its origin and evolution*. Greenwood Publishing Group.
- World Health Organization. 2003. *Diet, nutrition and the prevention of chronic diseases*. Geneva: WHO Technical Report Series 797.

NNND6413 Advanced Medical Nutrition Therapy

This advanced medical nutrition therapy course covers comprehensively on current nutritional management of acute and chronic disease and dietary issues relating to diseases based on scientific evidence. This involves diseases or conditions that require therapeutic diet, namely endocrine, gastrointestinal, hepatobiliary, paediatrics, oncology, renal, cardiovascular, AIDS, trauma and burn. Each disease state is taught comprehensively from pathophysiology of the disease, nutritional assessment, dietary modification, drug-nutrient interactions and follow-up management. Seminar and case presentation will be conducted as part of course requirement. Students will also gain practical experience in preparing therapeutic meal of their case studies.

Basic Readings

- Escott-Stump, S. 2008. *Nutrition and Diagnosis – Related Care*. 6th Ed. Lippincott Williams & Wilkins. Philadelphia. USA.
- Medical Nutrition & Therapy Guidelines. 2005. Malaysian Dietitian Association.
- Nelms MN & Anderson SL. 2004. *Medical Nutrition therapy A Case study approach*. 2nd edition. Thomson Wadsworth, USA
- Shaw, V & Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Ed. Blackwell Publishing. Oxford. United Kingdom.
- Thomas, B. 2007. *Manual of Dietetic Practice*. Oxford: Blackwell Scientific Publications. London.

NNND6433 Applications in Nutritional Support

This course gives exposure to the field of nutritional support. Students will develop an understanding about the applications of advanced dietetic concepts to critically ill patients who may be in intensive care, or undergoing acute illness or are in an immunocompromised state due to acute/chronic morbidity. Topics include the basics of nutritional support intervention for nutritional deficiencies arising from critical illness or special nutritional requirements. Medical management-related to nutritional care and the health team approach to management of the patient are highlighted during clinical visit.

Basic Readings

- A.S.P.E.N. Board of Directors and The Clinical Guidelines Task Force (2002) Guidelines for the Use of Parenteral and Enteral Nutrition in Adult and Pediatric Patients: *Journal Of Parenteral And Enteral Nutrition*. 26:1:supplement January–February
- Nelms, MM & Anderson, SL (2004). *Medical Nutrition Therapy- A case based approach*.

2nd edition. Thomson Wadsworth Pub.

Nutrition Support Service (2000) A practical guide to nutrition support in adults and children. UMMC

Rombeau JL & Caldwell, MD (1990). Clinical Nutrition: Enteral and Tube Feeding, 2nd edition W.B. Saunders Co. Philadelphia

Rombeau JL & Caldwell, MD (1993). Clinical Nutrition: Parenteral Nutrition, 2nd edition W.B. Saunders Co. Philadelphia

Shaw, V & Lawson, M. (1994) Clinical Pediatric Dietetics. Blackwell Scientific Pub.

The ASPEN Nutrition Support Practice Manual, 2nd Edition

NNND6363 Organization Behaviour and Personnel Management

This course covers the theory and practice in clarifying, estimating and controlling behavior and environment related to personnel management. Emphasis will be placed on leadership, motivation, communication and group dynamics in an organization. The course will also discuss the relationship between the organization and their personnel including work analysis, efficiency, effectiveness, training and development of health personnel.

Basic Readings

Bernardin, H.J. 2010. Human Resource Management: An Experiential Approach. 5th Ed. New York: McGraw-Hill.

Ivancevich, J.M., Konopaske, R. & Matteson, T.M. 2005. Organizational Behavior and Management. 7th Ed. Singapore: McGraw-Hill Higher Education.

Jaafar, M. 2003. Kelakuan Organisasi. 5th Ed. Petaling Jaya: Leeds Publication.

Kreitner, R. & Kinicki, A. 2009. Organizational Behaviour. 9th Ed. Boston: McGraw-Hill College.

Shortell, S.M. & Kaluzny, A.D. 2005. 5th Ed. Health Care Management: Organization Design and Behavior. Albany, NY: Delmar Cengage Learning.

NNND6373 Clinical Nutrition Practice

This course provides opportunities for students with dietetics or medical background to pursue subspecialization which the student may choose one discipline either geriatric, renal, pediatrics, oncology or critical care at hospitals for specific time allocated. While, other non-dietetics or medical graduates will undergo their clinical nutrition practice in out-patient clinic. The students are required to understand the medical and health team multidiscipline involvement in patient care either geriatric, renal, pediatrics, oncology or out-patient. This course emphasized on skills in management and care of nutritional needs of patients based on the up to date dietetic practice and technology and also according to the latest evidence based medicine. Case write up and presentation are part of requirement.

Basic Readings

- Cataldo, C.B., DeBryne, L.K. & Whitney, E.N. 2003. Nutrition and Diet Therapy. Ed. Ke-6. Belmont, USA: Wadsworth/Thomson Learning.
- Katz, L. 2008. A Comprehensive, Evidence-Based Manual for the Practitioner (Nutrition in Clinical Practice). 2nd ed. Philadelphia: Lippincott Williams & Wilkins.
- Lysen, L.K. 2006. Quick Reference to Clinical Dietetics. 2nd Ed. London: Jones & Bartlett Publishers
- Shaw, V & Lawson, M. 2007. Clinical Paediatric Dietetic. London: Blackwell Publishing
- Thomas, B & Bishop J. 2009. Manual of Dietetic Practice. British Dietetic Association. UK: Blackwell Scientific.

NNND6393 Critical Evaluation in Clinical Nutrition

Critical thinking means reliable knowledge. Through this course students learn about science and pseudoscience and how to differentiate and assess the reliability of information related to nutrition and supplement use. In doing this, students will develop the skill of dissecting scientific literature related to food claims. This course is designed to facilitate the development of critical thinking and problem-solving skills in health care and nutrition by requiring the student to analyze and solve conceptual and practical problems confronting the nutrition care professional. A problem-based learning (PBL) approach is used in which students work independently or in small groups to collect information relevant to problem solution, and take a hypothesis-oriented approach to dealing with each task. At the end of the course the student should develop evidence-based thinking in relation to the wide variety of dietary supplements that are available for public consumption..

Basic Readings

- Nestle, M. 2002. Food politics: how the industry influences nutrition and health. California: University of California Press.
- Sanders, TAB & Emery, P. 2003. Molecular basis of human nutrition. Taylor & Francis.
- Stephen Jay Gould. 1981. The mismeasure of man. WW Norton & Company. New York.
- Walter, P (ed.) 1995. The scientific basis for vitamin intake in human nutrition. Karger S Inc.
- Widmer, PL. 1997. Diets for reducing obesity including diet therapy research: index of new information for reference and practice. Washington DC: Abbe Pub Assn.

NNND641C Clinical Nutrition Research Project II

Students are required to conduct research independently under the supervision of a lecturer. Students may choose to carry out projects in the areas related to clinical nutrition or laboratory based studies. In this semester, the student is required to collect data for his research. The student will also learn data management, including data entry, data cleaning, data analysis and data interpretation. The student will be required to write up their research report in the form of a thesis. Besides that, the student will also present their

research findings and defend their research in a viva session. The student will produce a draft manuscript that is suitable for publication in a scientific journal.

Basic Readings

Alley, M. 2002. *The craft of scientific presentations: critical steps to succeed and critical errors to avoid*. New York: Springer.

Altman D.G. 1995. *Practical statistics for medical research*. London: Chapman & Hall.

Matthews, J.R., Bowen, J.M. & Matthews, R.W. 2001. *Successful scientific writing: A step-by-step guide for biomedical scientists*. Cambridge: Cambridge University Press.

Phelps R, Fisher K & Ellis AE. 2007. *Organizing and Managing Your Research: A Practical Guide for Postgraduates*. London: Sage Publications Ltd.

Pusat Pengajian Siswazah. 2009. *Panduan menulis tesis gaya UKM*. Ed. Ke-6. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

Masters of Health Science (Community Nutrition)

Introduction

The expansion of human resources in the field of Nutrition necessitates adaptation based on new challenges that emerge such as the impact of globalisation towards economic, sociology and ecological climate, population growth and demographic transition including urbanisation and ageing. Fresh graduates and nutritionists working in the public and private institutions will require additional knowledge, skills and attitude which can be acquired through academic training. In order to fulfill these needs, the Faculty of Allied Health Sciences offers a Masters programme in Health Sciences (Community Nutrition). This program contains three main components, i.e 1) Evaluation of the relationship between food intake and disease. 2) Application of knowledge acquired in the prevention of diseases in the population. 3) Opportunity to conduct research and write a dissertation related to Community Nutrition.

Objectives

Objectives of this programme are:

- To produce knowledgeable graduates with high understanding in nutrition and community health appropriate with current needs.
- To prepare students with knowledge and skills in basic nutritional sciences, epidemiology, social sciences, physiological needs and health management.
- To provide students with a strong foundation in research skills and techniques
- To produce quality graduates who are critical in solving nutrition issues professionally
- Create opportunities to career advancement in nutrition field.

Total Unit

The total compulsory units that have been set for this programme is 41 units.

Curriculum for Masters of Health Science (Community Nutrition)

Semester I

Code	Course Name	Unit
<i>Core Courses (10 units)</i>		
NNND6023	Nutritional Epidemiology	3
NNND6033	Nutritional Requirements and Nutritional Status Assessments	3
NNND6053	Human Physiology and Nutrient Metabolism in Health and Disease	3
NNND6093	Research Design and Statistics	3
<i>Electives (2 units)</i>		
NNND6082	Nutrition and Aging	2
NNND6192	Food and Nutrition Policy	2
	Total Units	14 units

Semester II

Code	Course Name	Unit
<i>Core Courses (10 units)</i>		
NNND6124	Community Nutrition Research Project I	4
NNND6213	Contemporary Issues in Nutrition and Health	3
NNND6243	Critical Assessment of Foods, Diets and Supplements	3
NNND6262	Nutrition Education and Intervention	2
<i>Electives (3 units)</i>		
NNND6363	Organization Behavior and Personnel Management	3
NNND6413	Advanced Medical Nutrition Therapy	3
	Total Units	15 units

Semester III

Code	Course Name	Unit
NNND601C	Community Nutrition Research Project II	12
	Total Units	12 units

Grand total units is 41 units

LIST OF COURSES WITH PROGRAMME OUTCOMES FOR MASTER OF HEALTH SCIENCE (COMMUNITY NUTRITION)

The aims of the programme Master of Health Science (Community Nutrition) are to:

- PO1:** Prepare graduates with enhanced knowledge, expertise and skills in specialised areas;
- PO2:** Train graduates with competencies in evaluating and adapting protocols and procedures;
- PO3:** Prepare graduates who are creative, innovative, sensitive and responsible towards the community, culture and environment;
- PO4:** Develop graduates who can take leadership role in planning and implementing tasks;
- PO5:** Train graduates with good teamwork, communication, problem-solving and scientific skills;
- PO6:** Generate graduates who can conduct research with minimal supervision;
- PO7:** Further enhance ICT, managerial and entrepreneurial skills in graduates; and
- PO8:** Instill lifelong learning skills in graduates.

Semester I

Core Courses

No	Course Code	Credit	Course Name	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6023	3	Nutritional Epidemiology	√	√	√	√	√	√		√
2	NNND6033	3	Nutritional Requirements and Nutritional Status Assessments	√	√	√	√	√	√		√
3	NNND6053	3	Human Physiology and Nutrient Metabolism in Health and Disease	√	√	√	√	√	√		√
4	NNND6093	3	Research Design and Statistics	√				√	√		√

Elective Courses

No	Course Code	Credit	Course Name	Programme Outcome (PO)							
				1	2	3	4	5	6	7	8
1	NNND6082	2	Nutrition and Aging	√	√	√	√	√	√		√
2	NNND6192	2	Food and Nutrition Policy	√	√	√			√		√

Synopsis of Courses for Masters of Health Science (Community Nutrition)

NNND6023 Nutritional Epidemiology

This course introduces the basic and principles of nutritional epidemiology. The course enables the students to interpret epidemiology data, identify methods and approach used in nutritional epidemiology research as well as understand the strength and weaknesses of study design. The course discusses disease epidemiology related to nutrition as well as the monitoring of outbreak surveillance. Students will be introduced to evidence based nutrition. The course will include lectures, assignments, critical evaluation of journal articles and report writing.

Basic Readings

- Institute of Public Health, IPH (2008). The third National Health Morbidity Survey (NHMS III. 2006. Ministry of Health Malaysia.
- Malaysia NCD Surveillance 1. 2006. NCD risk factors in Malaysia. Ministry of Health Malaysia.
- Margetts, B.M. and Nelson, M. 1997. Design Concepts in Nutritional Epidemiology. Second Edition. Oxford: Oxford University Press.
- Rothman KJ & Greenland S 1998. Modern Epidemiology. Ed. 2, Philadelphia: Lippincott Raven Publishers.
- Willett W 1998. Nutritional Epidemiology. Ed 2. Oxford: Oxford University Press.

NNND6033 Nutritional Requirements and Nutritional Status Assessments

This course provides understanding of nutritional requirements and recommendations for populations and individuals according to the life cycle. Students will have the opportunity to study the rationale for each recommendations made in the Recommended Nutrient Intakes. Discussions will also cover various methods of nutritional status assessments that are suitable for evaluation of various populations in the community and health care centers. Students will have hands-on experience in various techniques, including computer software analysis of nutrient intakes, anthropometric and body composition measurements, and calorimetric techniques for assessing energy expenditure.

Basic Readings

- Fidanza, F. 1991. Nutritional status assessment: A manual for population studies. London: Chapman & Hall.
- Gibson, R.S. 2005. Principles of nutritional assessment. 2nd Edition. Oxford: Oxford University Press.

- Lee, R.D. & Nieman, D.C. 2006. Nutritional assessment. 4th Ed. USA: McGraw-Hill Education.
- NCCFN. 2005. Recommended Nutrient Intakes for Malaysia. A Report of the Technical Working Group on Nutritional Guidelines. Putrajaya: National Coordinating Committee on Food and Nutrition, Ministry of Health Malaysia.
- Sauberlich, H.E. 2000. Laboratory tests for the assessment of nutritional status. Florida: CRC Press.

NNND6053 Human Physiology and Nutrient Metabolism in Health And Disease

This course discuss physiological process of human body throughout the lifecycles from foetal development, physiological adaptation during pregnancy, lactation and aging, specifically related to nutrition. This is follow by detail discussion about growth and gastrointestinal function including digestion and absorption of nutrient. Energy balance and its adaptation according to different level of energy expenditure and age, stress and disease condition; also neurological control of appetite and effect of food on mood. Another focus of the course is detail understanding of macro and micronutrient metabolism under different types of diet, nutritional status and stress such as fasting, hunger, starvation, high protein diet and chronic disease. Seminar and case discussion related to inbalance physiological function such as obesity, anorexia nervosa and bulimia will also be conducted.

Basic Readings

- Berdanier, C.D. 1998. *Advanced nutrition micronutrients*. Florida: CRC Press.
- Berdanier, C.D. 2001. *Advanced nutrition macronutrients*. Florida: CRC Press.
- Brody T. 1999. *Nutritional Biochemistry*. 2nd edition. Academic Press
- Garewal, H.S. 1997. *Antioxidants and disease prevention*. Florida: CRC Press.
- Sareen S. Gropper, Jack L. Smith & James L. Groff. 2005. *Advanced Nutrition and Human Metabolism*. Ed. Ke-4. Wadsworth: Thomson

NNND6093 Research Design and Statistics

The objective of this course is to produce students who are able to do descriptive statistics, inferential and advanced statistics. They will also learn on how to do statistic analysis using SPSS. Understand the relevant concepts and theories of statistics, and hence will be able to choose the suitable statistical methods for design of experiment and analysis. Understand the concepts of statistical methods and able to apply them for analysis of data in type of data. Able to perform data analysis and statistical tests using a statistical package like SPSS.

Basic Readings

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.

- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish*. Version 15.0 for Windows. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics*. 4th edition. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design using ANOVA*. Duxbury Press.

NNND6082 Nutrition and Aging

This course discuss aging from the perspective demographic transition, psychosocial, physiological, nutrition and health. Nutritional and health problems related to aging including cognitive impairment, geriatric syndromes, sarcopenia, malnutrition, androgen deficiency, menopause and osteoporosis will be discussed in depth. Students will be trained on techniques to assess nutritional and functional status. This course will also discuss other aspects in the care of elderly people including ergogeriatric, nutrition intervention and supplementation programme, exercise and fitness, and also rehabilitaton, health and social programmes specifically in Malaysia, and also other countries.

Basic Readings

- Niedert, K.C. ed. 1998. *Nutrition Care of the Older AdultCare*. USA: The American Dietetic Association.
- Noor Safiza Mohamad Nor, Khor Geok Lin, Suzana Shahar, Kee Chee Cheong, Jamaiyah Haniff, Geeta Appannah, Rahmah Rasat, Alan Wong Nam Foong, Ahmad Ali Zainuddin, Jamalludin Ab Rahman , Ruzita Abd. Talib, Ahmad Faudzi Haji Yusoff. 2008. Chapter II: Nutritional Status of Adults (Aged 18 years and above). In *The Third National Health and Morbidity Survey 2006 (NHMS III)*. Nutritional Status. Institute for Public Health, National Institutes of Health, Ministry of Health.
- Suzana Shahar, Noor Aini Mohd Yusoff, Nik Shanita Safii, Rafidah Ghazali, Roslina A. 2009. *Atlas Makanan: Pertukaran dan Saiz Porsi (Food Atlas: Exchanges and Portion Sizes) (Second Edition)*. MDC Publisher, Kuala Lumpur.
- Suzana Shahar, Zuriati Ibrahim, Suriah Abdul Rahman, Siti Nur' Asyura Adznam (eds). 2007. *Pemakanan dan Penilaian Kesihatan Warga Tua (Nutrition and Health Assessment among Older People)*. Penerbit UKM, Bangi.
- Watson, R.R. ed. 2000. *Handbook of Nutrition in the Aged*. 3rd ed. Florida: CRC Press.

NNND6192 Food and Nutrition Policy

The course will provide an understanding of the policies and programmes related to food and nutrition carried out by the government, bilateral and multilateral agencies. It will also discuss the effect of the policies on availability and food quality including health status of the population either directly on indirectly using examples from developing

and developed countries. Topics on poverty, human rights, trade liberalization, health reform, food balance sheet, food composition, dietary guidelines and code of ethics for infant formula products will be discussed by lecturers from the department and invited lecturers with related experience.

Basic Readings

- Goel, S.L.. 2005. Public health policy and administration . New Delhi:Deep and Deep Publications.
- Gormley, K. 1999. Social policy and health care. Edinburgh Churchill Livingstone.
- Min. Of Agriculture, 1999. Third National Agricultural Policy (1998-2010). Kuala Lumpur: Ministry of Agriculture Malaysia.
- MOH (2006) National Plan of Action for Nutrition, Malaysia. Ministry of Health Malaysia, Putrajaya
- WHO, 2004. 5th. Report on the world nutrition situation: Nutrition for improved development outcomes. SCN, WHO, Switzerland.

NNND6124 Community Nutrition Research Project I

Students are required to conduct research independently over two semesters under the supervision of a lecturer. In this semester, the student is required to prepare a research proposal and apply for ethics approval. The student will conduct a literature review in relation to their selected topic of research. The processes that will be learnt include developing a research question, study hypothesis and conceptual framework that is suitable for the research topic. Students will also plan a study design and methodology that is suitable for the research. If necessary, the students will develop and pretest/validate questionnaires and/or any other tools that are required to be submitted with the proposal to the Medical Research and Ethics Committee of UKM and any other Ethics Committee, if required.

Basic Readings

- Altman D.G. 1995. *Practical statistics for medical research*. London: Chapman & Hall.
- Friedland, A.J. & Folt, C.L. 2000. *Writing successful science proposals*. New Hampshire: Yale University Press.
- Margetts B.M. & Nelson M. 1991. *Design concepts in nutritional epidemiology*. New York: Oxford University Press.
- Ogden, T.E. & Goldberg, I. A. 2002. *Research proposal: a guide to success*. Third edition. California:Academic Press.
- Pusat Pengajian Siswazah. 2009. Panduan menulis tesis gaya UKM. Ed. terkini. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

NNND6213 Contemporary Issues in Nutrition and Health

This course discusses evolution of ideas in the science of Nutrition and its association with the community health development. This course also provides knowledge and

understanding on current issues and its association with body function. Students have to conduct survey among the public on contemporary nutrition issues. Students will discuss and debate their survey findings based on scientific evidenced in seminars and forums that will be held as part of the course requirements.

Basic Readings

- Caballero, B. & Popkin, B.M. 2002. *Nutrition transition: Diet-related diseases in the modern world*: Academic Press.
- Garrow, J.S. & James, W.P.T. 2000. *Human nutrition and dietetics*. Ed. Ke-10. Edinburgh: Churchill Livingstone.
- Ungar, P.S. & Teaford, M.F. (eds). 2002. *Human diet: Its origin and evolution*. Greenwood Publishing Group.
- World Health Organization. 2003. *Diet, nutrition and the prevention of chronic diseases*. Geneva: WHO Technical Report Series 797.

NNND6243 Critical Assessment of Foods, Diets and Supplements

Critical thinking means reliable knowledge. Through this course students learn about science and pseudoscience and how to differentiate and assess the reliability of information related to nutrition and supplement use. In doing this, students will develop the skill of dissecting scientific literature related to food claims. This course is designed to facilitate the development of critical thinking and problem-solving skills in health care and nutrition by requiring the student to analyze and solve conceptual and practical problems confronting the nutrition care professional. A problem-based learning (PBL) approach is used in which students work independently or in small groups to collect information relevant to problem solution, and take a hypothesis-oriented approach to dealing with each task. At the end of the course the student should develop evidence-based thinking in relation to the wide variety of dietary supplements that are available for public consumption..

Basic Readings

- Nestle, M. 2002. *Food politics: how the industry influences nutrition and health*. California: University of California Press.
- Sanders, TAB & Emery, P. 2003. *Molecular basis of human nutrition*. Taylor & Francis.
- Stephen Jay Gould. 1981. *The mismeasure of man*. WW Norton & Company. New York.
- Walter, P (ed.) 1995. *The scientific basis for vitamin intake in human nutrition*. Karger S Inc.
- Widmer, PL. 1997. *Diets for reducing obesity including diet therapy research: index of new information for reference and practice*. Washington DC: Abbe Pub Assn.

NNND6262 Nutrition Education and Intervention

This course introduces models on how to plan, develop, implement and evaluate the nutrition education and intervention programmes in the selected community. Students will be taught the application of education process which involves determination of

learning and behaviour objectives and the selection of appropriate interventions which are based on learning theory and development of central directive strategies for the specific target groups. This course will include the nutrition education and intervention programs available in Malaysia.

Basic Readings

- Bartholomew L.K., Parcel G.S., Kok G. & Gottlieb N.H. 2006. Planning health promotion programs. An intervention mapping approach. John Wiley & Sons, Inc.
- Cottrell, R.R., Girvan, J.T. & McKenzie, J.F. 2001. Principles and foundations of health promotion and education. Ed. ke-2. Pearson Education.
- Glanz, K., Lewis, F.M. & Rimer, B.K. 1996. Health behavior and health education: Theory, research and practice. Ed. ke-2. Jossey-Bass Inc. Publishers.
- Kreuter, M.W., Green, L.W. & Lezin, N.A. 2003. Community health promotion ideas that work: Jones & Bartlett Publishers Inc.
- McKenzie, J.F., Neiger, B.L. & Smeltzer, J.L.. 2005. Planning, implementing, and evaluating health promotion programs: A primer. Ed. Ke-4. Pearson Education.

NNND6363 Organization Behaviour and Personnel Management

This course covers the theory and practice in clarifying, estimating and controlling behavior and environment related to personnel management. Emphasis will be placed on leadership, motivation, communication and group dynamics in an organization. The course will also discuss the relationship between the organization and their personnel including work analysis, efficiency, effectiveness, training and development of health personnel.

Basic Readings

- Bernardin, H.J. 2010. Human Resource Management: An Experiential Approach. 5th Ed. New York: McGraw-Hill.
- Ivancevich, J.M., Konopaske, R. & Matteson, T.M. 2005. Organizational Behavior and Management. 7th Ed. Singapore: McGraw-Hill Higher Education.
- Jaafar, M. 2003. Kelakuan Organisasi. 5th Ed. Petaling Jaya: Leeds Publication.
- Kreitner, R. & Kinicki, A. 2009. Organizational Behaviour. 9th Ed. Boston: McGraw-Hill College.
- Shortell, S.M. & Kaluzny, A.D. 2005. 5th Ed. Health Care Management: Organization Design and Behavior. Albany, NY: Delmar Cengage Learning.

NNND6413 Advanced Medical Nutrition Therapy

This advanced medical nutrition therapy course covers comprehensively on current nutritional management of acute and chronic disease and dietary issues relating to diseases based on scientific evidence. This involves diseases or conditions that require therapeutic diet, namely endocrine, gastrointestinal, hepatobiliary, paediatrics, oncology, renal, cardiovascular, AIDS, trauma and burn. Each disease state is taught comprehensively from pathophysiology of the disease, nutritional assessment, dietary modification, drug-

nutrient interactions and follow-up management. Seminar and case presentation will be conducted as part of course requirement. Students will also gain practical experience in preparing therapeutic meal of their case studies.

Basic Readings

- Escott-Stump, S. 2008. *Nutrition and Diagnosis – Related Care*. 6thEd. Lippincott Williams & Wilkins. Philadelphia. USA.
- Medical Nutrition & Therapy Guidelines. 2005. Malaysian Dietitian Association.
- Nelms MN & Anderson SL. 2004. *Medical Nutrition therapy A Case study approach*. 2nd edition. Thomson Wadsworth, USA
- Shaw, V & Lawson, M. 2007. *Clinical Paediatric Dietetics*. 3rd Ed. Blackwell Publishing. Oxford. United Kingdom.
- Thomas, B. 2007. *Manual of Dietetic Practice*. Oxford: Blackwell Scientific Publications. London.

NNND601C Community Nutrition Research Project II

Students are required to conduct research independently under the supervision of a lecturer. Students may choose to carry out projects in the areas related to community nutrition or laboratory based studies.

In this semester, the student is required to collect data for his research. The student will also learn data management, including data entry, data cleaning, data analysis and data interpretation. The student will be required to write up their research report in the form of a thesis. Besides that, the student will also present their research findings and defend their research in a viva session. The student will produce a draft manuscript that is suitable for publication in a scientific journal.

Basic Readings

- Alley, M. 2002. *The craft of scientific presentations: critical steps to succeed and critical errors to avoid*. New York: Springer.
- Altman D.G. 1995. *Practical statistics for medical research*. London: Chapman & Hall.
- Matthews, J.R., Bowen, J.M. & Matthews, R.W. 2001. *Successful scientific writing: A step-by-step guide for biomedical scientists*. Cambridge: Cambridge University Press.
- Phelps R, Fisher K & Ellis AE. 2007. *Organizing and Managing Your Research: A Practical Guide for Postgraduates*. London: Sage Publications Ltd.
- Pusat Pengajian Siswazah. 2009. *Panduan menulis tesis gaya UKM. Ed. Ke-6*. Bangi: Penerbitan Universiti Kebangsaan Malaysia.

Masters of Health Science (Health Education)

Introduction

This programme require at least three semesters. It comprised an aspect of health education. It explain concept in term of strategy, model and communication that can change behavior and individual as well as community. Health education work activity focused on specific group looking at their characteristic and behavior. Health education does not only involve dissemination of information but also involve counseling process, individual, family and community active participation. Health Education Officer would be capable to plan, execute and analyse health education programme to promote/implement the health education program launched by the Malaysian Ministry of Health.

Objectives

To produce graduate that understand the knowledge of education & health promotion involving human behaviour & health, Health Belief Model & Education & Health Promotion Method which can be applied to individual, family and community.

Total Unit

The total compulsory units that have been set for this programme is 42 units.

Curriculum for Masters of Health Science (Health Education)

Semester I

Code	Course Name	Unit
NNNH6013	Anatomy, Physiology & Human Development	3
NNNH6053	Behavioral Science	3
NNNH6213	Biotic, Diseases & Epidemiology	3
NNNH6423	Communication Theory & Approaches	3
NNNH6613	Community Health	3
NNNH6623	Health Education Programme Planning	3
	Total Units	18 units

Semester II

Code	Course Name	Unit
NNNH6023	Health Education in the Health Care Systems	3
NNNH6033	Educational Media	3
NNNH6043	Management of Health & Community Services	3
NNNH6063	Training & Manpower Development	3
NNNH6223	Health Education Strategy	3
NNNH6413	Social Research Methods & Statistics	3
	Total Units	18 units

Semester III

Code	Course Name	Unit
NNNH6016	Research Project	6
	Total Units	6 units

Grand total unit is 42 units

Synopsis of Courses for Masters of Health Science (Health Education)

NNNH6013 Anatomy, Physiology and Human Advancement

The course includes lectures and tutorials. The course introduces introduction to Anatomy and Physiology of the human body of the various systems of the body and how it works in coordination and what happens in a disease or abnormal condition. It also includes development and nutritional requirements.

Basic Readings

- Golombok, S. & Firush, R. 1994. *Gender development*. New York: Cambridge University Press.
- Guyton, A.C. 1990. *Textbook of medical physiology*. Philadelphia: W.B.Saunders.
- Noback, C.H.1992. *Human anatomy and physiology (Ed. Ke-2)*. New York: Mc Graw Hill.
- Shier, D., Butler J & Lewis R. 2002. *Human anatomy & physiology*. New York: Mc Graw Hill.
- Wilson, K.J. 1990. *Anatomy and physiology, health and illness*. London: Longmans.

NNNH6053 Behavioural Sciences

This module will enable students to gain clear understanding of behavior science foundation and its application to health promotion. Relevant concepts and theories to affect behavior change will be introduced. Ethical aspect will also be discussed.

Basic Readings

- Glanz, K., Lewis, M.F. & Rimer, B.K. 1990. *Health behaviour and health education*. San Francisco: Oxford University Press.
- Hawkins, D.J., Best, R.J. & Coney, K.A. 2001. *Consumer behaviour*. USA: Irwin Mc Graw Hill.
- London, D.L. & Della Bitta, A.J. 1993. *Consumer behaviour. (Ed. Ke-4)*. New York: Mc Graw Hill. Int. Ed.
- Spezzano, C. 1992. *What to do between birth and death. The art of growing up*. New York: William Morrow.
- Taylor, S.E. 1997. *Health psychology. (Ed. Ke-4)*. New York: Mc Graw Hill.
- Tolman, C.W. & Maiers, W. 1991. *Critical psychology. Contributions to a historical science of the subject*. Cambridge: Cambridge University Press.

NNNH6213 Biotic, Disease and Epidemiology

The course consists of lectures and assignments. It emphasizes basic aspects of disease causation and transmission, epidemiology, infectious and non-communicable diseases. In addition, students will be exposed to information regarding frequently occurring diseases in Malaysia, Epidemiological Research and Disease Control Programme of the Ministry of Health Malaysia.

Basic Readings

- Ann, A. George, R.S. 2006. *Essentials of Epidemiology in Public Health*. Jones & Bartlett, Boston.
- Hanson, F.A. 1993. *Testing, social consequences of the examined life*. Berkeley: University California
- Phoon, W.O. & Cion, P.C.Y. 1996. *Textbook of community medicine in South East Asia*. Singapore: John Wiley & Sons.
- Rothman, J.K. 1996. *Modern epidemiology*. London: Boston Little Brown.
- Thomas, C.T. 2006. *An Introduction to Epidemiology (3rd Ed)*. Jones & Bartlett, Boston.

NNNH6423 Communication Theory and Presentation

The module will expose students to health communication concept and risk communication. Student will also be able to apply using health communication theories in health promotion program. The students can prepare and manage risk communication during pre-crisis, during crisis and post crisis. This course consists of lectures, hands on experience, group discussions and assignments.

Basic Readings

- Alan, B. 2007. *Improve Your Communication Skills 2nd. Edition*. London: Replika Press Pert. Ltd.
- Dianne, B. 2007. *Health Communication: theory and practice*. New York: Mc Graw Hill- Open University Press.
- Karen, G., Barbara, K.R., Kasisomay, A.V. 2008. *Health Behaviour and Health Education*. San Francisco: Jossey Bass.
- Kevin, B.W., Lisa, S., Dan, O.. 2007. *Health Communication in the 21st. Century*. USA: Blackwell Publication, Inc.
- Owen, D.W.H. 2006 *The Handbook of Communication Skills 3rd. Edition*. New York: Routledge Publications.
- Renata, S. 2007. *Health Communication: From Theory to Practice*. San Francisco: Jossey Bass.

NNNH6613 Community Health

This course will discuss concepts, philosophy and basic principles of public health, human ecology and its relation to disease and health. In addition, topics such as physical,

psycho-social and cultural aspects that contributes to the formation of a particular disease, community health requirements, health organisation patterns, health programmes in Malaysia, community development programmes and special programmes such as school health, occupational health and other settings will also be covered.

Basic Readings

- Baum, F. 2008. *The New Public Health 3rd Edition*, Oxford University Press.
- Blas, E., Sommerfeld, J and Kurup, A.S. 2011. *Social Determinants to Public Health*, WHO
- Hancock, J. 1993. *Health, human development and the community ecosystem*. Health Promotion International, 8, 1, 41-47.
- Phoon, W.O & Chen, P.C.Y. 1996. *Textbook of community medicine in South East Asia*. Singapore: John Wiley & Sons.
- Program Kesihatan, Perubatan, Sokongan & Teknikal Negara-Negara di bawah WHO. 2001.
- Program Kesihatan, Perubatan, Sokongan & Teknikal. 2001. Kementerian Kesihatan Malaysia.

NNNH6623 Planning Programme for Health Education intervention.

The module will expose students to concept of planning, its various component and steps in designing a program plan. Students will also be able to apply commonly used models to health promotion program planning. This course consists of lectures, tutorials and assignments.

Basic Readings

- Bartholomew, L.K., Guy, S.P., Gerjo, K. & Nell, H.G. 2006. *Planning Health Promotion Programs: An Intervention Mapping Approach*. (2nd edition). Jossey-Bass, a Wiley Imprint.
- Green, L.W. & Kreuter M.W. 1999. *Health promotion planning: An educational and ecological approach*. (Ed. Ke 3). London: Mayfield Publication Company.
- James, F.M., Brad, L.N., Rosemary, T. 2009. *Planning, implementing & evaluating health promotion programs: a primer*. (5th edition). Pearson International Edition.
- Karen, G., Barbara, K.R., Frances, M.L. 2002. *Health behaviour and health education: theory, research and practice*. (3rd edition). Jossey-Bass, a Wiley Imprint.
- Ralph, J.D., Riachard, A.C., Michelle, C.K. 2002. *Emerging theories in health promotion practice and research: strategies for improving public health*. Jossey-Bass, a Wiley company.

NNNH6023 Health Education in Health Care System

The course includes the scopes and roles of education in patients care delivery system. It explores the sick-role behaviour, apply behavioural change strategies and approaches; and methods in health education and promotion. It enables the students to carry out patient education intervention programmes in the patient care setting.

Basic Readings

- Annette Bender and Martha Byington, December 2008. *Communicating with Patients Issue Editors*, Risk Management Foundation Harvard Medical Institutions
- Barbara Klug Redman, 2009. *The Practice of Patient Education, 11th Edition*, Mosby
- Joanne Desmond, 2008. *Communicating with Today's Patient: Essentials to Save Time, Decrease Risk, and Increase Patient Compliance*, Lanny R Copeland.
- Margaret Comerford Freda, 2008. *Issues in Patient Education, Journal of Midwifery & Women's Health*, Journal Midwifery Womens Health.
- Rankin, S.H, Stallings, K.D & London,F, 2009 (6th Edition), *Patient Education in Health and Illness (patient education: issues, principle & practices)*, Lippincott Williams & Wilkins

NNNH6033 Media Education

This course covers the concept of media education that includes mass communication process, media techniques and forms. This course stresses on effective and influential media usage based on different types of media. Students will be taught how to carry out pre-testing and evaluation of the media. At the end of the course the students would be able to produce credible and effective educational media (electronic and printed media).

Basic Readings

- Downing, J.D. 2001. *Radical media*. USA Sage Publishers.
- Henry, J. 2006. *Convergence Culture, Where Old and New Media Collide*. New York University Press.
- Joan, G. 2010. *Annual Edition: Mass media (10th Edition)* McGraw-Hill/Dushkin.
- Joseph, R. D. 2010. *Dynamics of Mass Communication Media In Transition. (11th Edition)*. McGraw-Hill.
- Joseph, R.D., Fritz, M., Barry, L. S. 2007. *Broadcasting, cable, The Internet and Beyond.: An Introduction to*
- Michael, O. Stephanie, A. J, Robert, M. 2010. *Educational Media and Technology Yearbook. (First Edition)*. Colorado: Littleton

NNNH6043 Health Management and Community Services

Students will be exposed to various important aspects such as management theory and practice, health organisations, administrative and professional functions, Malaysian government's procedure related to health management, supervision and leadership, health information system, institutional structures and forms at the district, state, national levels and international cooperation in health care.

Basic Readings

- Azizi, Y. 2010. *Gelagat Organisasi: Satu Pendekatan Strategik*. Universiti Utara Malaysia.
- Bateman, S. 2002. *Management. (Ed. Ke-5)*. New York: Mc Graw Hill.
- Garvin, D.A. 2002. *General management*. New York: . Mc Graw Hill Irvian.

- Gayla, D., Gibson D. & Ivancerich, D.L. 1998. *Fundamentals of management*. New York: Mc Graw Hill.
- Robbins, S.P. & Coulter, M. 1999. *Management.(Ed. Ke-6)*. New York: Prentice Hall.

NNNH6063 Training and Improvement of Work Energy Knowledge

The course includes educational theories, evaluation of needs, learning principles, learning towards training system, curriculum development, in-service training, training course planning, presentation, micro-teaching techniques and skills and management training programmes.

Basic Readings

- Ferri, B. 2006. Teaching to trouble. In S. Danforth & S. Gabel (Eds.), *Vital questions facing disability studies in education* (pp. 289 – 306). New York, NY: Peter Lang.
- Klein S.B, 2009. Learning: principles and application fifth edition. Mississippi: sage publication inc
- Posner, G.J., & rudnitsky A.N. 2006. Course Design : A Guide to Curriculum Development for Teacher. Allyn & Bacon Inc
- Seifert, L. & Stacey M. 1998. *Trouble shooting for trainers*. London: Gower Pub.Ltd.
- Slavin, R.E. 1997. *Educational psychology: Theory & practice*. London: Allyn & Bacon

NNNH6223 Health Education Strategy

This course covers health promotion strategies. Among important aspects included in the course are health promotion in Malaysia and experiences from other selected countries.

Basic Readings

- Dines, A. & Cribb, A. 1993. *Health promotion: Concepts & practice*. San Francisco: Blackwell Scientific Publications.
- Egger, G., Spark R & Lawson, J. 1990. *Health promotion strategies & methods*. New York: Mc Graw-Hill.
- Gilbert, G.G. & Sawyer, R.G. 1995. *Health education: creating strategies for school and community health*. London: Jones & Bartlett Publication.
- Glantz, K., Lewis, F.M & Rimer B.K. 1990. *Health behaviour & health education: Theory, research & practice*. London: Jossey-Bass Publishers.
- Green, L.W & Kreuter, M.W. 1991. *Health promotion planning: An educational & environmental approach*. London: Mayfield Publishing.
- World Health Organisation. 1990. *General Concepts of Health Education*. Health Education In The Control Of Schistosomiasis. Geneva.

NNNH6413 Social Research Method and Statistic

This course consists of lectures, laboratory sessions and tutorials. The course includes quantitative and qualitative method in health statistics, research methodology such as planning, sampling method, data collection, analysis and data interpretation.

Basic Readings

- Blair, R.C. & Taylor, R.A. 2008. *Biostatistics for the health Sciences*. New Jersey: Pearson Prentice Hall.
- Carver, R.H. & Nash, J.G. 2006. *Doing data analysis with SPSS Version 14*. Duxbury: Thomson. Brooks/Cole.
- Coakes, S. J., Steed, L.G. & Price, J. 2008. *SPSS: Analysis without Anguish. Version 15.0 for Windows*. Australia : John Wiley & Sons, Ltd.
- Dawson, B & Trapp, G. 2004. *Basic & Clinical Biostatistics. 4th edition*. Boston: Lange Medical Books/McGraw-Hill.
- Tabachnick, B.G. & Fidell, L.S. 2006. *Experimental Design using ANOVA*. Duxbury Press.

NNNH6016 Research Project

Research project is an extension of social research methods and statistic course. It involves practical training to expose students to practical research in the community. Students are required to do a health education intervention project and present the research proposal in a seminar. After completion of the project, once again, the student is required to present the research outcome for evaluation.

Masters of Health Science (Clinical Linguistics)

Introduction

Clinical linguistics is an area of study within the Speech Sciences field. Clinical linguistics is the application of linguistic theories and analytical techniques in the field of speech, language and communication impairment. It can be used in the description, explanation and remediation of a wide range of impairments in children and adults. All areas of linguistics can be applied clinically to study breakdown in the perception, production and representation of language in all its modalities. By investigating the ways in which communication may be impaired, clinical linguistics also provides insights into the nature of normal language, its development and use. Students will be exposed to interrelated areas specifically normal language acquisition, linguistics of disordered clinical data, the varied speech and language disorders, and educational management for children with special needs.

Objectives

To produce graduates knowledgeable in Clinical Linguistics who are able to produce rigorous analysis of aspects of linguistics in speech and language impairment involving local languages in Malaysia. In addition to that, graduates will also be able to produce assessment and management speech and language tools based on the local languages, cultures and population of Malaysia. Finally, graduates will work closely with speech and language pathologists and other professionals in helping to enhance therapy materials in order to improve overall management of the speech and language difficulties. This is to provide opportunities for individuals with special needs to lead a better quality of life and to be able to contribute to nation building and nation state.

Total Unit

The total compulsory units that have been set for this programme is 40 units.

Curriculum for Masters of Health Science (Clinical Linguistics)

Semester I

Code	Course Name	Unit
NNNS5013	Developmental Language Disorders	3
NNNS5033	Acquired Language Disorders	3
NNNS5053	Language Processing & Acquisition	3
NNNS5082	Clinical Linguistic Seminar	2
NNNS5093	Research Methodology & Statistics	3
Choose 2 courses from the following:		
NNNS5012	Morphology & Syntax	2
NNNS5032	Phonetics & Phonology	2
NNNS5052	Semantics & Pragmatics	2
Choose 1 courses from the following:		
NNNS5011	Linguistic Analysis in Clinic	1
NNNS5031	Clinical Practicum	1
	Total Units	19 units

Semester II

Code	Course Name	Unit
NNNS5023	Research Issues in Communication Disorders	3
NNNS5024	Project Dissertation I	4
NNNS5043	Linguistic Aspects of Communication Disorders	3
NNNS5063	Motor Speech Disorders	3
NNNS5073	Experimental Linguistics	3
Choose 1 courses from the following:		
NNNS5021	Linguistic Analysis in Clinic	1
NNNS5041	Clinical Practicum	1
	Total Units	17 units

Semester III

Code	Course Name	Unit
NNNS5044	Project Dissertation II	4
	Total Units	4 units

Grand total units is 40 units

Synopsis of Courses for Masters of Health Science (Clinical Linguistics)

NNNS5013 Developmental Language Disorders

This course discusses the types of developmental language disorders: the aetiology, symptoms, nature and typology also the different intervention approaches taken. Students will be exposed to models of assessments and will do language samples analysis. The procedures in making management decisions and intervention principles employed will be discussed. Students will be required to read journal articles on the types of acquired disorders and will produce a critique of the readings as a group.

Basic Readings

- Gilliam et al. 2000. *Communication Sciences and Disorders- From Science to Clinical Practice*. Singular Publishing Group.
- Goldstein, H., Kaczmarek, L. & English, Kri. 2001. *Promoting social communication: children with developmental disabilities from birth to adolescence*. (Communication and language intervention series, 1). London: Brookes.
- Leonard, L. 2000. *Children with specific language impairment*. Massachusetts: MIT Press.
- Paul, R. & Paul, VI. 2001. *Language disorders from infancy through adolescence: assessment and intervention*. New York: Mosby.
- Weissenborn, J. & Hohle, B. 2001. *Approaches to bootstrapping: phonological, lexical, syntactic and neurophysiological aspects of early language acquisition* (language acquisition and language disorders, V23). Amsterdam: John Benjamins.

NNNS5033 Acquired Language Disorders

This course focuses on the assessment and management of aphasia, right brain injury, dementia, traumatic brain injury, dysarthria and apraxia. The connection between the symptoms of dysphagia and motor disorders will be made. This course will stress on the relationship between aetiology, motor organization, localization, symptomatology and management practices. We will also emphasize on the issues of diagnosis. The alternative mode of communication such as the alternative augmentative communication will be touched on.

Basic Readings

- Beukelman, D., Yorkston, K. & Reichle, J. 2000. *Augmentative and alternative communication for adults with acquired neurologic disorder*. London: Paul H. Brookes.

- Freed, D. 2000. *Motor Speech Disorders: Diagnosis & Treatment*. Singular Publishing Group.
- Hedge, M.N. 2006. *A Coursebook on Aphasia and Other Neurogenic Language Disorders*. Ed. Ke-3. Thomson Delmar Learning.
- Helm-Estrabrooks, N. & Albert, M.L. 2004. *Manual of Aphasia and Aphasia Therapy*. Ed. Ke-2. Austin, TX:Pro-ED.
- Kosta, J. 2005. *Communication Interaction with Elderly Japanese in Nursing Care Settings*. In *Perspective on Gerontology*. American Speech Language Hearing Association. V10, N1, pgs 11-14.

NNNS5053 Language Processing & Acquisition

This course will discuss the interactions between language acquisition and feature input processing in speech perception processes. This revolves around knowledge about language abilities of children according to various theoretical frameworks like the cognition hypothesis, functional approach, parameter setting in learning framework etc. The theme of the course is the relationship between brain, mind, language, speech and communication in language acquisition.

Basic Readings

- Bowman, M. & Levinson, S. 2001. *Language acquisition and conceptual development*. Cambridge: Cambridge Univ. Press.
- Guasti, M. 2002. *Language acquisition – The growth of grammar*. Cambridge: MIT Press.
- Kess, J. 1992. *Psycholinguistic – Psychology, linguistics, and the study of natural language*. Amsterdam: John Benjamins.
- McLaughlin, S. 1998. *Introduction to language development*. San Diego: Singular Publishing Group.
- Naremore, R. & Hopper, R. 1996. *Children learning language. A practical introduction to Communication Development*. Ed Ke-3. San Diego: Singular Publishing Group.

NNNS5082 Clinical Linguistic Seminar

This seminar-based course enables students to do independent readings on specialized topics under the guidance of the lecturer. Student choose a topic out of a given list of topics. Students will then do independent readings of relevant writings on specific aspects of the topic and do oral presentations on the readings in class. The written reports on readings will be submitted to the lecturer after each oral presentation. Students are encouraged to choose topics which are relevant to their dissertations project. Amongst topics provided would include diagnostics, teaching modules for special education, spontaneous speech analysis, aphasia, stuttering, autisme, dyslexia, hearing impairment, etc.

NNNS5093 Research Methodology & Statistics

This course introduces research methodologies like open ended conversations, structured or semi-structured elicitations, experimental studies, surveys, naturalistic data collection,

etc. The stages in research planning for example choosing a topic, conducting literature review, the selection procedures for choosing subjects, collection of data, the analyzing of data will be covered. The statistical section will introduce students to the use of statistics in clinical linguistics studies which among others would involve probabilities, inferential statistics, the concept of co-variance and coefficient, etc. The graphic presentation of data, the use of descriptive statistics concepts like probability, basic model and inference, hypothesis testing, t-Statistics, t-test for two independent samples, correlations etc will also be discussed.

Basic Readings

- Gravetter, F. & Wallnau, L. 2004. *Statistics for the Behavioral Sciences*. Australia: Thomson Wadsworth
- Kothari, C.R. 2004. *Research Methodology: Methods & Techniques*. New Delhi: New Age International Ltd.
- Lum, C. 2001. *Scientific thinking in speech and language therapy*. London: Lawrence Erlbaum.
- Silverman, F. 1997. *Research and evaluations in speech-language pathology and audiology*. New York: Allyn & Bacon.
- Windsor, F., Kelly, L. & Hewlett, N. 2000. *Investigations in clinical phonetics and linguistic*. London: Lawrence Erlbaum.
- Woods, A., Fletcher, P., Hughes, A. 1986. *Statistics in language studies*. London: Cambridge University Press.

NNNS5012 Morphology & Syntax

The course discusses aspects of linguistic study – scope, objectives and problems which touches on the universality of language or language universals in the sub-areas of morphology and syntax. The first part of the course will handle morphological processes which includes inflectional, derivational systems, compounding and its relation between morpho-phonological operations and its constraints on morphological rules. Interface relations between morphology and syntax will be established. Morphological aspects in language development, morphological problems in clinical data like in Aphasics will be discussed. The second part of the course will handle principles in construction of structures like phrases, clauses and the use of merging principles utilizing surface structures. The relationship between morphology and syntax in the understanding and production of language will be made.

Basic Readings

- Lasnik, H. et al. 2000. *Syntactic structures revisited – Contemporary lectures on classic transformational theory*. Massachusetts: MIT Press.
- McDaniel, D., McKee, C. & Caims, H. 1998. *Methods for Assessing Children's Syntax*. Cambridge, Massachusetts: MIT Press.
- Ouhalla, J. 1999. *Transformational grammar: From principles and parameters to minimalis*. Ed. Ke-2. London: Arnold.

- Radford, A. 1998. *Syntax: A minimalist introduction*. Cambridge Univ. Press.
- Spencer, A & Zwicky, a. 1998. *The handbook of morphology*. Massachusetts: Blackwell.

NNNS5032 Phonetics & Phonology

This course deals with aspects of modern phonology which includes phonetics, variance in phonetics, classification class of natural sounds, alternations, rule-based systems, prosodic phonology and theoretical aspects like lexical approach, the autosegmental approach, dependency and government, etc. This course will look at aspects of phonological acquisition and developmental phonology amongst children. Phonological processes used by children will also be elaborated on. We will also look at phonological disorders and articulation disorders. Students will be trained hands-on to do practical tasks like listening to sounds, transcribing and analyzing sounds using instrumentations.

Basic Readings

- Bowen, C. 1998. *Developmental phonological disorders*. Melbourne: ACER Press.
- Grunwell, P. 1997. Natural phonology. In M. Ball & R. Kent (Eds.), *The new phonologies : Developments in clinical linguistics*. San Diego: Singular Publishing Group, Inc.
- Lof, G.L. 2004. Confusion about speech sound norms and their use. *Thinking Publications Online Conference*. <http://thinkingpublications.com/LangConf04/OLCIntro.html>.
- Schiller, O. & Meyer, A. 2003. *Phonetics and Phonology in Language Comprehension and Language Production*. Walter de Gruyter.
- Singh. S. & Singh, K. 2000. *Phonetic – Principles and practices*. Ed. Ke-3. San Diego: Singular Publishing Group.

NNNS5052 Semantics & Pragmatics

This course focuses on the study of semantics or meaning. Topics of discussion revolve around concepts in semantics, pragmatic which involves deixis, presuppositions, implicatures, speech acts, semantic relations in language acquisition, discourse aspects like conversations, symbolic play etc which are used in children's understanding and production of language. The application of semantics and pragmatics concepts in clinical language data will also be carried out.

Basic Readings

- Best, W. Bryan, K. & Maxim, J. 2001. *Semantic processing: Theory and practice*. London: Whurr.
- Bloom, P. 2000. *How children learn the meaning of words*. Cambridge: MIT Press.
- Cruse, D. & Cruse, A. 2000. *Meaning in language: An Introduction to Semantics and Pragmatics*. London: Oxford Univ. Press.
- Muller, N. (Ed). 2000. *Pragmatics in speech and language pathology*. Amsterdam: John Benjamins.
- Paradis, M. 1998. *Pragmatics in neurogenic communication disorders*. Pergamon Press.

NNNS5011/5021 Linguistic Analysis in Clinic

For two semesters, students who do not have Speech Sciences background will be trained in the techniques of observation and taping of individual therapy sessions between clients and speech-language pathologists in the Speech Sciences Clinic. Students will video/ audio tape therapy sessions and subsequently transcribe the language sample recorded. Analysis of language samples will also be carried out. Group work will be conducted in the use of language profiling tools LARSP, PRISM, PROPH, PROP on language samples collected. Oral presentations in which students present their profiling findings will be carried out. Students will also be exposed to various activities conducted in clinic like assessment sessions, language tasks used in speech therapy clinics, and sit in the post-clinic discussions. Students will also observe multidisciplinary management of clients by various relevant professionals.

NNNS5031 / 5041 Clinical Practicum

Students with Speech Sciences background and is certified to practice will undergo clinical placements in specialized speech sciences clinics. Students are encouraged to choose a certain type of speech and language disorders that they would like to focus on depending on clinical expertise available in the department at any one time. It could include among others pediatric speech and language disorders for example autisme, down syndrom, speech and language delay, voice clinics, aphasia clinics, hearing impairment clinic, etc. In semester I, students will do pediatric client caseload while in semester 2, students will do adult client case load.

NNNS5023 Research Issues in Communication Disorders

This course aims to discuss the construction of assessment tools and therapy materials based on the local population and languages of Malaysia. It touches on the collating of the normative data for the typical child language development, construction of assessment tools for the purposes of screening, diagnosing and the production of therapy materials used in speech therapy clinics. The process of construction of tests will take into consideration guidelines set by the testing board in the field, reliability and validity of the tests constructed.

Basic Readings

- Cole, K. & Dale, D. 1996. *Assessment of Communication and Language*. Ed ke-6. Baltimore, MD: Paul H. Brooke.
- Cystal, D. 1991. *The grammatical analysis of language disability: A procedure for assessment and remediation*. London: Arnold.
- Cystal, D. 1991. *The grammatical analysis of language disability: A procedure for assessment and remediation*. London: Arnold.
- Luinge, M.R; Post, W.J; Wit, H.P; & Goorhuis-Brouwer, S.M (2006) *The Ordering of Milestones in Language Development for Children From 1 to 6 Years*.

Journal of Speech, Language, and Hearing Research; Oct 2006; 49, 5; Health Module pg. 923.

Paul, R. & Paul, VI. 2001. *Language disorders from infancy through adolescence: assessment and intervention*. New York: Mosby.

Shipley, K.G. & McAfee, J.G. 2004. *Assessment in Speech-Language Pathology: A Resource Manual*. Ed ke-3. San Diego: Singular Publishing Group.

NNNS5024/5044 Dissertation Project

Students can choose a research topic in the area of clinical linguistics subject to the available supervisory expertise at any one time in the department. (Supervisory expertise could be expertise in the department or external expertise.) The proposed topic will be selected and agreed upon in semester II and will be elaborated on in NS 5082 Clinical Linguistics Seminar. The research topic will be a topic which is a combination of both theoretical and clinical aspects. In semester III, students will present their final research findings which will be assessed and contribute towards the final marks awarded for the course. The written form of dissertation will be in the form of a journal article which has been published in an international journal of ISI ranking.

NNNS5043 Linguistic Aspects of Communication Disorders

The course aims to give in-depth understanding of current researches which provide linguistic explanations to language pathology. Example would be aphasia. Discussions will be focused on aggramatisme, paragramatisme based on error analysis of speech and connected speech, also the function of verbs and its arguments in the understanding and production of speech by individuals with aphasia, syntactic processing deficits amongst aphasia, naming difficulties amongst aphasics, conversation analysis of aphasics and their caregivers.

Basic Readings

Bastiaanse, R., Grodzinsky, Y. & Grodsky, Y. 2000. *Grammatical disorders in aphasia: A neurolinguistic perspective*. London: Whurr.

Fava, E. (Ed). 2002. *Clinical linguistics: Theory and applications in speech pathology and therapy*. Amsterdam: John Benjamins.

Grundy, K. 1989. *Linguistic in clinical practice*. London: Taylor & Francis

Maasen, B. & Groenen, P. 1999. *Pathologies of speech and language: Advances in clinical phonetics and linguistics*. London: Whurr.

Perkins, M. & Howard, S. 1995. *Case studies in clinical linguistics*. San Diego: Singular.

NNNS5063 Motor Speech Disorders

This course will discuss dysarthria i.e a disorder which is caused by abnormality to the neuromuscular system. Discussions would cover the structures involved in dysarthria, speech processes resulting from the abnormality of components in the neuromuscular system, its aetiology, assessments, the different types of dysarthria, characteristics of

apraxia, research findings on instrumental research to apraxia.

Basic Readings

- Ball, M. & Kent, R. 1997. *The New Phonologies: Developments in Clinical Linguistics*. San Diego: Singular.
- Freed, D. 1999. *Motor Speech Disorders: Diagnostic & Treatment*. San Diego: Singular.
- Kent, R. & Weismer, G. (Eds). 2006. *Motor Speech Disorders*. Plural Publishing.
- Love, R. 1999. *Childhood Motor Speech Disability*. Ed. 2. New York: Allyn & Bacon.
- Tobin, Y. 1999. *Phonology as Human Behaviour: Theoretical Implications and Clinical Applications*. Vermont: Duke Univ. Press.

NNNS5073 Hearing Impairment

This course provides a perspective to hearing impairment; contemporary issues in the education of children with hearing impairment, teaching methodologies, educational contexts and the method of communication and its implication to children with hearing impairment; language and culture of hearing impaired communities, the functions of hearing, basic handling of hearing aid devices, the acoustics of listening. The impact of hearing loss and its relationship to the developmental process of listening, speech, language and communication amongst preschool children and school age children will also be discussed.

Basic Readings

- Flexer, C. 1999. *Facilitating hearing and listening in young children*. New York: Singular.
- Mahsie, J., Moseley, M., Scott, S. & Lee, J. 2004. *Enhancing communication skills : Deaf and hard hearing children*. New York: Singular.
- McLean, J & McLean, L. 1999. *How children learn language : A guide for professionals in early childhood or special education*. New York: Singular.
- Nevins, M. & Chute, P. 1996. *Children with cochlear implants in educational settings*. New York: Singular.
- Paul, P. 2001. *Language and deafness*. New York: Singular. New York: Singular.

Masters of Health Science (Clinical Optometry)

Introduction

Optometry is a primary eye health care profession. It is an independent profession whose services are directly available to the public. An optometrist is a health care professional who examines, diagnoses, and treats disorders and conditions of the visual systems. The ability of an optometrist to solve visual problems and care for vision disorders will be accelerated through the Master of Health Science (Clinical Optometry) programme.

Objectives

To produce professionals who are:

- Proficient in examining, diagnosing, and treating complicated disorders of the visual system.
- Proficient in providing specialty contact lens care.
- Proficient in providing vision care to children and the elderly.
- Able to design and evaluate, projects which involve assessment and intervention of visual problems.
- Able to understand ethical issues related to individual and community health.

Total Unit

The total compulsory units that have been set for this programme is 40 units.

Curriculum for Masters of Health Science (Clinical Optometry)

Semester I

Code	Course Name	Unit
NNNV6014	Ocular Therapeutics	4
NNNV6023	Methods & Ethics of Research	3
NNNV6213	Advanced Clinical Optometry I	3
NNNV6214	Advanced Contact Lenses	4
NNNV6224	Clinical Management	4
	Total Units	18 units

Semester II

Code	Course Name	Unit
<i>Core Courses</i>		
NNNV6024	Case Analysis	4
NNNV6123	Special Clinics	3
NNNV6323	Advanced Clinical Optometry II	3
<i>Elective Courses (Choose one elective course only)</i>		
NNNV6124	Public Health Optometry	4
NNNV6324	Advanced Binocular Vision	4
NNNV6524	Pediatric Optometry	4
NNNV6724	Geriatric Optometry	4
	Total Units	14 units

Semester I

Code	Course Name	Unit
NNNV6238	Project	8
	Total Units	8 units

Grand total units is 40 units

Synopsis of Courses for Masters of Health Science (Clinical Optometry)

NNNV6014 Ocular Therapeutics

This course seeks to provide the student with knowledge of bio medical sciences in the context of understanding ocular anomalies and disorders. This course contains background knowledge necessary to diagnose and understand the therapeutic management of eye diseases. This course contains lectures, practicals and clinical postings to expose the students with good clinical skill in diagnosing and having the knowledge of managing ocular diseases. At the end of the course, the student is expected to be able to conduct eye examination using advanced techniques, be able to diagnose ocular diseases and have the knowledge of management of these patients.

Basic Readings

- Biswas, N.R. & Gupta, V. 2004. *Ocular Therapeutics*. Ed ke-2. CBS Publishers and Distributors.
- Doughty, M.J. 2010. *Ocular Pharmacology and Therapeutics : A Primary Care Guide*. BH/Optician.
- Levin, L.A. & Albert, D.M. 2010. *Ocular Disease: Mechanism and Management*. Saunders.
- Onofrey, B.E., Skorin, L., & Holdeman N.R. 2011. *Ocular Therapeutics Handbook: A clinical Manual*. 2rev ed. Lippincott Williams & Wilkins.
- Yurio 2007. *Ocular Therapeutics: Eye On New Discoveries*. Academic Press.

NNNV6023 Methods & Ethics of Research

This course has lectures, presentations and assignments. This course will emphasize on basic and advanced biostatistics principles. Different study designs will also be taught which are related to health sciences research. By understanding these principles, the student is able to design research and choose appropriate statistics to be used. The student will also be taught data interpretation. The student will also be taught the correct way to write a scientific report. At the end of the course, students will be able to conduct, write, present and report the outcome of their research.

Basic Readings

- Balakrishnan, N., Read, C.B., Vidakovic, B. Kotz, S., Johnson, N.L. 2010. *Methods and Applications of Statistics in the Life and Health Sciences*. WileyBlackwell.
- Campbell, M.J., Machin, D., Walters, S.J. *Medical Statistics: A Textbook for the Health Sciences*. 2007. Ed ke-4. WileyBlackwell.

- Creswell, J.W. 2008. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Ed ke-3. SAGE Publications Inc. Sugarman, J. & Sulmasy, D.P. 2010. *Methods in Medical Ethics*. 2nd ed. Georgetown Univ Pr.
- Kuzman, J.W. & Bohnenblust, S. 2005. *Basic Statistics for the Health Sciences*. Ed ke-5. McGraw-Hill Higher Education.
- Laake, P., Benestad, B. & Olsen, B.R. 2007. *Research Methodology in the Medical and Biological Sciences*. Academic Press.

NNNV6213 Advanced Clinical Optometry I

This course has lectures, presentations and workshops. This course will emphasize on advanced techniques and latest developments. The advanced optometry procedures include gonioscopy, funduscopy, slitlamp, indirect binocular ophthalmoscopy, scleral depression, ultrasonography, corneal topography, corneal photography, computerized visual field analysis and visual functions.

Basic Readings

- Benjamin, W.J. 2006. *Borish's Clinical Refraction*. 2nd ed. . Butterworth-Heinemann.
- DuBois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated. .
- Grosvenor, T. 2002. *Primary care optometry*. 4th ed. Boston: Butterworth-Heinemann.
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th ed.. Boston: Butterworth-Heinemann.
- Rosenfield, M. & Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. 2nd ed. . Butterworth-Heinemann.
- Van Boemel, G.B. 1999. *Special skills and techniques. The basic book shelf for eyecare professionals*. Thorofore: Slack.Eskridge.

NNNV6214 Advanced Contact Lenses

This course is aimed at exposing the students to different aspects of special contact lenses theoretically and practically. Students will be required to conduct presentations related to latest research in contact lenses. This will include the effect on ocular physiology, biocompatibility, liquid lenses, expediated orthokeratology and aftercare solutions. Workshops will also be conducted to enable students to learn how to use and interpret results obtained from new and advanced equipment in contact lenses.

Basic Readings

- Bennett, E.S. & Weissman, B.A. 2004. *Clinical Contact Lens Practice*. Lippincott Williams & Wilkins.
- Efron, N. 2000. *The Cornea: Its examination in contact lens practice*. Oxford: Butterworth-Heinemann.
- Harris, M.G. 1996. *Contact Lenses: Treatment option for ocular disease*. St Louis: Mosby.

- Jones, L.W. & Jones, D.A. 2000. *Common Contact Lens Complications: Their Recognition and Management*. Oxford: Butterworth-Heinemann.
- Swartz, C. A. 1996. *Specialty Contact Lenses: A Fitter's Guide*. W.B. Saunders Company.
- Sweeney, D. 2000. *Silicone Hydrogels: The rebirth of continuous wear contact lenses*. Oxford: Butterworth-Heinemann.

NNNV6224 Clinical Management

This course is an extension of NV 6213 Advanced Clinical Optometry I and NV 6014 Ocular Therapeutics. . It is in the form of an attachment at a hospital.. It is aimed at exposing the student to different types of patients with different complications and observing and learning the different management approaches. It is also instilling confidence, expertise and professionalism in students as professional optometrists in specific elective areas. Throughout the course, students are required to observe, examine when given the opportunity and suggest management of patients with complicated vision problems under the supervision of clinical supervisors, and have a log book. At the same time, students are also required to conduct special diagnostic procedures using latest equipment in the optometry clinic. At the end of this course, the student should have acquired good clinical skills.

Basic Readings

- Casser, L. and Fingeret M.. 1997. *Atlas of Primary Eyecare Procedures*. 2nd ed. McGraw-Hill Medical. .
- Dubois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated
- Ettinger ER, Rouse MW. 1997. *Clinical decision making in optometry*. Boston: Butterworth-Heinemann.
- Grosvenor T. 2006. *Primary care optometry*. 5th ed. Butterworth-Heinemann.
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th Edition. Boston: Butterworth-Heinemann.
- Ledford, J.K. 1998. *The complete guide to ocular history taking*. Slack Incorporated,
- Levin, L.A. & Albert, D.M. 2010. *Ocular Disease: Mechanism and Management*. Saunders.

NNNV6024 Case Analysis

This course is in the form of presentation of clinical cases and recent research papers in various disciplines in optometry. The student will be given a topic or journal paper for critical evaluation. The student is required to present the strength or weakness of the study, or comment on the management of a case.

Basic Readings

- Ettinger ER, Rouse MW. 1997. *Clinical decision making in optometry*. Boston: Butterworth-Heinemann.
- Grosvenor T. 2002. *Primary care optometry*. Ed ke-4. Boston: Butterworth-Heinemann.

NNNV6123 Special Clinics

This course is the clinical component of the elective course. It is aimed at instilling confidence, expertise and professionalism in students as professional optometrists in specific elective areas. Throughout the course, students are required to examine and management patients with complicated vision problems under the supervision of clinical supervisors, have a log book, conduct dispensing and delivery jobs. At the same time, students are also required to conduct special diagnostic procedures using latest equipment in the optometry clinic. At the end of this course, the student should have acquired good clinical skills.

Basic Readings

- Benjamin (2006). *Clinical Refraction*. 2nd Ed. Butterworth-Heinemann.
- Jackson AJ, Wolffsohn JS. (2007). *Low Vision Manual*. Butterworth-Heinemann
- Lueck AH (2004). *Functional Vision: A Practitioner's Guide to Evaluation and Intervention*. American Foundation for the Blind.
- Melore GG (1997). *Treating vision problem in the older adult*. *Mosby's optometric problem solving series*. St. Louis Missouri, Mosby.
- Rosenbloom AA, Morgan MW (2007). *Vision and aging*. Butterworth-Heinemann
- Rosenfield M., Logan N. 2009. *Optometry: Science, Techniques and Clinical Management*. Butterworth-Heinemann.

NNNV6323 Advanced Clinical Optometry II

This course is a continuation of NV 6213. It consists of lectures, presentations and workshops. This course will emphasize on advanced techniques and latest developments. The advanced optometry procedures include funduscopy, intraocular pressure measurements, computerized visual field analysis and electrodiagnostic procedures. It also gives explanation of the clinical applications.

Basic Readings

- Benjamin, W.J. 2006. *Borish's Clinical Refraction*. 2nd ed. . Butterworth-Heinemann.
- Casser, L. and Fingeret M.. 1997. *Atlas of Primary Eyecare Procedures*. 2nd ed. McGraw-Hill Medical.
- DuBois, L. 2005. *Clinical Skills for the Ophthalmic Examination: Basic Procedures*. 2nd ed. Slack Incorporated
- Kanski, J.J. & Bowling, B. Kanski, J.J. 2007. *Clinical Ophthalmology. A Systemic Approach*. 6th ed.. Boston: Butterworth-Heinemann.
- Rosenfield, M. & Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. 2nd ed. . Butterworth-Heinemann.

- Van Boemel, G.B. 1999. *Special skills and techniques. The basic book shelf for eyecare professionals*. Thorofore: Slack.Eskridge.
- Zadnik, K. 1997. *The ocular examination*. Philadelphia: W.B. Saunders.

NNNV6724 Geriatric Optometry

This course consists of lectures, presentations and workshops. It discusses the visual function changes amongst the elderly, for example contrast sensitivity, colour vision, transmission through the ocular media, visual acuity and visual fields. Psychological changes, low vision definition, incidence and etiology, routine management, magnification of optical system and advanced optics of low vision will also be taught. Other services available to low vision patients in Malaysia will also be discussed.

Basic Readings

- Benjamin (2006). *Clinical Refraction*. 2nd Ed. Butterworth-Heinemann.
- Jackson, A.J., dan Wolffsohn, J.S. (2007). *Low Vision Manual*. Butterworth-Heinemann
- Lueck, A.H. (2004). *Functional Vision: A Practitioner's Guide to Evaluation and Intervention*. American Foundation for the Blind.
- Melore, G.G. (1997). *Treating vision problem in the older adult. Mosby's optometric problem solving series*. St. Louis Missouri, Mosby.
- Rosenbloom, A.A., dan Morgan, M.W. (2007). *Vision and aging*. Butterworth-Heinemann
- Rosenfield, M., dan Logan, N. 2009. *Optometry: Science, Techniques and Clinical Management*. Butterworth-Heinemann.

NNNV6238 Project

This course involves research work on a topic chosen by the student and agreed by a supervisor. The topic of the research will depend on the expertise of the lecturers in their respective areas. Students should use the knowledge obtained in their first year to design their own research, conduct the data collection, analyze and write a project report with guidance of the supervisor.

Basic Readings

- Fink, F. 2009. *Conducting Reserach Literature Reviews: From the Internet to Paper*. 3rd ed. Sage Publications, Inc.
- Garrard, J. 2010. *Health Sciences Literature Review Made Easy: The Matrix Method*. 3rd ed. Jones & Bartlett Publishers.
- Jacobson, K.H. 2011. *Introduction to Health Research Methods*. Jones & Bartlett Learning.
- Lachin, J.M. 2010. *Biostatistical Methods: The Assessment of Relative Risks (Wiley Series in Probability and Statistics)*. 2nd ed. Wiley.
- Roberts, C.M. 2010. *The Dissertation Journey: A Practical and Comprehensive Guide to Planning, Writing, and Defending Your Dissertation*. 2nd ed. Corwin Press.

Varsiti Kita

*Lihat Kampusku yang tenang
Damainya alam ciptaan Tuhan
Paduan ilmu dan keimanan
Amal dan jerih digabungkan*

*Lautan ilmu kita harungkan
Sumber ilmuan berkembang*

*Inilah Varsiti kita
Ditengahkan hasrat rakyat kita
Dari mula untuk semua
Bagai tanda perjuangan kita*

*Bangun berbakti membela
Memupuk insan jiwa bertakwa
Memimpin manusia semua
Kenal akan adat unggulnya*

*Membina negara senantiasa
Maju berilmu dan bahagia*

*Inilah Varsiti kita
Ditengahkan hasrat rakyat kita
Dari mula untuk semua
Bagai tanda perjuangan kita*

*Penggubah
Nazri Ahmad*

**Jawatankuasa Penerbitan
Buku Panduan Siswazah
Fakulti Sains Kesihatan
Sesi Akademik 2010-2011**

Penasihat

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Dekan

Pengerusi

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Prof. Dr. Norimah A. Karim
Prof. Dr. Mohd Ismail Mohd Noor
Prof. Madya Dr. Nor Fadilah Rajab
Prof. Madya Dr. Poh Bee Koon
Prof. Madya Dr. Tilakavathi A/P Karupaiah
Prof. Madya Dr. Sharanjeet Kaur A/P Malkeet Singh
Prof. Madya Dr. Cila Umat
Prof. Madya Dr. Rogayah A. Razak
Prof. Madya Dr. Ng Lai Oon
Prof. Madya (K) Kanaga Kumari A/P Chelliah
Dr. Jacinta Santhanam
Dr. Zahara Abdul Manaf
Dr. Suhaina Sulaiman
Puan Siti Sa'adiyah Hassan Nudin

Setia Usaha

En. Baharuzaini Baharin
Penolong Pendaftar

Rekabentuk

En. Zulkifli Ibrahim

En. Khalid Hashim

Pusat Penerbitan dan Percetakan UKM

Jurufoto

En. Ismail Ibrahim

Pusat Penerbitan dan Percetakan UKM