UNIVERSITI PENDIDIKAN SULTAN IDRIS
اونيۏرسيتي قنديديقن سلطان ادريس
SULTAN IDRIS EDUCATION UNIVERSITY

Panduan Akademik
Academic Guideline

Fakulti Sains & Matematik
Faculty of Science and Mathematics

Program Sarjana Muda
Degree Programmes

Sesi 2026/2027
Session 2026/2027



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Panduan Akademik
Academic Guideline

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FAKULTI SAINS DAN MATEMATIK

‘MEMUPUK MINDA KREATIF’

ALUAN DEKAN

Assalamualaikum Warahmatullahi Wabarakatuh,
Selamat Sejahtera

Alhamdulillah, syukur ke hadrat Ilahi kerana dengan izin-Nya jua maka Buku Panduan Akademik Program Sarjana Muda Fakulti Sains dan Matematik Sesi Akademik 2025/2026 dapat diterbitkan dengan jayanya.

Syabas dan tahniah kepada semua warga kerja Jawatankuasa Buku Panduan Akademik Program Sarjana Muda Fakulti Sains dan Matematik Sesi Akademik 2025/2026 yang telah bekerja keras dan bertungkus lumus untuk memastikan penerbitan buku panduan ini terlaksana dengan jayanya. Saya mewakili semua pensyarah dan warga kerja Fakulti Sains dan Matematik mengucapkan selamat datang dan tahniah kepada semua pelajar baharu yang telah ditawarkan untuk mengikuti program pengajian peringkat Sarjana Muda di Fakulti Sains dan Matematik, Universiti Pendidikan Sultan Idris.

Buku panduan ini disediakan khas untuk memberikan panduan dan penerangan kepada siswa dan siswi mengenai peraturan akademik, kurikulum, sinopsis kursus, struktur program pengajian dan semua perkara penting yang perlu diketahui oleh pelajar sepanjang menjalani program pengajian Fakulti ini. Saya berharap pelajar akan menggunakan buku panduan ini dengan sebaik-baiknya sebagai rujukan sepanjang berada di Universiti ini. Buku ini juga amat berguna kepada orang awam yang ingin mendapatkan maklumat mengenai sistem akademik di Fakulti.

Akhir kata, sekali lagi saya mengalu-alukan kehadiran pelajar baharu ke Fakulti ini dan berharap agar kita sama-sama dapat berusaha menggemilangkan pendidikan Sains dan Matematik dengan melengkapkan diri dengan ilmu pengetahuan dan kemahiran yang kreatif dan inovatif selaras dengan moto Universiti Pendidikan Sultan Idris iaitu “Peneraju Kebitaraan Pendidikan” dan moto Fakulti Sains dan Matematik “Memupuk Minda Kreatif”.



Profesor Dr. Mohd Faizal Nizam Lee Abdullah
Dekan
Fakulti Sains dan Matematik

LATAR BELAKANG UPSI

TERBILANG DI HAMPARAN WARISAN TIGA GENERASI

Universiti Pendidikan Sultan Idris (UPSI) telah memainkan peranannya yang unik dalam sejarah pendidikan . Pada permulaan penubuhannya, universiti ini dikenali sebagai Maktab Latihan Perguruan. UPSI melalui tiga era perkembangan pendidikan yang berbeza iaitu Sultan Idris Training College (SITC), 29 November 1922 - 1957, Maktab Perguruan Sultan Idris (MPSI), 1957 - 1987 dan Institut Perguruan Sultan Idris (IPSI), 21 Februari 1987 - April 1997. Tiga era ini juga memperlihatkan wadah generasi guru dan pendidik yang dilahirkan oleh institusi ini dalam tempoh 75 tahun. Pada tanggal 1 Mei 1997 bermulalah lembaran barunya sebagai sebuah universiti, apabila universiti ini diperbadankan di bawah Perintah Universiti Pendidikan Sultan Idris (Perbadanan) 1997 dan Perintah Universiti Pendidikan Sultan Idris (Kampus) 1997 menerusi Warta Kerajaan P.U (A) 132 & 133 yang bertarikh 24 Februari 1997.

Pada awal penubuhannya, terdapat hanya empat buah fakulti yang menawarkan sepuluh program pengajian. Fakulti-fakulti tersebut adalah Fakulti Bahasa, Fakulti Sains Sosial dan Kesenian, Fakulti Sains dan Teknologi, dan Fakulti Sains Kognitif dan Pembangunan Manusia. Pada tahun 2002, dua buah fakulti baharu ditubuhkan, iaitu Fakulti Perniagaan dan Ekonomi dan Fakulti Teknologi Maklumat dan Komunikasi, menjadikan jumlah fakulti sehingga itu enam buah dengan jumlah 19 kursus pengajian di peringkat Ijazah Sarjana Muda. Peningkatan ini menggambarkan perubahan besar yang dirancang menampung keperluan akademik negara dan jumlah pelajar yang ingin menjadi guru semakin bertambah. Seterusnya, Fakulti Sains Sosial dan Kesenian ditukar namanya kepada Fakulti Seni dan Muzik manakala Fakulti Sains Sosial dan Kemanusiaan dan Fakulti Sains Sukan ditubuhkan sebagai fakulti baharu.

Pada 1 Jun 2010, penstrukturan semula fakulti UPSI dilaksanakan bertujuan meningkatkan daya saing universiti pada masa itu.

Ini adalah bagi merealisasikan visi dan misi Universiti untuk menjadi universiti nombor satu dalam bidang pendidikan. Fakulti di UPSI sekarang seperti berikut:-

1. Fakulti Sains dan Matematik (FSM)
2. Fakulti Pembangunan Manusia (FPM)
3. Fakulti Bahasa dan Komunikasi (FBK)
4. Fakulti Sains Sukan dan Kejurulatihan (FSSK)
5. Fakulti Sains Kemanusiaan (FSK)
6. Fakulti Muzik dan Seni Persembahan (FMSP)
7. Fakulti Seni, Komputeran dan Industi Kreatif (FSKIK)
8. Fakulti Pengurusan dan Ekonomi (FPE) .
9. Fakulti Teknikal dan Vokasional (FTV).
10. Fakulti Komputeran & Meta Teknologi (META).

VISI UPSI

Menjadi Universiti yang bitara, cemerlang dalam kepimpinan pendidikan berlandaskan kegemilangan sejarah serta menerajui perubahan global.

MISI UPSI

Menjana dan menatar ilmu menerajui pengajaran, penyelidikan, penerbitan, perundingan dan khidmat masyarakat, dalam konteks pembangunan insan untuk mencapai wawasan negara.

MOTO UPSI

"Universiti No.1 Pendidikan"



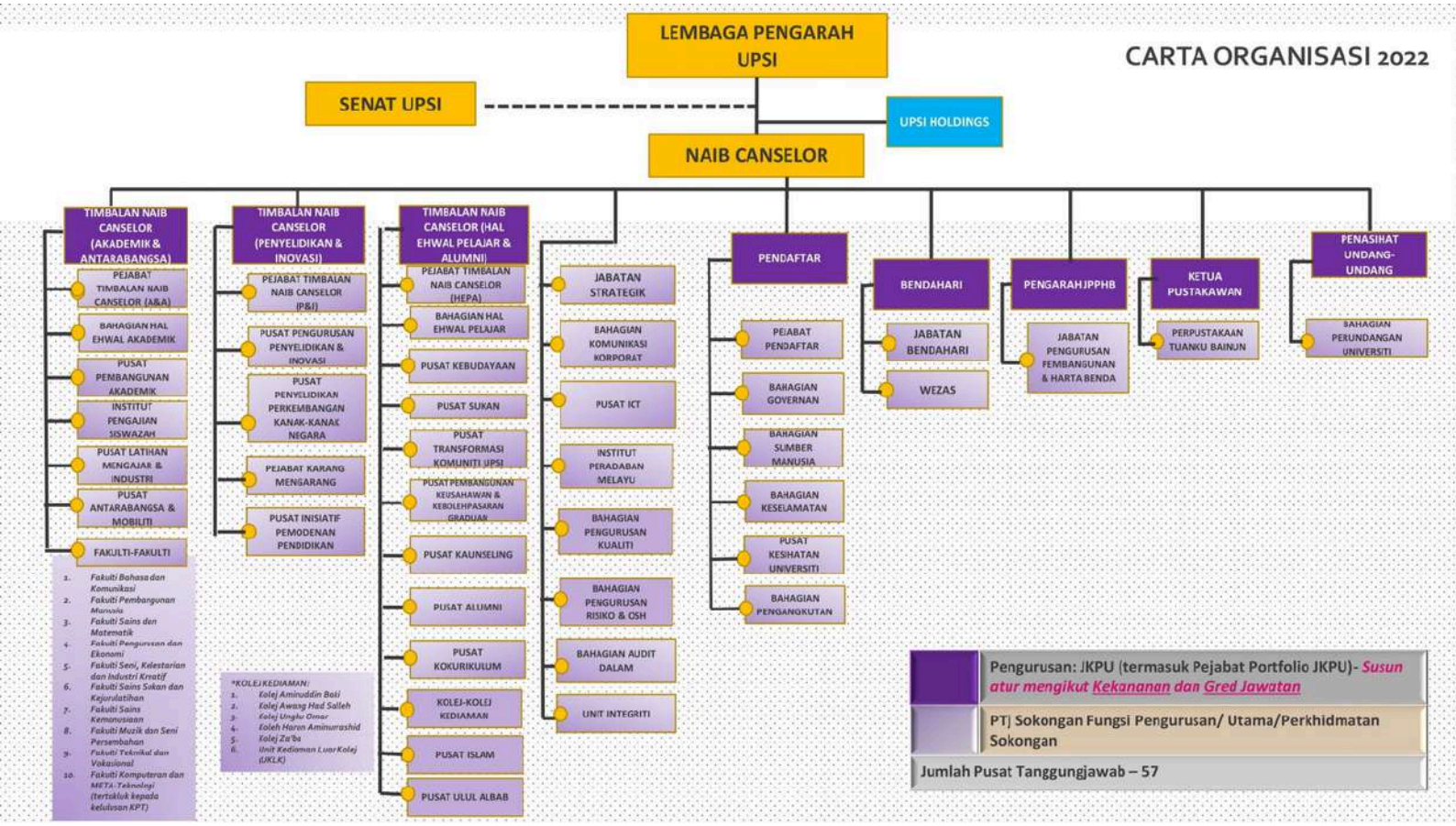
MATLAMAT

UNTUK MENCAPAI MISI DI ATAS, UNIVERSITI BERAZAM DAN BERITLIZAM UNTUK:

- Mengutamakan keikhlasan intelek dan kejujuran sikap dalam aktiviti meneroka sambil menyoal kembali kebenaran yang telah diterima selama ini bagi menjana, mengembang dan memperdalam ilmu.
- Mewujudkan kesinambungan sumbangan yang berterusan bagi membangun dan memperkaya ilmu terutamanya menerusi bahasa Melayu dalam pelbagai bidang.
- Menatar dan berkongsi ilmu melalui aktiviti-aktiviti kesarjanaan, termasuk perangkaian maklumat, pendidikan, penerbitan dan perundingan dalam dan luar negara.
- Membina potensi individu bagi menjadikannya berilmu, berketerampilan, berakhlak tinggi, berakhlak mulia dan bersemangat patriotis.
- Menggerakkan komunitinya supaya lebih prihatin betapa perlunya mereka menyumbang khidmat kepada masyarakat dan negara, terutama ke arah pemupukan semangat patriotik dan nasionalistik untuk membina sebuah bangsa Malaysia dan menyumbang kepada kesejahteraan sejagat.

Carta Organisasi UPSI

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FAKULTI SAINS DAN MATEMATIK

SEJARAH

FST / FSM

Liku sejarah Fakulti Sains dan Matematik bermula dengan tertubuhnya Universiti Pendidikan Sultan Idris (UPSI) pada tahun 1997 dengan nama Fakulti Sains dan Teknologi (FST). Selaras dengan visi dan misi untuk mentransformasikan UPSI ke peringkat antarabangsa, UPSI telah menstruktur semula Fakulti Sains dan Teknologi kepada Fakulti Sains dan Matematik (FSM) berkuatkuasa mulai 1 Jun 2010. Penstrukturan semula ini supaya Fakulti Sains dan Matematik bersedia menerajui penerokaan ilmu terkini dan releven agar sentiasa diperbatasan hadapan ilmu sains dan matematik. Seterusnya, Fakulti Sains dan Matematik akan memainkan peranannya dalam pembangunan dan transformasi agenda pendidikan negara melalui program pengajian sedia ada, penyelidikan, perundingan, penerbitan dan aktiviti khidmat masyarakat.

Program pengajian yang ditawarkan mempunyai perkaitan dengan sains dan matematik. Matlamat utama program pengajian adalah untuk meningkatkan dan memantapkan pengetahuan, kemahiran dan persediaan bakal graduan dalam bidang pendidikan sains dan matematik di sekolah menengah dan institusi pengajian tinggi. Program yang ditawarkan bertujuan untuk menyumbang ke arah pembangunan dan kemajuan pengetahuan serta kemahiran sains asas, sains gunaan serta logik matematik selaras dengan moto fakulti iaitu ”Memupuk Minda Kreatif ”. Kecemerlangan Fakulti Sains dan Matematik dibuktikan menerusi penerimaan pelbagai anugerah dan pengiktirafan dalam bidang penyelidikan dan inovasi di peringkat kebangsaan dan antarabangsa. Selain itu, Fakulti Sains dan Matematik juga aktif dalam aktiviti khidmat masyarakat menerusi aktiviti dan program berterusan.

KEMUDAHAN

PRASARANA

Kecemerlangan Fakulti Sains dan Matematik adalah gabungan kecemerlangan pensyarah, penyelidik dan pentadbir dan pegawai sokongan dalam memberikan perkhidmatan kepada pelajar, menyediakan kemudahan dan prasarana pengajaran seperti Makmal Pengajaran dan Pembelajaran, Makmal Biologi, Makmal Fizik, Makmal Kimia, Makmal Matematik, Makmal Tiub Kaca, Balai Cerap Astronomi, Bengkel Mekanikal, Makmal Komputer Multimedia serta Makmal Penyelidikan bagi tujuan membantu pelajar mempraktik dan mengaplikasikan pengetahuan teknologi terkini secara interaktif. Kemudahan makmal diuruskan oleh mereka yang pakar dalam bidang teknikal untuk membantu pelajar menjalani proses pembelajaran yang kondusif dan mengasah kemahiran praktikal mereka.



VISI/MISI/MOTO

VISI, MISI, MOTO

VISI FSM

Peneraju Kreativiti dan Inovasi Sains dan Matematik

MISI FSM

Menjadi peneraju dalam bidang Sains dan Matematik menerusi pendidikan dan penyelidikan yang kreatif dan inovatif

MOTO FSM

“Memupuk Minda Kreatif”



OBJEKTIF FSM

- Menjadi pusat kecemerlangan pendidikan sains dan matematik;
- Melahirkan modal insan yang profesional dan bertanggungjawab;
- Menjalankan penyelidikan dan menjana ilmu baharu dalam bidang sains dan matematik;
- Menerbitkan hasil penyelidikan atau idea-idea baharu dalam bidang sains dan matematik; dan
- Memberi sumbangan kepakaran dan perundingan dalam bidang sains dan matematik untuk memajukan negara.

DASAR KUALITI FSM

Kami, staf Fakulti Sains dan Matematik, Universiti Pendidikan Sultan Idris, komited ke arah kecemerlangan melalui penerapan budaya kualiti dan penambahbaikan berterusan mengikut keperluan MS ISO 9001:2008 di dalam pengajaran, penyelidikan, perundingan dan penerbitan yang berorentasikan pelanggan.

Dasar ini menjadi rangka kerja pembentukan dan penilaian objektif kualiti Fakulti dan Jabatan serta panduan kepada staf untuk melaksanakan tugas dan tanggungjawab dengan cekap, kreatif dan inovatif.

OBJEKTIF KUALITI FSM



TERAS 1:
KEBITARAAN AKADEMIK

Mencapai kebitaraan akademik menerusi kecemerlangan staf akademik, pelajar dan penawaran kursus



TERAS 2:
KECEMERLANGAN PENYELIDIKAN DAN INOVASI

Menerajui kecemerlangan menerusi aktiviti penyelidikan, penerbitan, perundingan dan pengkomersilan



TERAS 3:
KEUNGGULAN GRADUAN

Menghasilkan graduan holistik yang unggul dari perspektif akademik dan akhlak serta keusahawanan



TERAS 4:
KELESTARIAN JARINGAN INDUSTRI DAN KOMUNITI

Memperluaskan kolaborasi strategik bersama pihak industri dan komuniti sehingga ke peringkat antarabangsa

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Penolong Pegawai Sains C5
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: hazim@upsi.edu.my



Penolong Pegawai Sains C5
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: normazwani@upsi.edu.my



Penolong Pegawai Sains C5
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: qayyum.idris@upsi.edu.my

FACULTY OF SCIENCE AND MATHEMATICS

FSM UPSI

NURTURING CREATIVE MINDS

PROGRAM AKADEMIK YANG DITAWARKAN

PROGRAM AKADEMIK FSM









DOKTOR FALSAFAH:

Mod: Penyelidikan

- Pendidikan Biologi
- Pendidikan Fizik
- Pendidikan Kimia
- Pendidikan Sains
- Pendidikan Matematik
- Biologi
- Fizik
- Kimia
- Matematik
- Statistik Gunaan
- Matematik Gunaan
- Statistik

SARJANA:

SARJANA PENDIDIKAN

- Pendidikan Biologi
- Pendidikan Fizik
- Pendidikan Kimia
- Pendidikan Sains
- Pendidikan Matematik
- Pendidikan Sains Data

SARJANA SAINS

Mod: Penyelidikan

- Biologi
- Fizik
- Kimia
- Matematik
- Matematik Gunaan
- Instrumentasi
- Fizik Bahan
- Tenaga Boleh Diperbaharui
- Kimia Analisis
- Sebatian Semulajadi
- Bahan Termaju
- Statistik Gunaan
- Statistik

IJAZAH SARJANA MUDA:

- Ijazah Sarjana Muda Pendidikan (Biologi) dengan Kepujian (AT11)
- Ijazah Sarjana Muda Pendidikan (Fizik) dengan Kepujian (AT12)
- Ijazah Sarjana Muda Pendidikan (Kimia) dengan Kepujian (AT13)
- Ijazah Sarjana Muda Pendidikan (Sains) dengan Kepujian (AT16)
- Ijazah Sarjana Muda Pendidikan (Matematik) dengan Kepujian (AT14)
- Ijazah Sarjana Muda Sains Matematik dengan Pendidikan (AT48)

DIPLOMA:

- Diploma Sains (A2000)
- Diploma Sains (Matematik) (A2002)
- Diploma Teknologi Makmal (A2003)



TAKWIM AKADEMIK PROGRAM SARJANA MUDA

Sesi 2026/2027

Semester 1 Sesi 2026/2027 (Sept 2026)

Aktiviti	Tempoh	Tarikh
Pendaftaran Pelajar Baharu/Suai kenal	9 hari	12 - 26 Sept 2026
Kuliah Semester 1	7 Minggu	28 Sept - 15 Nov 2026
Cuti Pertengahan Semester	1 Minggu	16 - 22 Nov 2026
Kuliah Semester 1	7 Minggu	23 Nov - 10 Jan 2027
Minggu Ulang Kaji Peperiksaan	1 Minggu	11 - 17 Jan 2027
Minggu Peperiksaan	3 Minggu	18 Jan - 07 Februari 2027
Cuti Semester 1	3 Minggu	08 - 28 Feb 2027

Semester 2 Sesi 2026/2027 (Februari 2027)

Aktiviti	Tempoh	Tarikh
Pendaftaran Pelajar Baharu/Suai kenal	8 hari	21 - 28 Feb 2027
Kuliah Semester 2	7 Minggu	1 Mac - 18 Apr 2027
Cuti Pertengahan Semester	1 Minggu	19 - 25 April 2027
Kuliah Semester 2	7 Minggu	26 Apr - 13 Jun 2027
Minggu Ulang Kaji	1 Minggu	14 - 20 Jun 2027
Minggu Peperiksaan	3 Minggu	21 Jun - 11 Julai 2027
Cuti Semester 2	10 Minggu	12 Jul - 19 Sept 2027





TAKWIM AKADEMIK PROGRAM SARJANA MUDA

Sesi 2026/2027

Semester Khas Sesi 2026/2027 (A262S)

Aktiviti	Tempoh	Tarikh
Kuliah Semester Khas	7 Minggu	19 Jul - 5 Sept 2027
Peperiksaan Akhir Semester Khas	1 Minggu	06 - 12 Sept 2027
Cuti Semester Khas	1 Minggu	13 - 19 Sept 2027



SISTEM KOD KURSUS

Jam Kredit

A B C 1 2 3 4

Kod Fakulti
S = Fakulti Sains dan Matematik

Bidang
B = Biologi
F = Fizik
K = Kimia
M = Matematik

Bilangan/Siri Kursus
01 = Kursus Siri Pertama
02 = Kursus Siri Kedua
03 = Kursus Siri Ketiga
04 = Kursus Siri Keempat

Sub Bidang
B = Biologi
F = Fizik
K = Kimia
M = Matematik

Tahap Pengajian
1 = Diploma
2 = Guna Sama Diploma/ISM
3 = Ijazah Sarjana Muda (ISM)
4 = Diploma Lepasan Ijazah
5 = Sarjana
6 = Doktor Falsafah



Contoh 1 :

SBC3013 Biologi Sel

S = Fakulti yang menawarkan (Fakulti Sains dan Matematik)
B = Biologi
C = Sub Bidang (Sel)
3 = Peringkat Sarjana Muda
01 = Bilangan Siri Kursus
3 = Jam Kredit

Contoh 2 :

SMS3013 Statistik Pengenalan

S = Fakulti yang menawarkan (Fakulti Sains dan Matematik)
M = Matematik
S = Sub Bidang (Statistik)
3 = Peringkat Sarjana Muda
01 = Bilangan Siri Kursus
3 = Jam Kredit

B

JABATAN BIOLOGI

(BIOLOGI DEPARTMENT)

DIREKTORI KEPAKARAN:

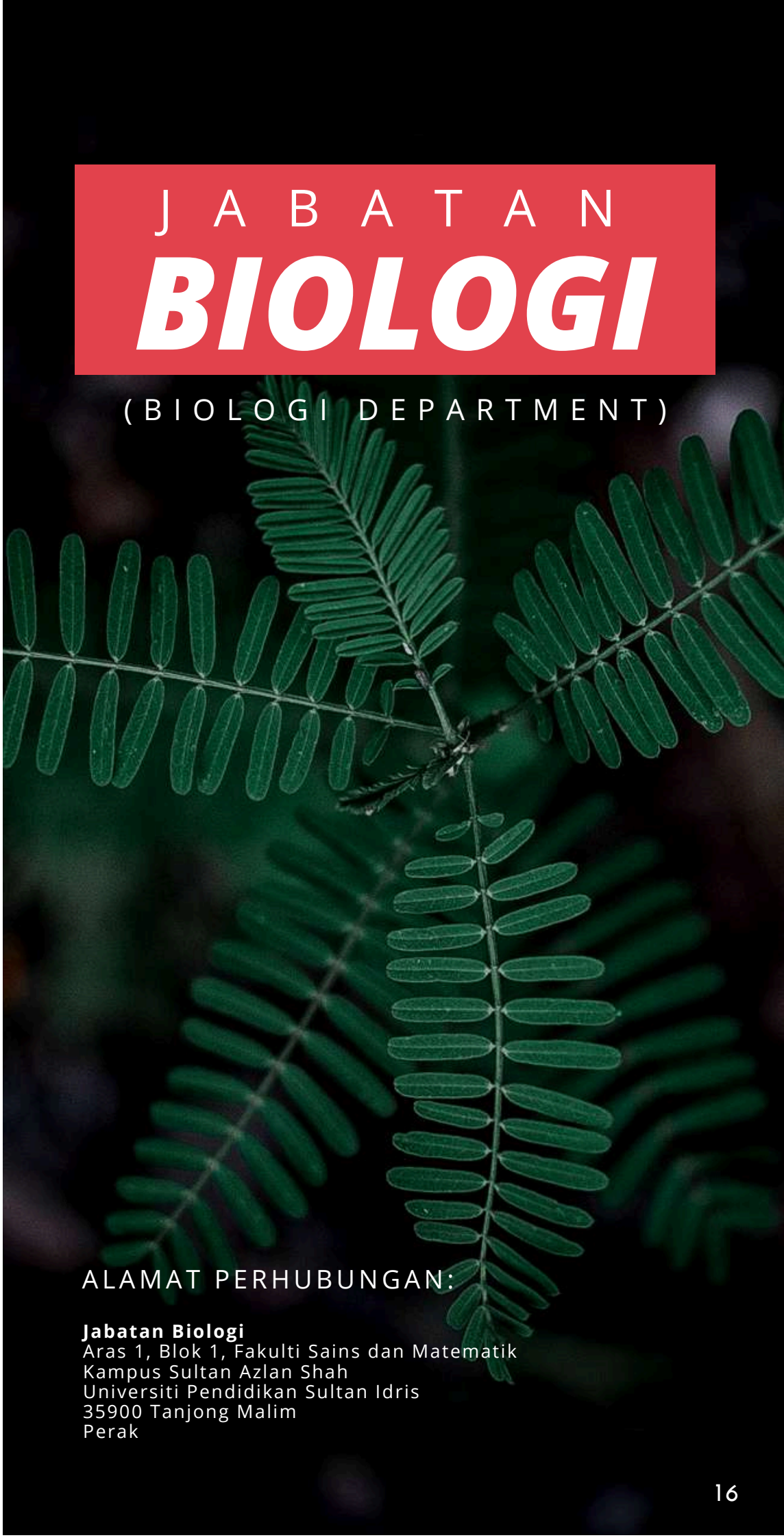
Senarai kakitangan akademik Jabatan Biologi

IJAZAH SARJANA MUDA PENDIDIKAN (BIOLOGI) DENGAN KEPUJIAN:

- Struktur Program
- Agihan Kursus
- Bahasa Inggeris
- Latihan Mengajar

IJAZAH SARJANA MUDA PENDIDIKAN (SAINS) DENGAN KEPUJIAN:

- Struktur Program
- Agihan Kursus
- Bahasa Inggeris
- Latihan Mengajar



ALAMAT PERHUBUNGAN:

Jabatan Biologi
Aras 1, Blok 1, Fakulti Sains dan Matematik
Kampus Sultan Azlan Shah
Universiti Pendidikan Sultan Idris
35900 Tanjong Malim
Perak

JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)



KETUA JABATAN/
HEAD OF DEPARTMENT

Dr. Noraine Salleh Hudin

Ph.D (Ghent, Belgium), M.Sc. (Lund, Sweden), B.Sc (UMT)

:05-4507418
: noraine@fsmt.upsi.edu.my

Kepakaran/Expertise:
Animal Ecology, Conservation Biology, Environmental Sustainability



Profesor Dr. Haniza Hanim Mohd Zain

Ph.D (Leicester, UK), M.Sc. (UKM), B.Sc. (Hons) (UKM), PG-Cert in LT HE (Roehampton, UK)

: 05-4507319
: haniza@fsmt.upsi.edu.my

Kepakaran/Expertise:
Animal Applied Histology, Small Mammal Biotechnology



Profesor Dr. Rosmilah Misnan

Ph.D (UKM), B.Sc. (UKM)

:05-4507367
: rosmilah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Medical Biotechnology, Proteomics, Allergy



Prof. Madya Dr. Shakinaz Desa

Ph.D (UPM) , M.Sc. (UPM), B.Sc. (UPM)

: 05-4507555
: shakinaz@fsmt.upsi.edu.my

Kepakaran/Expertise:
Biosensor Biochemistry, Microalgae Biotechnology, Applied Aquatic Ecology



Prof. Madya Dr. Syakirah Samsudin

Ph.D (Dundee, UK), M.Sc. (UKM), B.Sc. (Hons) (UKM), PG-Cert in LT HE (Roehampton, UK)

: 05-4507380
: syakirah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Animal Physiology, Toxicity, Conservation Biology, Toxicology



Prof. Madya Dr. Nor Nafizah Mohd Noor

Ph.D (Reading, UK), M.Sc. (UKM), B.Sc. (Hons) (UKM), Dip. Sc. (UiTM), PG-Cert in LT HE (Roehampton, UK)

: 05-4507398
: nafizah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Systematics Anatomy, Plant Tissue Culture, Botany, Palynology



Dr. Alene Tawang

Ph.D (UWA, Australia), M.Sc. (UKM), B.Sc. (Hons) (UKM)

: 05-4507633
: alene@fsmt.upsi.edu.my

Kepakaran/Expertise:
Animal Biology, Sperm Preservation, Cell Histology and Morphology, Semen Analysis, Reproductive Biology & STEM Education



Dr. Nurhaida Kamaruddin

PhD. (UKM), M.Sc. (UKM), B.Sc. (UKM)

: 05-4507654
: nurhaida@fsmt.upsi.edu.my

Kepakaran/Expertise:
Fungal Biotechnology, Microbial Biotechnology, Molecular Biology



Prof. Madya Dr. Muhammad Aqil Aryan Wong

Ph.D (UPM), B.Sc (Hons) (UPM)

: 05-4507326
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Kepakaran/Expertise:
Microbiology, Microbial Biotechnology, Protein Chemistry, Structural Biology



Prof. Madya. Ts. Dr. Nurul Bahiyah Abd. Wahid

Ph.D (UKM),M.Eng. (UTM), B.Eng. (UTM)

: 05-4506986
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Kepakaran/Expertise:
Air Pollution, Air Quality, Atmospheric Science, Environmental Science

JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)



Dr. Remmy Keong Bun Poh
Ph.D (UPM), M.Sc. (UPM), B.Sc. (Hons) (UPM)

: 05-4507328
: keongbunpoh@fsmt.upsi.edu.my

Kepakaran/Expertise:
Animal Breeding and Genetics, Plant and Animal Genetics



Prof. Madya. Dr. Som Cit Si Nang
Ph.D (Australia), M.Sc. (UTM), B.Sc. (UTM)

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: somcit@fsmt.upsi.edu.my

Kepakaran/Expertise:
Aquatic ecology



Dr. Mohamad Termizi Borhan
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: 05-4507591
: termizi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Qualitative Research in Education, Science Education Research, Innovation in Biology Teaching and Learning, Problem and Project-Based Learning



Dr. Raja Farhana Raja Khairuddin
Ph.D (Manchester, UK), M.Sc. (Sydney Univ), B.Sc. (UM)

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Kepakaran/Expertise:
Bioinformatics



Dr. Azi Azeyanty Jamaludin
PhD (Reading, UK),M.Sc (UKM),B.Sc. (UMT)

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Kepakaran/Expertise:
Plant Molecular Systematics, DNA Barcoding, Biodiversity and Conservation



Dr. Hamidah Idris
PhD. (Newcastle, UK), M.Sc. (UKM), B.Sc (UKM)

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Kepakaran/Expertise:
Microbiology, Actinobacteria, Taxonomy, Natural Products, Microbial Diversity



Dr. Adibah Abu Bakar
Ph.D (USM), M.Sc. (UPM), B.Sc. (Hons) (UKM)

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: adibah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Molecular Biology, Biotechnology and Genetics



Ts. Dr. Suzita Ramli
Ph.D (UPM),M.Sc. (UPM), B.Sc. (Hons) (UPM)

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Kepakaran/Expertise:
Food Microbiology, Food Safety and Microbiology



Dr. Fatimah Azzahra Ahmad Rashid
Ph.d (Australian National University), M.Sc. (USM), B.Sc. (UMT)

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Kepakaran/Expertise:
Plant Physiology, Plant Science, Enzyme Technology



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Kepakaran/Expertise:
Genetics, Molecular Medicine, Parasitology, Proteomics

JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)



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PhD. (UM), M. Sc. (Al-Nahrain University), B.Sc. (Al-Nahrain University)

: 05-4507324
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Kepakaran/Expertise:
Proteomics, Molecular Biology, Bioinformatics, Plant and Fungal Biology



Dr. Muhammad Hakimi Mohd Kassim

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Kepakaran/Expertise:
Animal Physiology



Dr. Nur Izwani Mohd Shapri

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Kepakaran/Expertise:
Module Development, Gamification in Learning, Instructional Technology and Innovation, Experimental, Developmental and Quantitative Research, Biology Education Research



Dr. Ahmad Muslihin Ahmad

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Kepakaran/Expertise:
Science and Biology Education Education, SEM-PLS, Measurement in Education, Technology in Education



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Kepakaran/Expertise:
Ornithology, Ecology, Wildlife Ecology and Management



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Kepakaran/Expertise:
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Kepakaran/Expertise:
Science, Physics & STEM Education, Innovation in Education,Module Development , Experimental & Development Research



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Kepakaran/Expertise:
Biology/Science Education, Pedagogy of Science and Biology Education, Experiential and Field-Based Learning in Science Education, Curriculum Design and Development in Science Education, Assessment and Evaluation in Science Education and Creative Thinking (Torrence)



Ts. Marina Mokhtar

M.Sc. (USM), B.Sc. (Hons) (USM)

: 05-4507325
: marina@fsmt.upsi.edu.my

Kepakaran/Expertise:
Molecular Biotechnology, Biotechnology, Plant Virology



En. Azmi Ibrahim

M.Sc. (UPM), B.Sc. (Hons) (UKM), Dip.Pend. (UKM)

: 05-4507332
: azmii@fsmt.upsi.edu.my

Kepakaran/Expertise:
Multimedia in Biology

JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)



En. Zahid Md Said
M.Sc. (Malaya), B.Sc. (Hons) (Malaya)

: 05-450 7748
: zahid@fsmt.upsi.edu.my

Kepakaran/Expertise:
Higher Plant Systematics, Ecology of Tropical Rain Forest, Botany

Kakitangan Sokongan (Supporting Staffs)



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Penolong Kurator S6

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: marina_nizar@ upsi.edu.my



Pn. Munirah binti Abdul Muhaimin
MyStep 19

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: munirah.muhaimin@upsi.edu.my

FSMT

STRUKTUR PROGRAM ISMP (Biologi) AT11

Elektif Terbuka

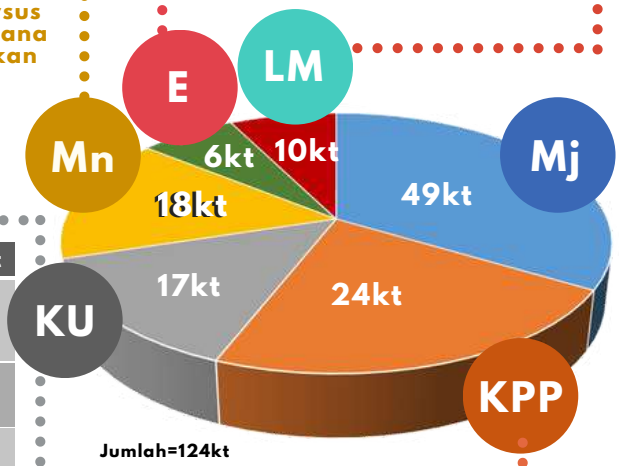
Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3

Latihan Mengajar

Kod & Nama Kursus		Kredit
KPR3068	Latihan Mengajar	8
KPR3072	Perantis Guru	2
	JUMLAH	10

Minor

Pelajar Sarjana Muda Pendidikan (Biologi) dgn Kepujian boleh memilih 18 jam kredit daripada kursus minor daripada mana-mana program yang ditawarkan oleh universiti



Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

Kod & Nama Kursus		Kredit
UPU3282	Kemahiran dan Inovasi Digital	2
UPU3142	Falsafah dan Cabaran Semasa	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UBM3292	Komunikasi Profesional Bahasa Melayu	Kursus audit
UPU3152	Aspirasi Negara Bangsa	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UPU3192	Integriti dan Anti Rasuah	2
	JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UPU3282	Kemahiran dan Inovasi Digital	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UBM3382	Bahasa Melayu Komunikasi II	2
UPU3162	Cita Malaysia	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UPU3192	Integriti dan Anti Rasuah	2
	JUMLAH	17

Kursus Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPS3032	Amalan Sosiologi dalam Pendidikan	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SBP3013	Pelaksanaan Pengajaran Biologi (BIDANG MAJOR)	3
******	Pelaksanaan Pengajaran Minor (BIDANG MINOR)	3
KPK3022	Pengenalan Pendidikan Inklusif	2
KPG3013	Insan Guru Profesional	3
	JUMLAH	24

Nota: Kursus Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
*SBC3073	Cell Biology and Molecular Foundation	3
SBC3063	Plant Anatomy and Morphology	3
SBB3053	Biodiversity	3
SBC3053	Animal Anatomy and Histology	3
*SBU3033	Genetics	3
SBC3083	Developmental Biology and Reproduction	3
SBF3053	Physiological Processes in Plant	3
*SBF3034	Animal and Human Physiology	4
SBB3033	Principles in Microbiology	3
SBK3013	Principles in Biochemistry	3
SBT3033	Applications of Biotechnology	3
SBV3033	Ecology for Sustainable Futures	3
SPR3003	Educational Research Method	3
SBR3913	Final Year Project 1	3
SBR3923	Final Year Project 2	3
SBS3023	Digitizing Biology: Omics and Cellular Data Science	3
	JUMLAH	49

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

AGIHAN KURSUS ISMP (Biologi) AT11

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

UPU3142/	Falsafah dan Cabaran Semasa/	2
*UBM3282	Bahasa Melayu Komunikasi II	
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
SBC3073	Cell Biology and Molecular Foundation	3
SBB3033	Principle in Microbiology	3
SBV3033	Ecology for Sustainable Future	3
UPU2232	Pengenalan Keusahawanan	2
	JUMLAH	16

SEMESTER 2

UPU3152/	Aspirasi Negara	2
*UPU3162	Bangsa/Citra Malysia	
UBI3282	Comprehensive English 1	2
KPS3032	Amalan Sosiologi dalam Pendidikan	2
xxx	Kokurikulum Komponen Sukan/Bitara	1
SBC3063	Plant Anatomy and Morphology	3
SBC3053	Animal Anatomy and Histology	3
SBB3053	Biodiversity	3
	JUMLAH	16

SEMESTER 3

KPP3032	Amalan Psikologi dalam Pendidikan	2
xxx	Kokurikulum Komponen Persatuan/Bitara	1
UBI3292	Comprehensive English 2	2
SBC3083	Development Biology and Reproduction	3
SBU3033	Genetics	3
xxx	Minor 1	3
xxx	Bahasa Asing Peringkat 1	2
UPU3192	Integriti dan Antirasuah	2
UBM3292	Komunikasi Profesional Bahasa Melayu	-
	JUMLAH	18

SEMESTER 4

KPK3022	Pengenalan Pendidikan Inklusif	2
xxx	Kokurikulum Komponen Badan Beruniform/Bitara	1
UPU2382	Kemahiran dan Inovasi Digital	2
SBF3034	Animal and Human Physiology	4
BF3053	Physiological Proceseses in Plants	3
xxx	Minor 2	3
xxx	Bahasa Asing Peringkat 2	2
	JUMLAH	17

**Catatan : Kursus audit

AGIHAN KURSUS ISMP (Biologi) AT11

SEMESTER 5

KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
KPG3013	Insan Guru Profesional	3
SPR3003	Educational Research Method	3
xxx	Bahasa Asing Peringkat 3	2
xxx	Minor 3	3
	JUMLAH	17

SEMESTER 6

SBP3013	Pelaksanaan Pengajaran Biologi	3
xxx	Pelaksanaan Pengajaran Minor	3
SBR3913	Projek Tahun Akhir 1	3
SBT3033	Applications of Biotechnology	3
xxx	Minor 4	3
xxx	Minor 5	3
	JUMLAH	18

Pelaksanaan KPR3072 Perantis Guru pada cuti Semester 6 selama 4 minggu

SEMESTER 7

SBR3923	Projek Tahun Akhir 2	3
SBK3013	Principle of Biochemistry	3
xxx	Minor 6	3
KPR3072	Perantis Guru	2
SBS30232	Digitizing Biology: Omics and Cellular Data Science	3
	JUMLAH	14

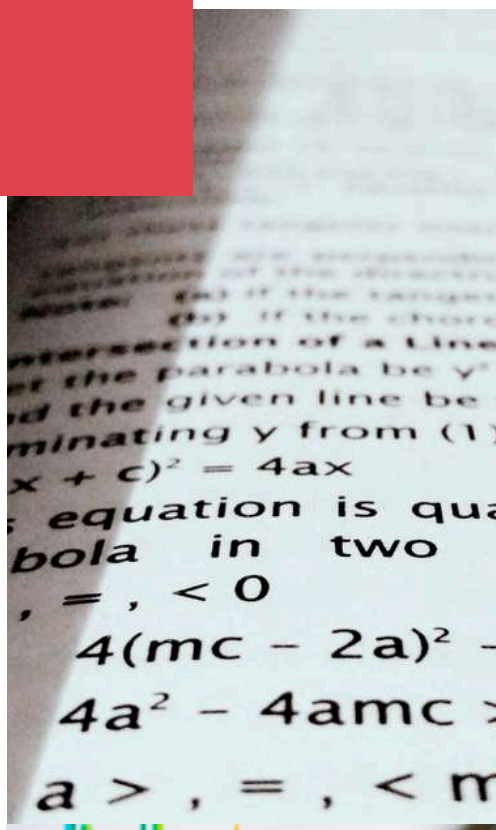
SEMESTER 8

KPR3068	Latihan Mengajar	8
	JUMLAH	8

Catatan: *Pelajar bukan Warganegara sahaja
*Pelajar Warganegara sahaja
*Kursus Audit (Warganegara sahaja)

Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

LATIHAN MENGAJAR







PELAKSANAAN LATIHAN MENGAJAR (LM) DAN PERANTIS GURU (PG)

Struktur baharu Latihan Mengajar bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2024/2025 (Oktober 2024):

Program	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 6	4 Minggu	2 Kredit
Latihan Mengajar	Semester 8	16 Minggu	8 Kredit
		JUMLAH	10 Kredit

STRUKTUR PROGRAM ISMP (Sains) AT16

Elektif Terbuka

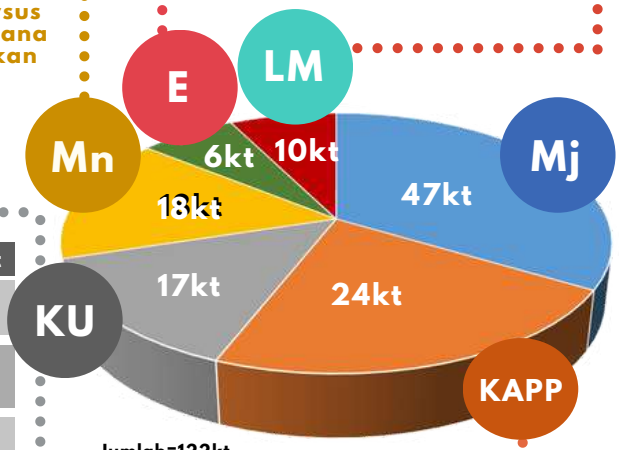
Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3

Latihan Mengajar

Kod & Nama Kursus		Kredit
KPR3068	Latihan Mengajar	8
KPR3072	Perantis Guru	2
	JUMLAH	10

Minor

Pelajar Sarjana Muda Pendidikan (Sains) dgn Kepujian boleh memilih 18 jam kredit daripada kursus minor daripada mana-mana program yang ditawarkan oleh universiti



Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

Kod & Nama Kursus		Kredit
UPU3192	Integriti dan Anti Rasuah	2
UPU3282	Kemahiran dan Inovasi Digital	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU3142	Falsafah dan Cabaran Semasa	2
UPU2232	Pengenalan dan Keusahawanan	2
UPU3152	Aspirasi Negara Bangsa	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
*UBM3292	Komunikasi Profesional Bahasa Melayu	Kursus audit
	JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UPU3192	Integriti dan Anti Rasuah	2
UBM3282	Bahasa Melayu Komunikasi II	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU3282	Kemahiran dan inovasi Digital	2
UPU2232	Pengenalan Keusahawanan	2
UPU3162	Citra Malaysia	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
	JUMLAH	17

Kursus Asas & Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPS3032	Amalan Sosiologi dalam Pendidikan	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPG3013	Insan Guru Profesional	3
KPK3022	Pengenalan Pendidikan Inklusif	2
KPD3056	Pedagogi, Pentaksiran, dan Teknologi Pengajaran	6
SSP3103	Pelaksanaan Pengajaran Sains	3
***	Pelaksanaan Pengajaran Minor	3
	JUMLAH	24

Nota: Kursus Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
*SBU3043	Concepts in Biology	3
SBF3012	Plant Systems	2
SBK3023	Food Science and Nutrition	3
SBF3063	Animal physiology and Epidemiology	3
SSV3013	Environmental Science	3
*SFT3033	Mechanics	3
SFT3023	Vibrations, Waves and Optics	3
SFT3013	Electromag-netism	3
SFT3113	Mathematics for Physics	3
SFU3073	Astronomy	3
*SKU3013	Chemistry I	3
*SKU3023	Chemistry II	3
SKO3013	Basic Organic Chemistry	3
SSR3913	Final Year Project 1	3
SSR3923	Final Year Project 2	3
SPR3003	Educational Research Method	3
	JUMLAH	47

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

AGIHAN KURSUS ISMP (Sains) AT16

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

UPU3142/ *UBM2142	Falsafah dan Cabaran Semasa/Bahasa Melayu Komunikasi II	2
UPU2232	Pengenalan Kusahawanan	2
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
SFT3113	Mathematics for Physics	3
*SBU3043	Concepts in Biology	3
*SKU3013	Chemistry I	3
	JUMLAH	16

SEMESTER 2

UPU3152/ *UPU3162	Aspirasi Negara/Citra Malaysia	2
xxx	Kokurikulum Sukan (CS...) ATAU Komponen Bitara (CI...)	1
UBI3282	Comprehensive English 1	2
KPS3032	Amalan Sosiologi dalam Pendidikan	2
SBK3023	Food Science and Nutrition	3
*SKU3023	Chemistry II	3
SFU3073	Astronomy	3
	JUMLAH	16

SEMESTER 3

UPU3192	Integriti dan Anti Rasuah	2
xxx	Kokurikulum Persatuan (CP...) ATAU Komponen Bitara (CI...)	1
UBI3292	Comprehensive English 2	2
UBM3292	Komunikasi Profesional Bahasa Melayu	-
KPP3032	Amalan Psikologi dalam Pendidikan	2
*SFT3033	Mechanics	3
SBF3012	Plant Systems	2
xxx	Minor 1	3
xxx	Bahasa Asing Peringkat 1	2
	JUMLAH	17

SEMESTER 4

UPU3282	Kemahiran dan Inovasi Digital	2
KPK3022	Pengenalan Pendidikan Inklusif	2
xxx	Kokurikulum Badan Beruniform(CU...) ATAU Komponen Bitara (CI...)	1
SSV3013	Environmental Science	3
SKO3013	Basic Organic Chemistry	3
xxx	Minor 2	3
xxx	Bahasa Asing Peringkat 2	2
	JUMLAH	16

CatatanPelajar bukan Warganegara sahaja

AGIHAN KURSUS ISMP (Sains) AT16

SEMESTER 5

KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
KPG3013	Insan Guru Profesional	3
***	Minor 3	3
SPR3003	Educational Research Method	3
***	Bahasa Asing Peringkat 3	2
	JUMLAH	17

SEMESTER 6

SSP3103	Pelaksanaan Pengajaran Sains	3
xxx	Pelaksanaan Pengajaran Minor	3
SFT3013	Electromagnetism	3
SSR3913	Projek Tahun Akhir 1	3
xxx	Minor 4	3
xxx	Minor 5	3
	JUMLAH	18

Pelaksanaan KPR3072 Perantis Guru pada cuti Semester 6 selama 4 minggu

SEMESTER 7

SSR3923	Projek Tahun Akhir 2	3
SFT3023	Vibrations, Waves and Optics	3
SBF3063	Animal Physiology and Epidemiology	3
xxx	Minor 6	3
KPR3072	Perantis Guru	2
	JUMLAH	14

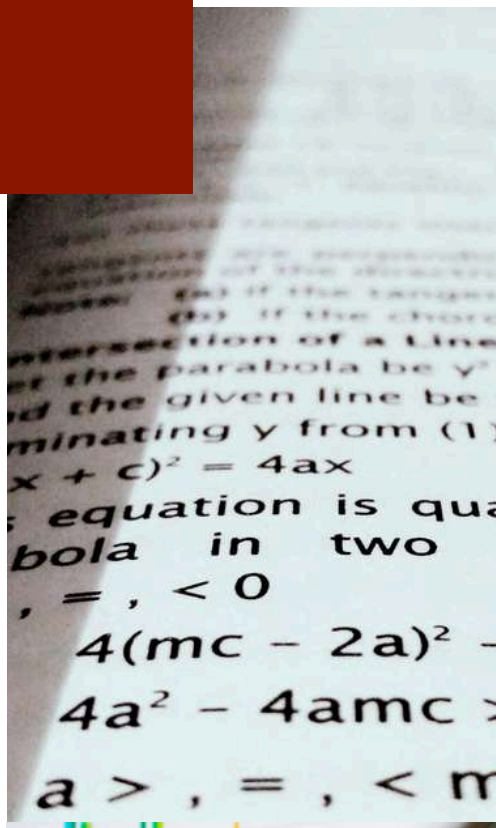
Catatan: *Pelajar bukan Warganegara sahaja
*Pelajar Warganegara sahaja
*Kursus Audit (Warganegara sahaja)

SEMESTER 8

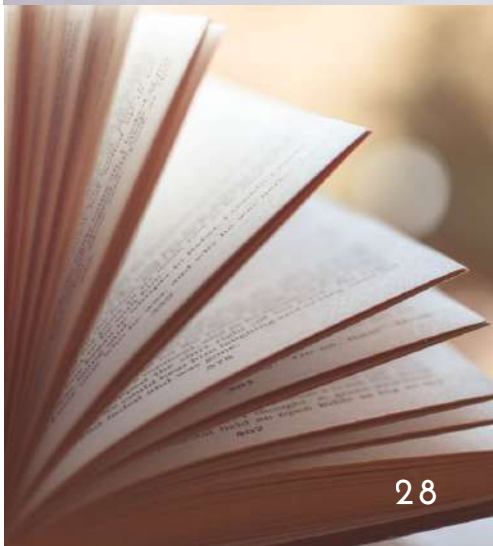
KPR3068	Latihan Mengajar	8
	JUMLAH	8

Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

LATIHAN MENGAJAR







PELAKSANAAN LATIHAN MENGAJAR (LM) DAN PERANTIS GURU (PG)

Struktur baharu LM dan PG bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2024/2025 (Oktober 2024):

Program	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 6	4 Minggu	2 Kredit
Latihan Mengajar	Semester 8	16 Minggu	8 Kredit
		JUMLAH	10 Kredit

F

JABATAN FIZIK
(PHYSICS DEPARTMENT)



Direktori Kepakaran:

Senarai kakitangan akademik Jabatan Fizik

Ijazah Sarjana Muda Pendidikan (Fizik) dengan Kepujian:

- *Struktur Program*
- *Agihan Kursus*
- *Bahasa Inggeris*
- *Latihan Mengajar*

ALAMAT PERHUBUNGAN:

Jabatan Fizik
Aras 1, Blok 4, Fakulti Sains dan Matematik
Kampus Sultan Azlan Shah
Universiti Pendidikan Sultan Idris
35900 Tanjong Malim
Perak

JABATAN FIZIK
(PHYSICS DEPARTMENT)



KETUA JABATAN/
HEAD OF DEPARTMENT

Ts. Dr. Mohd Norzaidi Mat Nawi

Ph.D (USM), B.Eng (Hons)(USM)

: 05-4507639
: norzaidi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Fluidic based sensor, underwater flow sensor, MEMS



Profesor Dr. Suriani Abu Bakar

Ph.D (UiTM), M.Sc. (UTM), B.Sc. (UTM)

: -
: suriani@fsmt.upsi.edu.my

Kepakaran/Expertise:
Carbon Nanotubes, Graphene, Oxide Nanostructure



Prof. Madya Dr. Faridah Lisa Supian

Ph.D (Sheffield), M.Sc. (USM), B.Sc. (Hons) (UKM)

:05-4507607
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Kepakaran/Expertise:
Chemical Physics, Langmuir-Blodgett, Calixarene, Polysiloxanes, Solid State Physic



Prof. Madya Ts. Dr. Shahrul Kadri Ayop

Ph.D (Hokkaido), M.Sc. (Leipzig), B.Sc. (Hons) (UTM)

: 05-4507529 / 7360
: shahrul.kadri@fsmt.upsi.edu.my

Kepakaran/Expertise:
Micromanipulation using Optical Tweezers, Physics Education



Prof. Madya Dr. Tho Siew Wei

Ph.D (HKIEd), M.Ed. (UPSI), B.Ed. (Hons) (UPSI)

: 05-4507679
: thosw@fsmt.upsi.edu.my

Kepakaran/Expertise:
Science Education (Physics), Educational Technology



Ts. Dr. Muhammad Noorazlan Abd Azis

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: azlanmn@fsmt.upsi.edu.my

Kepakaran/Expertise:
Glass and Ceramics, Applied Optics, Nanoscience, Advanced Materials



Dr. Mohd Ikhwan Hadi Yaacob

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Kepakaran/Expertise:
Sensor & Instrumentation, MEMS, Underwater Acoustics



Dr. Izan Roshawaty Mustapa

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: 05-4507497
: roshawaty@fsmt.upsi.edu.my

Kepakaran/Expertise:
Material Physics: Physical and Mechanical Characterization (DMA, mT-DSC & Non-isothermal crystallization Kinetics DSC, TGA, WAXS); Morphology Study (SEM, EDX, POM)



Dr. Rosazley Ramly

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Kepakaran/Expertise:
Advanced Materials, Materials Science, Bio-based Materials,



Dr. Mohd Faudzi Umar

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Kepakaran/Expertise:
Theoretical Physics, Quantum Physics

JABATAN FIZIK
(PHYSICS DEPARTMENT)



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: 05-4507382
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Kepakaran/Expertise:
Educational Physics, Physics Instrumentation and Interactive Learning



Dr. Mohd Syahriman Mohd Azmi

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: 05-4507494
: syahriman@fsmt.upsi.edu.my

Kepakaran/Expertise:
Solar Energy Technology, Energy Physics, Physics Education



Dr. Lilia Ellany Mohtar

Ph.D (UKM), M.Ed. (UTM), B.Sc. With Ed. (UTM)

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: lilia@fsmt.upsi.edu.my

Kepakaran/Expertise:
Physics Education, Scientific Creativity, SEM-AMOS Modeling



Dr. Siti Nursaila Alias

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Kepakaran/Expertise:
(Science Education (Physics), Educational Games



Dr. Anis Nazihah Mat Daud

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Kepakaran/Expertise:
Nondestructive Testing (Ultrasonics), Instrumentation, Science Education (Physics



Ts. Dr. Afiq Radwan

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: afiq@fsmt.upsi.edu.my

Kepakaran/Expertise:
Computational Physics, Density Functional Theory, Quantum Mechanics, Condensed Matter Physics, Solid State Physics



Dr. Anis Diyana Halim

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: 05-4507350
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Kepakaran/Expertise:
Physics Education



Dr. Muhamad Safuan Mat Yeng @ Mat Zin

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: -05-4506993
: msafuan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Non-Destructive Tool (Optical Tweezers), Renewable Energy (Wind Energy)



Dr. Husnul Fuad Zein

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: -05-4507520
: husnul.zein@fsmt.upsi.edu.my

Kepakaran/Expertise:
Computational Physics and Molecular Dynamics Simulation



Pn. Mazlina Mat Darus

M.Sc. (UTM), B.Sc. (Hons) (UTM)

: 05-4507343
: mazlina.md@fsmt.upsi.edu.my

Kepakaran/Expertise:
Nanomaterials, Hybrid Nanocomposites, Photocatalyst

JABATAN FIZIK
(PHYSICS DEPARTMENT)



En. Wan Zul Adli Wan Mokhtar
M.Sc. (UKM), B.Sc. (Hons) (UTM)

: 05-4507530
: zul.adli@fsmt.upsi.edu.my

Kepakaran/Expertise:
Solar Radio, Space Weather and Physics Education



En. Roszairi Haron
M.Sc. (UM), B.Sc. (Hons) (UM)

: 05-4507604
: roszairi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Thin Films Technology, Hydrogenated Amorphous Silicon

Kakitangan Sokongan (Supporting Staffs)



En. Bisyr Asfar Ahmad Bakhtiar
Penolong Jurutera (Mekanikal) JA6

: 05-4507303
: bisyr@upsi.edu.my



Pn. Nashimatul Aliana Kamarul Bahrin
Pembantu Tadbir (P/O) N2

: 05-4507655
: aliana@upsi.edu.my

STRUKTUR PROGRAM ISMP (Fizik) AT12

Minor

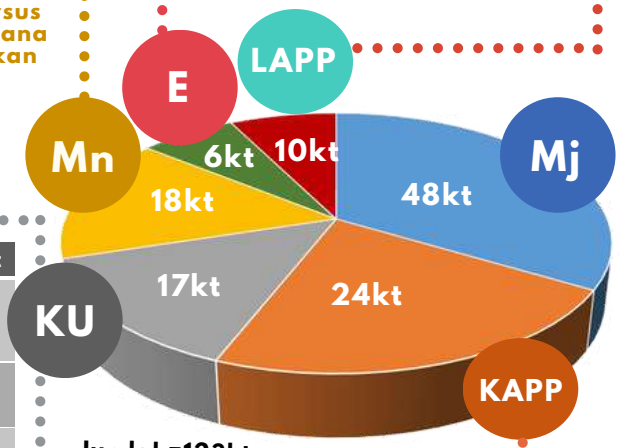
Pelajar Sarjana Muda Pendidikan (Fizik) dgn Kepujian boleh memilih 18 jam kredit daripada kursus minor daripada mana-mana program yang ditawarkan oleh universiti

Elektif Terbuka

Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3

Latihan Amalan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPR3068	Latihan Mengajar	8
KPR3072	Perantis Guru	2
	JUMLAH	10



Jumlah=123kt

Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

Kod & Nama Kursus		Kredit
UPU3142	Falsafah dan Cabaran Semasa	2
UPU3152	Aspirasi Negara Bangsa	2
UPU3192	Integriti dan Anti Rasuah	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	kemahiran dan Inovasi Digital	2
UBI3282	Comprehensive English 1	2
UBI 3292	Comprehensive English 2	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UBM3292	Komunikasi Profesional Bahasa Melayu	
	JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UBM3282	Bahasa Melayu Komunikasi II	2
UPU3162	Citra Malaysia	2
UPU3192	Integriti dan Anti Rasuah	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	Kemahiran dan Inovasi Digital	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
	JUMLAH	17

Kursus Asas Dan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPS3032	Amalan Sosiologi dalam Pendidikan	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SFP3013	Pelaksanaan Pengajaran Fizik (bidang MAJOR)	3
******	Pelaksanaan Pengajaran Minor (bidang MINOR)	3
KPK3022	Pengenalan Pendidikan Inklusif	2
KPG3013	Insan Guru Profesional	3
	JUMLAH	24

Nota: Kursus Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
*SFT3033	Mechanics	3
SFT3023	Vibrations, Waves and Optics	3
*SFT3013	Electro-magnetism	3
SFE3053	Electronics	3
SFG3023	Thermo-dynamics	3
SFT3053	Solid State Physics	3
SFT3113	Mathematics for Physics	3
SFT3063	Mathematical Physics	3
SFT3103	Nuclear and Particle Physics	3
SFU3063	Physics of Sustainable Energy	3
SFE3043	Computer Programming and Interfacing	3
SFU3073	Astronomy	3
SFT3093	Modern & Quantum Physics	3
SPR3003	Kaedah Penyelidikan Pendidikan	3
SFR3913	Final Year Project 1	3
SFR3923	Final Year Project 2	3
	JUMLAH	48

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

AGIHAN KURSUS ISMP (Fizik) AT12

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

*UPU3142/ *UBM3282	Falsafah dan Isu Semasa/ *Bahasa Melayu Komunikasi II	2
UPU2232	Pengenalan Keusahawanan	2
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
SFT3033	Mechanics	3
SFT3013	Electromagnetism	3
SFT3113	Mathematics for Physics	3
SFU3073	Astronomy	3
	JUMLAH	19

SEMESTER 2

*UPU3152/ *UPU3162	Aspirasi Negara Bangsa/ *Citra Malaysia	2
UBI3282	Comprehensive English 1	2
xxx	Kokurikulum komponen Kelab/Persatuan (CP) ATAU Komponen Bitara (CI)	1
KPS3032	Amalan Sosiologi dalam Pendidikan	2
SFT3023	Vibrations, Waves and Optics	3
SFG3023	Thermodynamics	3
SFE3053	Electronics	3
	JUMLAH	16

SEMESTER 3

*UBM3292	Komunikasi Profesional Bahasa Melayu	2(A)
UPU3192	Integriti dan Anti Rasuah	2
UBI3292	Comprehensive English 2	2
xxx	Kokurikulum Komponen Unit Beruniform (CU) ATAU Komponen Bitara (CI)	1
KPP3032	Amalan Psikologi dalam Pendidikan	2
xxx	Bahasa Asing Peringkat 1	2
SFE3043	Computer Programming dan Interfacing	3
SFT3063	Mathematical Physics	3
xxx	Minor 1	3
	JUMLAH	18

**Catatan *Pelajar bukan Warganegara sahaja
*Pelajar Tempatan sahaja
*Kursus Audit (Untuk pelajar tempatan sahaja)

SEMESTER 4

UPU2382	Kemahiran dan Inovasi Digital	2
xxx	Kokurikulum Komponen Sukan (CS), ATAU Komponen Bitara (CI)	1
KPK3022	Pengenalan Pendidikan Inklusif	2
xxx	Bahasa Asing Peringkat 2	2
SFU3093	Physics of Sustainable Energy	3
SFT3093	Modern and Quantum Physics	3
xxx	Minor 2	3
	JUMLAH	16

AGIHAN KURSUS ISMP (Fizik) AT12

SEMESTER 5

KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
KPG3013	Insan Guru Profesional	3
SPR3003	Kaedah Penyelidikan Pendidikan	3
xxx	Bahasa Asing Peringkat 3	2
xxx	Minor 3	3

JUMLAH 17

SEMESTER 6

SFP3013	Pelaksanaan Pengajaran Fizik	3
xxx	Pelaksanaan Pengajaran Minor	3
SFR3913	Final Year Project 1	3
SFT3053	Solid State Physics	3
xxx	Minor 4	3

JUMLAH 15

Pelaksanaan KPR3072 Perantis Guru pada cuti Semester 6 selama 4 minggu

SEMESTER 7

SFR3923	Final Year Project 2	3
SFT3103	Nuclear & Particle Physics	3
KPR3072	**Perantis Guru	2
xxx	Minor 5	3
xxx	Minor 6	3

JUMLAH 14

SEMESTER 8

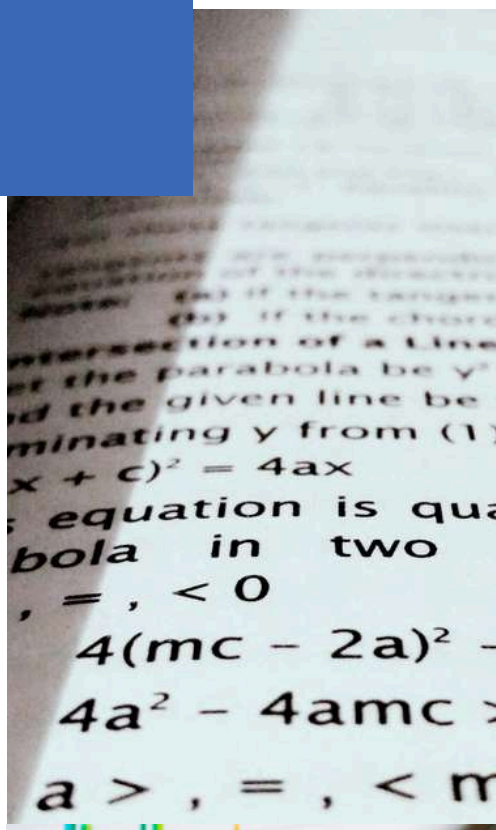
KPR3068	Latihan Mengajar	8

JUMLAH 8

**Catatan: Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara sem 6 dengan 7). Kursus didaftarkan dan diberi penilaian gred pada semester 7

Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

LATIHAN MENGAJAR







PELAKSANAAN LATIHAN MENGAJAR (LM) DAN PERANTIS GURU (PG)

Struktur baharu LM dan PG bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2024/2025 (Oktober 2024):

Program	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 6	4 Minggu	2 Kredit
Latihan Mengajar	Semester 8	16 Minggu	8 Kredit
		JUMLAH	10 Kredit

K

DIREKTORI KEPAKARAN

Senarai kakitangan akademik
Jabatan Kimia

IJAZAH SARJANA MUDA PENDIDIKAN (KIMIA) DENGAN KEPUJIAN

- Struktur Program
- Agihan Kursus
- Bahasa Inggeris
- Latihan Mengajar

ALAMAT PERHUBUNGAN:

Jabatan Kimia
Aras I, Blok 3, Fakulti Sains dan Matematik
Kampus Sultan Azlan Shah
Universiti Pendidikan Sultan Idris
35900 Tanjong Malim
Perak

JABATAN KIMIA

(CHEMISTRY DEPARTMENT)

JABATAN KIMIA
(CHEMISTRY DEPARTMENT)

KETUA JABATAN/
HEAD OF DEPARTMENT



ChM. Dr. Mohamad Idris Saidin

Ph.D (UPSI), M.Sc. (UPSI), B.Ed. (Hons) (UPSI)

: 05-4507253
: idris.saidin@fsmt.upsi.edu.my

Kepakaran/Expertise:
Analytical Chemistry, Spectroscopy, Electrochemical Sensor, Nanomaterials, STEM Education



Profesor Dr. Illyas Md Isa

Ph.D (USM), M.Sc. (USM), B. App. Sc. (USM)

: 05-4507714
: illyas@fsmt.upsi.edu.my

Kepakaran/Expertise:
Analytical Chemistry, Chemical and Biosensor



Profesor Ts. Dr. Ismail Zainol

Ph.D (Manchester), B.Sc. (UKM)

: 05-4507369
: ismail.zainol@fsmt.upsi.edu.my

Kepakaran/Expertise:
Polymer Chemistry, Material Science and Composite



Profesor ChM. Dr. Azlan Kamari

Ph.D (Glasgow), M.Sc. (USM), B.App.Sc. (Hons) (USM)

: 05-4507320
: azlan.kamari@fsmt.upsi.edu.my

Kepakaran/Expertise:
Analytical Chemistry, Enviromental Chemistry



Profesor Dr. Azmi Mohamed

Ph.D (Bristol), M.Sc. (UTM), B.Sc. (UTM)

: 05-4507582
: azmi.mohamed@fsmt.upsi.edu.my

Kepakaran/Expertise:
Surfactant and Colloidal Chemistry



Profesor Dr. Mohd Azlan Nafiah

Ph.D (UM), M.Sc. (UPM), B.Sc. (UPM)

: 05-4507339
: azlan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Organic Chemistry, Natural Products Chemistry



Prof. Madya Dr. Saripah Salbiah Syed Abdul Azziz

Ph.D (UM), M.Sc. (UPM), B.Sc. (UPM)

: 05-4507313
: saripah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Organic Chemistry, Natural Products Chemistry, Seperation and Structural Identification



Prof. Madya ChM. Dr. Norhayati Hashim

Ph.D (UPM), M.Sc. (UKM), B.Sc. (UKM)

: 05-4507314
: norhayati.hashim@fsmt.upsi.edu.my

Kepakaran/Expertise:
anomaterials, Inorganic Chemistry



Prof. Madya Dr. Lee Tien Tien

Ph.D (UKM), M.Ed. (UTM), B.Ed. (Hons) (UPSI)

: 05-4507718
: lee.tt@fsmt.upsi.edu.my

Kepakaran/Expertise:
Chemistry Education, Module Development, Instructional Technology



Prof. Madya ChM. Dr. Wan Mohd Nuzul Hakimi W Salleh

Ph.D (UTM), M.Sc. (UTM), B.Sc. (UTM)

: 05-4507123
: wmnhakimi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Natural Products Chemistry (Essential Oils and Phytochemistry of Piperaceae, Annonaceae, Lauraceae, and Myristicaceae)

JABATAN KIMIA
(CHEMISTRY DEPARTMENT)



Prof. Madya ChM. Dr. Noorshida Mohd Ali

Ph.D (Sheffield), M.Sc. (UKM), B.Sc. (Hons) (UKM)

: 05-4507538
: noorshida@fsmt.upsi.edu.my

Kepakaran/Expertise:
Luminescence, Inorganic Chemistry



Dr. Norlaili Abu Bakar

Ph.D (UKM), M.Sc. (UPM), B.Sc. (UPM)

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: norlaili@fsmt.upsi.edu.my

Kepakaran/Expertise:
Chemical Sensor, Molecularly Imprinted Polymer, Water Treatment/Adsorption Behaviour



Dr. Mazlina Musa

Ph.D (St. Andrews), M.Sc. (UPM), B.Sc. (Hons) (UPM)

: 05-4507734
: mazlinam@fsmt.upsi.edu.my

Kepakaran/Expertise:
Analytica; Chemistry, Materials Science, Ionothermal Synthesis, Synthesis and Characterisation, Spectroscopy



Dr. Wan Rusmawati Wan Mahamod

Ph.D (UKM), M.Sc. (UPM), B.Sc. (UPM)

: 05-4506000
: rusmawati@fsmt.upsi.edu.my

Kepakaran/Expertise:
Emulsion, Nano-emulsions, Micro-emulsion and Liquid Crystalline Phase of Essential Oil



Dr. Nurulsaidah Abdul Rahim

Ph.D (Dublin), M.Sc. (UKM), B.Sc. (KUSTEM)

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Kepakaran/Expertise:
Polymer Chemistry, Biomaterials



ChM. Dr. Wan Haslinda Wan Ahmad

Ph.D (UTM), M.Sc. (UKM), B.Sc (Hons) (UKM)

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Kepakaran/Expertise:
Analytical Chemistry, Water and wastewater treatment, Bioremediation



Dr. Norlinda Daud

Ph.D (Melbourne), M.Sc. (UKM), B.Sc. (Hons) (UPM)

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Kepakaran/Expertise:
Materials Science, Polymer chemistry and composites



Dr. Muhd Ibrahim Muhamad Damanhuri

Ph.D (Perth),M.Ed. (Perth), B.Ed. (Hons) (UPSI)

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Kepakaran/Expertise:
Chemistry Education, Science Education, Technology & Innovation in Education, Evaluation



ChM. Dr. Yuhanis Mhd Bakri

Ph.D (Newcastle), B.Sc. (Hons) (UTM)

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Kepakaran/Expertise:
Organic Synthesis, STEM Related Research, Marine Natural Products, Natural Products Chemistry



ChM. Dr. Mohamad Saufi Rosmi

Ph.D (Nagoya), M.Sc. (UTM), B.Sc. (UTM)

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Kepakaran/Expertise:
Carbon Nanomaterial, Graphene, Carbon Nanotubes, Carbon Nanofiber, Catalysis and Photocatalyst

JABATAN KIMIA
(CHEMISTRY DEPARTMENT)



Dr. Suzaliza Mustafar
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Kepakaran/Expertise:
Photochemistry, Coordination Complexes, Electrochemistry, Material Chemistry



Dr. Yusnita Juahir
Ph.D (UM), M.Sc. (UTM), B.Sc. Comp.Edu. (UTM)

: 05-4507618
: yusnita@fsmt.upsi.edu.my

Kepakaran/Expertise:
Inorganic Chemistry, Coordination Chemistry, Fluorescent Chemosensor



ChM. Dr. Aisyah Mohamad Sharif
Ph.D (Limerick), M.Sc. (UKM), B.Sc.(Hons) (UTM)

: 05-4507662
: aisyah.sharif@fsmt.upsi.edu.my

Kepakaran/Expertise:
Material and Surface Science, Physical Chemistry, STEM Education



ChM. Dr. Siti Munirah Sidik
Ph.D (UTM), M.Sc. (UTM), B.Sc. (UTM)

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Kepakaran/Expertise:
Nanotechnology, Advanced Materials, Catalysis, Inorganic Chemistry



Dr. Mohd Mokhzani Ibrahim
Ph.D (UTM), M.Ed.(UPSI), B.Ed. (Hons) (UPSI)

: 05-4507735
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Kepakaran/Expertise:
Chemistry Education, Blended Problem Based Learning



Dr. Mohamad Syahrizal Ahmad
Ph.D (UPSI), M.Sc. (UTM), B.Sc. (UTM)

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Kepakaran/Expertise:
Organic Synthesis, Organic Chemistry, Electrochemical Sensor



Dr. Nilavathi a/p Balasundram
Ph.D (USM), M.Ed (USM)

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: b.nilavathi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Science Education (Chemistry)



ChM. Dr. Sharifah Norain Mohd Sharif
Ph.D (UPSI), M.Sc. (UPSI), B.Ed. (Hons) (UPSI)

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Kepakaran/Expertise:
Inorganic Chemistry, Nanomaterial, Controlled Release Study



Dr. Siti Nur Akmar Mohd Yazid
Ph.D (UPSI), M.Sc. (UNIMAS), B.Sc. (UNIMAS)

: 05-4507919
: snakmar@fsmt.upsi.edu.my

Kepakaran/Expertise:
Analytical Chemistry, Electrochemical Sensor



ChM. Dr. Maizatul Najwa Jajuli
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Kepakaran/Expertise:
Analytical Chemistry, Separation, Electrochemistry at Liquid-liquid Interface, Physical Chemistry

JABATAN KIMIA
(CHEMISTRY DEPARTMENT)



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Ph.D (Queensland), M.Sc. B. Pharm (Assiut University)

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Kepakaran/Expertise:
Organic and Medicinal Chemistry



Dr. Supriatno Salam

Ph.D (Universitas Padjadjaran), M.Sc. (Universitas Padjadjaran)

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Kepakaran/Expertise:
Organic Natural Product Chemistry



Pn. Rozita Yahaya

M.Sc. (UPM), B.Sc. (Hons) (UPM), Dip. Ed. (MPT)

: 05-4507643
: rozita@fsmt.upsi.edu.my

Kepakaran/Expertise:
Physical Chemistry, Electrochemistry

Kakitangan Sokongan/ Supporting Staff



Pn. Aryani Adnan

Pembantu Tadbir (P/O) N2

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FSMT

STRUKTUR PROGRAM ISMP (Kimia) AT13

Minor

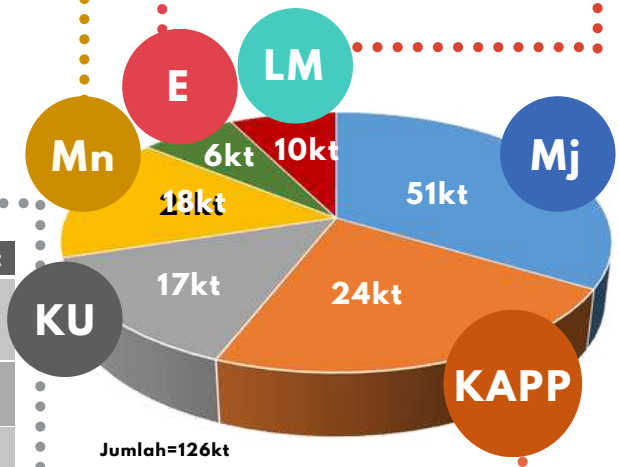
Pelajar Sarjana Muda Pendidikan (Kimia) dgn Kepujian boleh memilih 18 jam kredit daripada kursus minor daripada mana-mana program yang ditawarkan oleh universiti

Elektif Terbuka

Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3

Latihan Amalan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPR3068	Latihan Mengajar	8
KPR3072	Perantis Guru	2
	JUMLAH	10



Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

Kod & Nama Kursus		Kredit
UPU3142	Falsafah dan Cabaran Semasa	2
UPU3192	Integriti dan Anti Rasuah	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	Kemahiran dan Inovasi Digital	2
UBM3292	Komunikasi Profesional Bahasa Melayu	
***	Ko-Kurikulum (Sukan, Kelab/Persatuan dan Unit Beruniform)	3
UPU3152	Aspirasi Negara Bangsa	2
	JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UBM3282	Bahasa Melayu Komunikasi II	2
UPU3192	Integriti dan Anti Rasuah	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	Kemahiran dan Inovasi Digital	2
UPU3162	Citra Malaysia	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
	JUMLAH	17

Kursus Asas dan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPS3032	Amalan Sosiologi dalam Pendidikan	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPK3022	Pengenalan Pendidikan Inklusif	2
KPG3013	Insan Guru Profesional	3
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
******	Pelaksanaan Pengajaran Kimia (bidang MAJOR)	3
******	Pelaksanaan Pengajaran Minor (bidang MINOR)	3
	JUMLAH	24

Nota: Kursus Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
*SKU3013	Kimia I	3
*SKU3023	Kimia II	3
SKA3013	Kimia Analisis	3
SKI3013	Teknologi Maklumat dan Komunikasi dalam Kimia	3
SKO3023	Kimia Organik I	3
SKF3013	Kimia Fizik I	3
SKT3013	Kimia Tak Organik I	3
SKO3033	Kimia Organik II	3
SKF3023	Kimia Fizik II	3
SKU3053	Industri dan Isu Semasa dalam Kimia	3
SKA3023	Kimia Analisis Beralat	3
SKT3023	Kimia Tak Organik II	3
SPR3003	Kaedah Penyelidikan Pendidikan	3
SKU3043	Kimia Polimer	3
SKR3913	Projek Tahun Akhir 1	3
SKU3033	Kimia Alam Sekitar	3
SKR3923	Projek Tahun Akhir 2	3
	JUMLAH	51

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

AGIHAN KURSUS ISMP (Kimia) AT13

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

*UPU3142/ *UBM3282	Falsafah dan Cabaran Semasa/Bahasa Melayu Komunikasi II	2
UPU2232	Pengenalan Keusahawanan	2
KPF3013	Perkembangan Pendidikan di Malaysia: Falsafah dan Dasar	3
SKU3013	Kimia I	3
SKT3013	Kimia Tak Organik I	3
SKI3013	Teknologi Maklumat dan Komunikasi dalam Kimia	3
SKO3023	Kimia Organik I	3
	JUMLAH	19

SEMESTER 2

*UPU3152/ *UPU3162	Aspirasi Negara Bangsa/ Citra Malaysia	2
UBI3282	Comprehensive English 1	2
KPS3032	Amalan Sosiologi dalam Pendidikan	2
xxx	Kokurikulum komponen Kelab/Persatuan	1
SKU3023	Kimia II	3
SKT3023	Kimia Tak Organik II	3
SKO3033	Kimia Organik II	3
	JUMLAH	16

SEMESTER 3

*UBM3292	Komunikasi Profesional Bahasa Melayu	
UBI3292	Comprehensive English 2	2
UPU3192	Integriti dan Anti Rasuah	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
xxx	Kokurikulum komponen Unit Beruniform	1
SKA3013	Kimia Analisis	3
SKF3013	Kimia Fizik I	3
xxx	Minor 1	3
xxx	Bahasa Asing Peringkat 1	2
	JUMLAH	18

SEMESTER 4

UPU2382	Kemahiran dan Inovasi Digital	2
KPK3022	Pengenalan Pendidikan Inklusif	2
xxx	Kokurikulum komponen Sukan	1
SKA3023	Kimia Analisis Beralat	3
SKF3023	Kimia Fizik II	3
SKU3033	Kimia Alam Sekitar	3
xxx	Minor 2	3
xxx	Bahasa Asing Peringkat 2	2
	JUMLAH	19

Catatan *Pelajar bukan Warganegara sahaja
*Pelajar Warganegara sahaja
*Kursus Audit (Warganegara sahaja)

AGIHAN KURSUS

ISMP (Kimia)

AT13

SEMESTER 5

KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
KPG3013	Insan Guru Profesional	3
SPR3003	Kaedah Penyelidikan Pendidikan	3
xxx	Minor 3	3
xxx	Bahasa Asing Peringkat 3	2
	JUMLAH	17

SEMESTER 6

SKR3913	Projek Tahun Akhir 1	3
SKU3053	Industri dan Isu Semasa dalam Kimia	3
SKP3013	Pelaksanaan Pengajaran Kimia	3
xxx	Pelaksanaan Pengajaran Minor	3
xxx	Minor 4	3
	JUMLAH	15

Pelaksanaan KPR3072 Perantis Guru pada cuti Semester 6 selama 4 minggu

SEMESTER 7

SKR3923	Projek Tahun Akhir 2	3
SKU3043	Kimia Polimer	3
KPR3072	Perantis Guru	2
xxx	Minor 5	3
xxx	Minor 6	3
	JUMLAH	14

SEMESTER 8

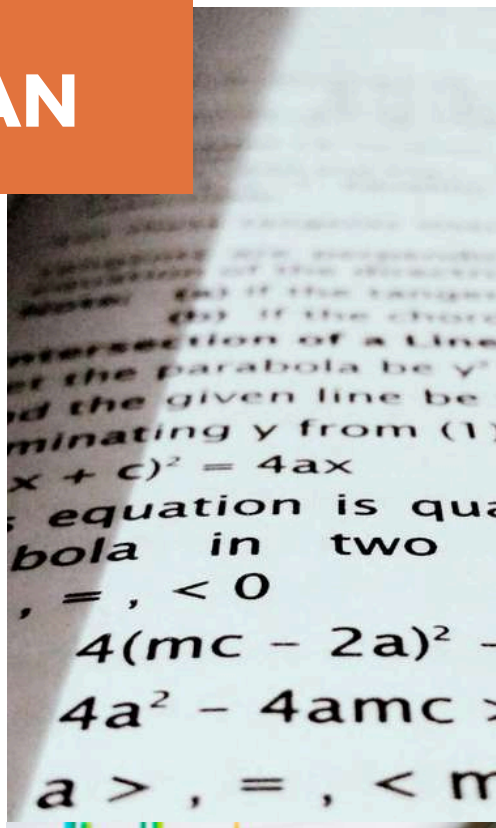
KPR3068	Latihan Mengajar	8
	JUMLAH	8

Catatan: *Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara sem 6 dengan 7). Kursus didaftarkan dan diberi penilaian gred pada semester 7.

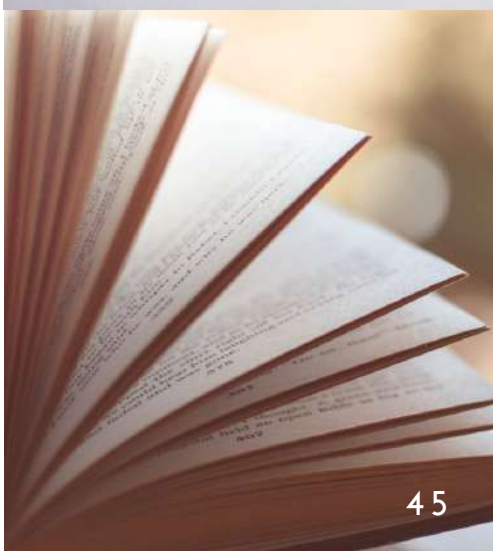
Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

LATIHAN AMALAN

PROFESIONAL PENDIDIKAN



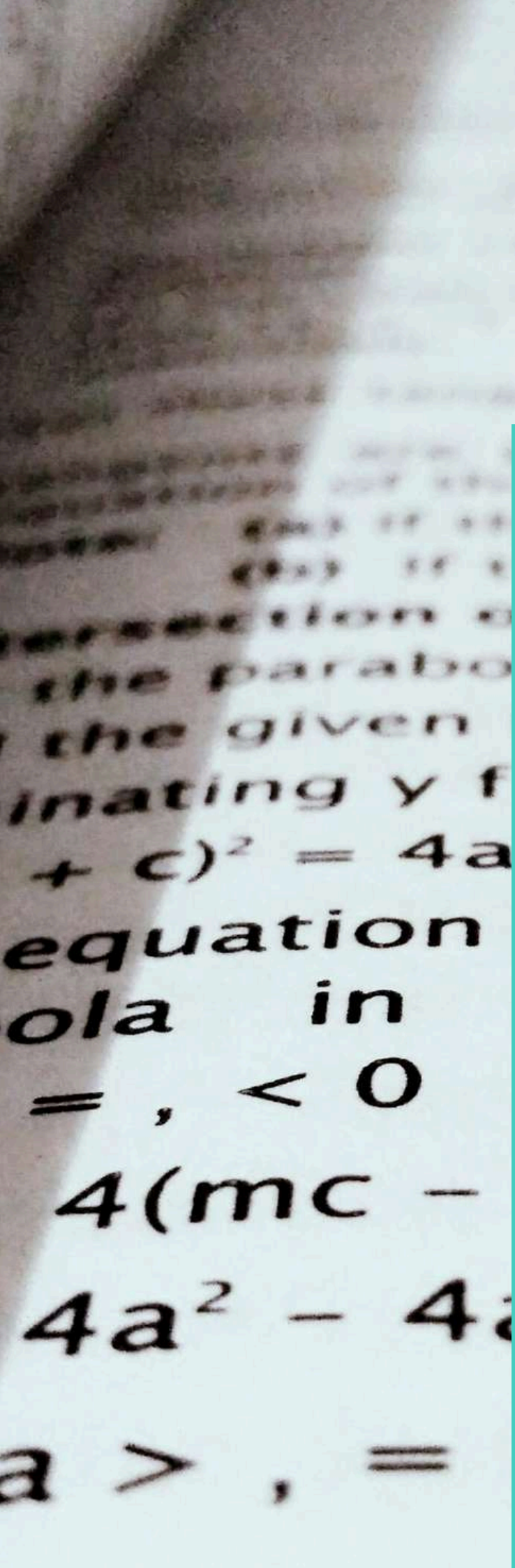




PELAKSANAAN LATIHAN MENGAJAR (LM) DAN PERANTIS GURU (PPG)

Struktur baharu LM dan PG bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2026/2027 (September 2026):

Program	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 6	4 Minggu	2 Kredit
Latihan Mengajar	Semester 8	16 Minggu	8 Kredit
		JUMLAH	10 Kredit



M

JABATAN MATEMATIK
(Mathematics Department)

DIREKTORI KEPAKARAN:

Senarai kakitangan akademik Jabatan Matematik

IJAZAH SARJANA MUDA PENDIDIKAN (MATEMATIK) DENGAN KEPUJIAN:

- Struktur Program
- Agihan Kursus
- Bahasa Inggeris
- Latihan Mengajar

IJAZAH SARJANA MUDA SAINS (MATEMATIK) DENGAN PENDIDIKAN:

- Struktur Program
- Agihan Kursus
- Bahasa Inggeris
- Latihan Mengajar

ALAMAT PERHUBUNGAN:

Jabatan Matematik
Aras 2, Blok 1, Fakulti Sains dan Matematik
Kampus Sultan Azlan Shah
Universiti Pendidikan Sultan Idris
35900 Tanjong Malim
Perak

JABATAN MATEMATIK
(MATHEMATICS DEPARTMENT)

KETUA JABATAN/
HEAD OF DEPARTMENT



Prof. Madya Dr. Phoong Seuk Yen

Ph.D (USM), B.Sc. Ed. (UPSI)

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Kepakaran/Expertise:
Statistics, Unsupervised Machine Learning, Econometric, Mathematics Education



Prof. Dr. Zulkifley Mohamed

Ph.D (UKM), M.Sc. (Salford, UK), Adv. Dip (UiTM), Dip. (UiTM)

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Kepakaran/Expertise:
Robust Statistics. Statistical Modelling



Prof. Dr. Mohd Faizal Nizam Lee Abdullah

Ph.D (East Anglia), M.Ed. (UPSI), B.Ed. (Hons) (UPSI)

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Kepakaran/Expertise:
Mathematics Education



Prof. Madya Dr. Mazlini Adnan

Ph.D (UKM), M.Ed. (UKM), B.Sc. Ed. (UM)

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Kepakaran/Expertise:
Mathematics Education



Prof. Madya Dr. Rohaidah Masri

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: rohaidah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Group Theory, Algebra, Mathematics Education



Prof. Madya Dr. Nor Azah Samat

Ph.D (Salford, UK), M.Sc. (UKM), B.Sc. (Hons) (UiTM)

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: norazah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Statistics: Bayesian Disease Mapping and Stochastic Model for Infectious Disease



YM Prof. Madya Dr. Raja Noor Farah Azura Raja Ma'amor Shah

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: raja_farah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Mathematics, Computational Mathematics, Applied Graph Theory and Networking, Mathematics Education, Engineering Mathematics, Mathematics Technology



Prof. Madya Dr. Annie Gorgey

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Kepakaran/Expertise:
Numerical Methods, Numerical Ordinary Differential Equations



Prof. Madya Dr. Shazlyn Milleana Shaharudin

Ph.D (UTM), B.Sc.Ed. (Hons) (UTM)

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Kepakaran/Expertise:
Multivariate Analysis, Big data



Prof. Madya Dr. Nurul Akmal Mohamed

Ph.D (Brunel University), M.Sc. (UTM), B.Sc. (UTM)

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Kepakaran/Expertise:
PDE

JABATAN MATEMATIK
(MATHEMATICS DEPARTMENT)



Dr. Fainida Rahmat
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: fainida@fsmt.upsi.edu.my

Kepakaran/Expertise:
Mathematical Modelling in Nanotechnology



Dr. Norhayati Ahmat
Ph.D (Bradford, UK), M.Sc. (Brunel, UK), B.Sc. (Hons) (UTM)

: 05-4507424
: norhayati.ahmat@fsmt.upsi.edu.my

Kepakaran/Expertise:
Geometric Modelling Techniques, Deformation Models, Design Optimisation



Dr. Nor Afzalina Azmee
Ph.D (Sheffield), M.Sc. (Warwick), B.Sc. (Hons) (UTM)

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: afzalina@fsmt.upsi.edu.my

Kepakaran/Expertise:
Medical Statistics, Non-inferiority Clinical Trials, Multivariate Analysis



Dr. Nurul Huda Mohamed
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Kepakaran/Expertise:
Vehicle Routing Problems and Operational Research



Dr. Zamzana Zamzamir @ Zamzamin
Ph.D (UTM), M.Sc. (UKM), B.Sc. (UKM)

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Kepakaran/Expertise:
Applied and Computational Complex Analysis



Dr. Rawdah Adawiyah binti Tarmizi
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: rawdah@fsmt.upsi.edu.my

Kepakaran/Expertise:
Matematik, Algebra



Dr. Norsida Hasan
Ph.D (UPM), M.Sc. (UKM), B.App.Sc. (Hons) (USM)

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: norsida@fsmt.upsi.edu.my

Kepakaran/Expertise:
Linear Programming Data Mining



Dr. Nor Azian Aini Mat
Ph.D (UPM), M.Sc. (UKM), B.Sc. (UKM)

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Kepakaran/Expertise:
Calculus



Dr. Nor Suriya Abd Karim
Ph.D (UMT), M.Sc. (UKM), B.Sc. (UiTM)

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Kepakaran/Expertise:
Graph Theory



Dr. Norazman Arbin
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: norazman@fsmt.upsi.edu.my

Kepakaran/Expertise:
Geometric Modeling, Mathematics Education

JABATAN MATEMATIK
(MATHEMATICS DEPARTMENT)



Dr. Nur Hamiza Adenan
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Kepakaran/Expertise:
Mathematical Modelling, Dynamical System, Chaos Theory



Dr. Foo Chuan Hui
Ph.D (UQ, Aus), M.Sc. (USM), B.Sc.Ed. (Hons) (UPM)

: 05-4507439
: foo.ch@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Statistics, Statistical Theory and Modeling, Data Analysis



Dr. Noor Wahida Md Junus
Ph.D (USM), M.Sc. (UKM), B.Sc. (Hons) (UiTM)

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: noor_wahida@fsmt.upsi.edu.my

Kepakaran/Expertise:
Time Series Modeling, Inferential Statistical Analysis



Dr. Nurul Hila Zainudin
Ph.D (UMT), M.Sc. (UMT), B.Sc.Ed. (Hons) (UMT)

: 05-4507435
: nurulhila@fsmt.upsi.edu.my

Kepakaran/Expertise:
Statistical Modelling, Bootstrap, Artificial Neural Network, Monte Carlo Simulation, Time Series



Dr. Sabarina Shafie
Ph.D (New South Wales), M.Sc. (USM), B.Sc. (UIA)

: 05-4507368
: sabarina@fsmt.upsi.edu.my

Kepakaran/Expertise:
Mathematical Computation, PDE Numerical



Dr. Fauzi Mohamed Yusof
Ph.D (USM), M.Sc. (USM), B. Sc. (Hons) UPM, Dip. Edu. (KOPEDA)

: 05-4507118
: fauzi.my@fsmt.upsi.edu.my

Kepakaran/Expertise:
Biomathematics and Mathematical Modelling (Numerical Method, Numerical Analysis, Modeling and Simulation – ODE and PDE)



Dr. Nor Hafizah Md Husin
Ph.D (UMT), M. Sc. (UMT), B. Sc. (UMT)

: 05-4507316
: hafizah.husin@fsmt.upsi.edu.my

Kepakaran/Expertise:
Graph Theory



Dr. Nurihan Nasir
P.hd (USM), M.Ed. (UPSI), B.Ed. (UPSI), Sijil Asas Perguruan (MPPP)

: 05-4507418
: nurihan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Mathematics Education



Dr. Riswan Effendi
Ph.D (UTM), M.Sc. (UTM), B.Sc. UNAND)

:05-4507417
: riswanefendi@fsmt.upsi.edu.my

Kepakaran/Expertise:
Fuzzy Time Series, Rough-Regression, Quantitative Data Analysis, Time Series



Dr. Murugan Rajoo
Ph.D (UUM), M.Ed. (UMS), B.Ed. (Hons) UPSI

: 05-4507412
: murugan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Mathematics Education

JABATAN MATEMATIK
(MATHEMATICS DEPARTMENT)



Dr. Noor Alhuda Madzlan
Ph.D (UKM), M.Sc. (University of London, UK), BSc. (Hons) IIUM

: 05-4506000
: -

Kepakaran/Expertise:
Multi Criteria Decision Making, Bayesian Statistics, Data Sciences



Dr. Ijlal Mohd Diah
Ph.D (UUM), MSc. (Stat) UUM, BEd. UPSI

: 05-4507416
: ijlal.md@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Statistics



Dr. Noor Farizza Haniem Mohd Sohut
Ph.D (UKM), M.Sc. (UiTM), Bsc (Hons) (UiTM)

: 05-4506000
: farizzahaniem@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Mathematics



Pn. Noorazrin Abdul Rajak
M.Sc. (UKM), B.Sc. (Hons) (UiTM), Dip.Stat (UiTM)

: 05-4507425
: noorazrin@fsmt.upsi.edu.my

Kepakaran/Expertise:
Bayesian Analysis, Applied Statistics



En. Mohamad Faiz Farhan Abdul Rahman
MEd (UPSI), BEd. (UPSI), Dip. (UPSI)

: 05-450600
: faizfarhan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Pendidikan Matematik



Dr. Muhammad Solleh Asmadi
Ph.D (UM), M.Sc. (UM), B.Sc (H) (UM)

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: muhammadsolleh@fsmt.upsi.edu.my

Kepakaran/Expertise:
Computational Fluid Dynamics, Numerical Analysis, Ordinary and Partial Differential Equations



Dr. Mohd Shahridwan Ramli
Ph.D (UPM), M.Sc. (UMP), BSc. Manchester, DPLI IPGM

: 05-4506961
: shahridwan@fsmt.upsi.edu.my

Kepakaran/Expertise:
Mathematics Education



Dr. Adib bin Mashuri
Ph.D (UPSI), M.Sc. (UPSI), BEd. (Hons) (UPSI)

: 05-4507852
: adib.mashuri@fsmt.upsi.edu.my

Kepakaran/Expertise:
Applied Mathematics, Mathematical Modelling, Chaos Approach, Genetic Algorithm



En. Abdul Halim Amat @ Kamaruddin
M.Sc. (Jackson State), B.Sc. (Lousiana State), Dip. Ed. (MPTI)

: 05-4507417
: halim@fsmt.upsi.edu.my

Kepakaran/Expertise:
Operations Research Mathematics Education

Kakitangan Sokongan/Supporting Staf



Pn. Siti Khairatul Azwa Mohd Farok
Pembantu Tadbir (P/O) N2

: 015-48797400
: azwa83@upsi.edu.my

STRUKTUR PROGRAM ISMP (Matematik) AT14

Elektif Terbuka

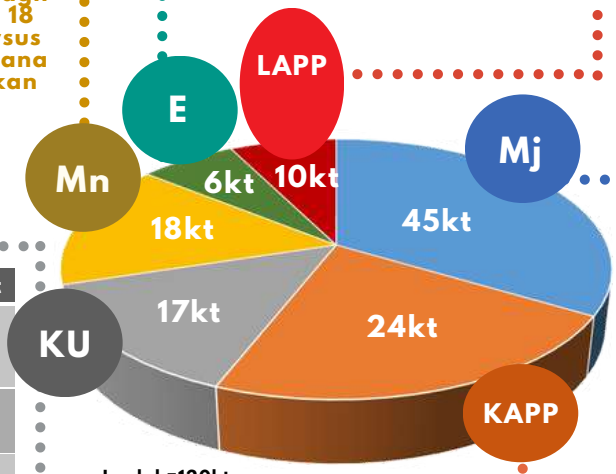
Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3.

Latihan Amalan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPR3068	Latihan Mengajar	8
KPR3072	Perantis Guru	2
	JUMLAH	10

Minor

Pelajar Sarjana Muda Pendidikan (Matematik) dgn Kepujian boleh memilih 18 jam kredit daripada kursus minor daripada mana-mana program yang ditawarkan oleh universiti



Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

Kod & Nama Kursus		Kredit
UPU3142	Falsafah dan Cabaran Semasa	2
UPU3152	Aspirasi Negara Bangsa	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	Kemahiran Inovasi dan Digital	2
UPU3192	Integriti dan Antirasuah	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UBM3292	Komunikasi Profesional Bahasa Melayu	0
	JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UBM3282	Bahasa Melayu Komunikasi II	2
UPU3162	Citra Malaysia	2
UBI3282	Comprehensive English 1	2
UBI3292	Comprehensive English 2	2
UPU2232	Pengenalan Keusahawanan	2
UPU2382	Kemahiran Inovasi dan Digital	2
UPU3192	Integriti dan Antirasuah	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
	JUMLAH	17

Kursus Asas dan Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPS3032	Amalan Sosiologi dalam Pendidikan	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPK3022	Pengenalan Pendidikan Inklusif	2
KPG3013	Insan Guru Profesional	3
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SMP3013	Pelaksanaan Pengajaran Matematik (bidang MAJOR)	2
KPK3012	Pelaksanaan Pengajaran Minor (bidang MINOR)	2
	JUMLAH	24

Nota: Kursus Asas dan Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
SMA3013	Linear Algebra	3
SMA3023	Discrete Mathematics	3
SMA3033	Algebraic Structures	3
SMA3043	Elementary Number Theory	3
*SMN3093	Calculus 1	3
SMN3103	Calculus 2	3
SMQ3043	Linear Programming	3
SMN3043	Ordinary Differential Equations	3
*SMS3013	Introductory Statistics	3
SMS3133	Theory of Probability	3
SMF3013	Financial Mathematics	3
SMG3013	Geometry	3
SMR3013	Research Method	3
SMR3913	Final Year Project 1	3
SMR3923	Final Year Project 2	3
	JUMLAH	45

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

AGIHAN KURSUS ISMP (Matematik) AT14

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

*UPU3142/ *UBM3282	Falsafah dan Cabaran Semasa/ Bahasa Melayu Komunikasi II	2
UPU2232	Pengenalan Keusahawanan	2
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
SMA3013	Linear Algebra	3
SMN3093	Calculus I	3
SMS3013	Introductory Statistics	3
SMS3133	Theory of Probability	3
	JUMLAH	19

SEMESTER 2

*UPU3152/ *UPU3162	Aspirasi Negara Bangsa/Citra Malaysia	2
UBI3282	Comprehensive English 1	2
KPS3032	Amalan Sosiologi dalam Pendidikan	2
SMA3023	Discrete Mathematics	3
SMN3103	Calculus II	3
SMF3013	Financial Mathematics	3
xxx	Bahasa Asing Peringkat 1	2
xxx	Kokurikulum Komponen Kelab/Persatuan	1
	JUMLAH	18

SEMESTER 3

UPU3192	Integriti dan Antirasuah	2
UBI3292	Comprehensive English 2	2
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPK3022	Pengenalan Pendidikan Inklusif	2
SMA3043	Elementary Number Theory	3
xxx	Minor 1	3
xxx	Minor 2	3
xxx	Bahasa Asing Peringkat 2	2
xxx	Kokurikulum Komponen Badan Beruniform	1
*UBM3292	Komunikasi Profesional Bahasa Melayu	
	JUMLAH	20

SEMESTER 4

UPU2382	Kemahiran dan Inovasi Digital	2
KPG3013	Insan Guru Profesional	3
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SMG3013	Geometry	3
SMR3013	Research Method	3
xxx	Bahasa Asing Peringkat 3	2
xxx	Kokurikulum Komponen Sukan	1
	JUMLAH	20

*Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara sem 4 dengan 5).

Catatan: *Pelajar bukan Warganegara sahaja
*Pelajar Warganegara sahaja
*Kursus Audit (Warganegara sahaja)

AGIHAN KURSUS

ISMP (Matematik)

AT14

SEMESTER 5

*KPR3072	Perantis Guru	2
SMP3013	Pelaksanaan Pengajaran Matematik	3
xxx	Pelaksanaan Pengajaran Minor	3
SMQ3043	Linear Programming	3
SMR3913	Final Year Project 1	3
xxx	Minor 3	3
xxx	Minor 4	3
	JUMLAH	20

SEMESTER 6

SMA3033	Algebraic Structure	3
SMN3043	Ordinary Differential Equations	3
SMR3923	Final Year Project 2	3
xxx	Minor 5	3
xxx	Minor 6	3
	JUMLAH	15

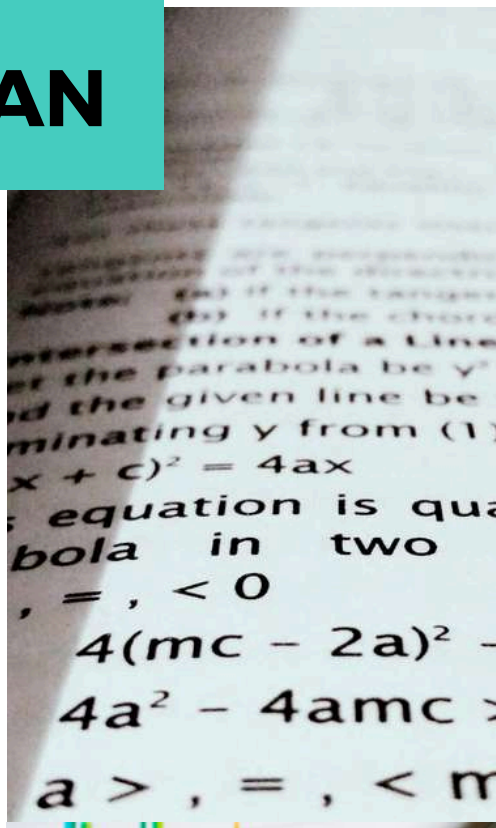
SEMESTER 7

KPR3068	Latihan Mengajar	8
	JUMLAH	8

Catatan: *Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara sem 4 dengan 5). Kursus didaftarkan dan diberi penilaian gred pada semester 5. Tempoh masa Perantis Guru adalah 4 minggu.

Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

LATIHAN AMALAN PROFESIONAL PENDIDIKAN







PELAKSANAAN LATIHAN MENGAJAR (LM) DAN PERANTIS GURU (PG)

Struktur baharu LM dan PG bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2026/2027 (September 2026):

Program	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 4	4 Minggu	2 Kredit
Latihan Mengajar	Semester 7	16 Minggu	8 Kredit
		JUMLAH	10 Kredit

STRUKTUR PROGRAM

ISM SAINS Matematik Dengan Pendidikan

AT48

Teras Lanjutan

Pelajar perlu memilih minimum 12 jam kredit dari mana-mana kursus yang ditawarkan pada semester berkenaan

Kursus Universiti

Pakej Kursus Universiti bagi pelajar tempatan:

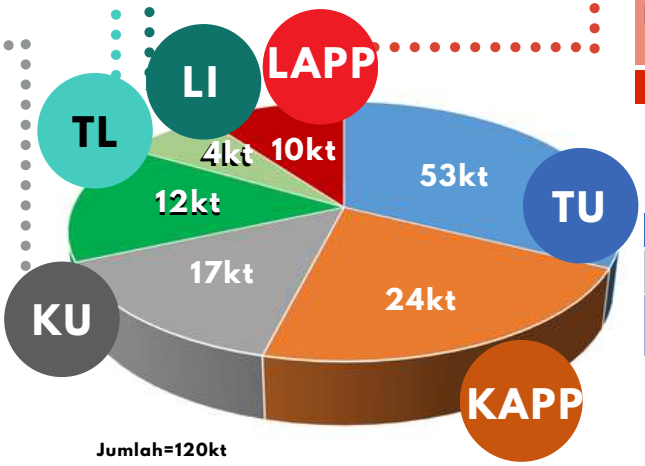
Kod & Nama Kursus	Kredit
UPU3142 Falsafah Dan Cabaran Semasa	2
UPU3152 Aspirasi Negara Bangsa	2
UPU3192 Integriti dan Anti Rasuah	2
UPU2232 Pengenalan Keusahawanan	2
UPU2382 Kemahiran dan Inovasi Digital	2
UBI3282 Comprehensive English 1	2
UBI3292 Comprehensive English 2	2
*** Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform ATAU Bitara)	3
UBM3292 Komunikasi Profesional Bahasa Melayu	0 (Audit)
JUMLAH	17

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus	Kredit
UBM3282 Bahasa Melayu Komunikasi II	2
UBM3162 Citra Malaysia	2
UPU3192 Integriti dan Anti Rasuah	2
UPU2232 Pengenalan Keusahawanan	2
UPU2382 Kemahiran dan Inovasi Digital	2
UBI3282 Comprehensive English 1	2
UBI3292 Comprehensive English 2	2
*** Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform ATAU Bitara)	3
JUMLAH	17

Latihan Industri

Kod & Nama Kursus	Kredit
SML3014 Latihan Industri	4
JUMLAH	4



Jumlah=120kt

Latihan Amalan Profesional Pendidikan

Kod & Nama Kursus	Kredit
KPR3068 Latihan Mengajar	8
KPR3072 Perantis Guru	2
JUMLAH	10

Kursus Asas dan Profesional Pendidikan

Kod & Nama Kursus	Kredit
KPF3013 Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
KPP3032 Amalan Psikologi dalam Pendidikan	2
KPS3032 Amalan Sosiologi dalam Pendidikan	2
KPK3022 Pengenalan Pendidikan Inklusif	2
KPG3013 Insan Guru Profesional	3
KPD3056 Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SMP3013 Pelaksanaan Pengajaran Matematik	3
SMP3023 Teknologi dalam Pengajaran dan Pembelajaran Matematik	3
JUMLAH	24

Nota: Kursus Asas dan Profesional Pendidikan wajib diulang sekiranya pelajar memperoleh Gred B- dan ke bawah.

Teras Utama

Kod & Nama Kursus	Kredit
SMA3013 Linear Algebra	3
SMA3023 Discrete Mathematics	3
SMA3033 Algebraic Structures	3
SMA3043 Elementary Number Theory	3
*SMN3093 Calculus 1	3
SMN3103 Calculus 2	3
SMG3013 Geometry	3
SMQ3043 Linear Programming	3
SMN3043 Ordinary Differential Equations	3
SMF3013 Financial Mathematics	3
SMN3083 Partial Differential Equations	3
SMQ3013 Programming Language for Numerical Computing	3
*SMS3013 Introductory Statistics	3
SMS3133 Theory of Probability	3
SMS3153 Data Sciences	3
SMR3022 Mathematical Research Methods	2
SMR3933 Mathematical Science Project 1	3
SMR3943 Mathematical Science Project 2	3
JUMLAH	53

Nota: Kursus bertanda * wajib diulang sekiranya pelajar memperolehi Gred C- dan ke bawah.

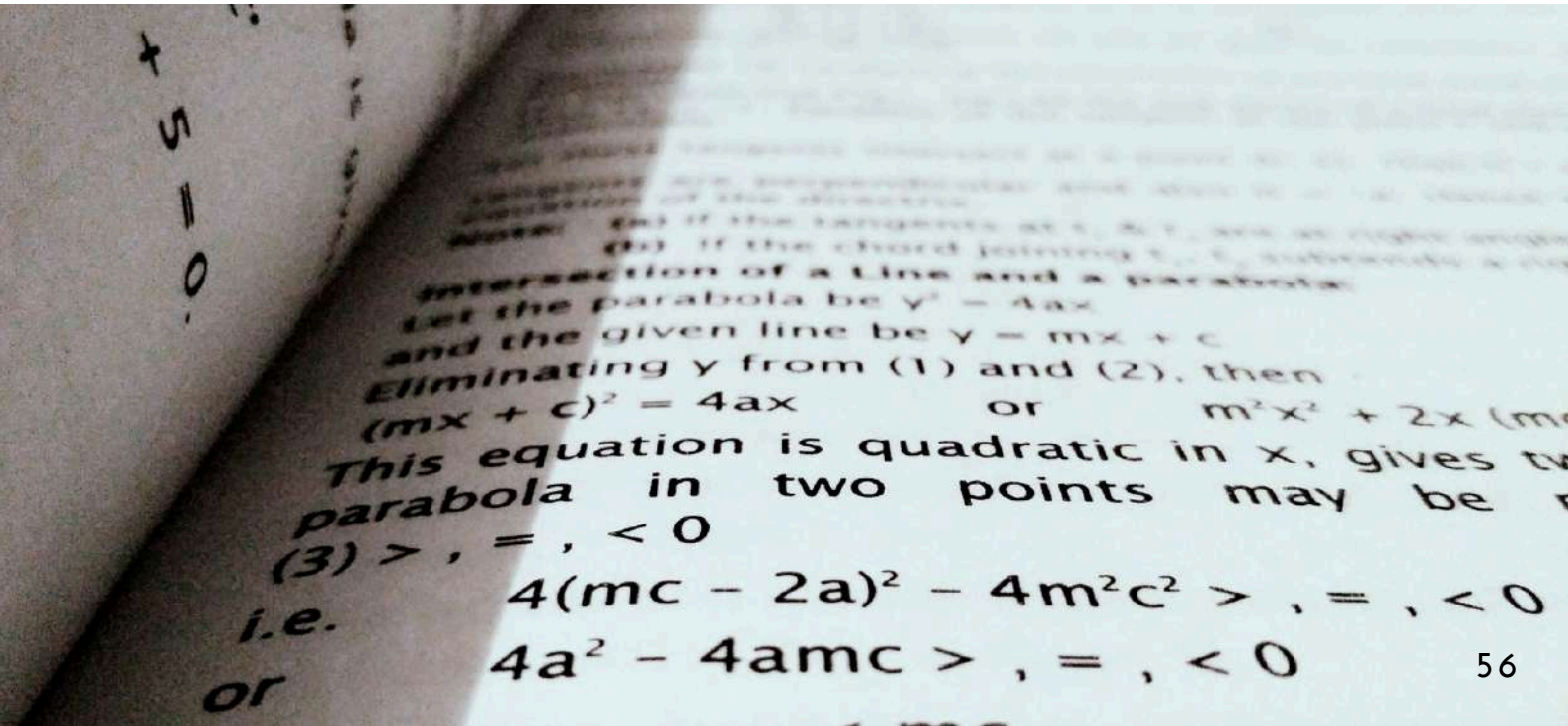
ISM SAINS
Matematik Dengan Pendidikan

Kursus Teras Lanjutan

Pelajar program Ijazah Sarjana Muda Sains Matematik dengan Pendidikan (AT48)

Pelajar perlu memilih minimum 12 jam kredit dari mana-mana kursus di bawah yang ditawarkan pada semester berkenaan:

Kod	Nama Kursus	Kredit
SMA3063	Graph Theory	3
SMN3063	Real Analysis	3
SMQ3053	Introduction to Mathematical Modelling	3
SMQ3143	Games and Networks	3
SMQ3123	Numerical Analysis	3
SMS3073	Sampling Techniques	3
SMS3083	Time Series	3
SMS3103	Experimental Design and Analysis	3
SMS3143	Non-Parametric Statistics	3
SMS3163	Big Data Analysis	3



AGIHAN KURSUS

ISM SAINS Matematik Dengan Pendidikan

AT48

CADANGAN PENDAFTARAN KURSUS MENGIKUT SEMESTER

SEMESTER 1

*UPU3142/ *UBM2142	Falsafah dan Cabaran Semasa/ Bahasa Melayu Komunikasi II	2
UPU2232	Pengenalan Keusahawanan	2
KPF3013	Falsafah dan Kurikulum dalam Perkembangan Pendidikan	3
SMA3013	Linear Algebra	3
SMN3093	Calculus 1	3
SMS3013	Introductory Statistics	3
SMS3133	Theory of Probability	3
	JUMLAH	19

SEMESTER 2

*UPU3152/ *UBM3162	Aspirasi Negara Bangsa/ Citra Malaysia	2
UBI3282	Comprehensive English 1	2
KPS3032	Amalan Sosiologi dalam Pendidikan	2
SMA3023	Discrete Mathematics	3
SMN3103	Calculus 2	3
SMF3013	Financial Mathematics	3
SMQ3103	Programming Language for Numerical Computing	3
xxx	Kokurikulum Komponen Kelab/Persatuan	1
	JUMLAH	19

SEMESTER 3

UPU2342	Integriti dan Anti Rasuah	2
UBI3292	Comprehensive English 2	2
*UBM3292	Komunikasi Profesional Bahasa Melayu	0
KPP3032	Amalan Psikologi dalam Pendidikan	2
KPK3022	Pengenalan Pendidikan Inklusif	2
SMA3043	Elementary Number Theory	3
SMN3043	Ordinary Differential Equations	3
xxx	Teras Lanjutan 1	3
xxx	Kokurikulum Komponen Badan Beruniform	1
	JUMLAH	18

SEMESTER 4

UPU2382	Kemahiran dan Inovasi Digital	2
KPG3013	Insan Guru Profesional	3
KPD3056	Pedagogi, Pentaksiran dan Teknologi Pengajaran	6
SMG3013	Geometry	3
SMR3022	Mathematical Research Methods	2
xxx	Kokurikulum Komponen Sukan	1
	JUMLAH	17

*Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara sem 4 dengan 5).

Catatan: *Pelajar bukan Warganegara sahaja
*Pelajar Warganegara sahaja
*Kursus Audit (Warganegara sahaja)

AGIHAN KURSUS

ISM SAINS
Matematik Dengan Pendidikan

AT48

SEMESTER 5

*KPR3072	Perantis Guru	2
SMP3013	Pelaksanaan Pengajaran Matematik	3
SMP3023	Teknologi dalam Pengajaran dan Pembelajaran Matematik	3
SMQ3043	Linear Programming	3
SMR3933	Mathematical Science Project 1	3
SMxxxx	Teras Lanjutan 2	3
	JUMLAH	17

SEMESTER 6

SMA3033	Algebraic Structures	3
SMR3943	Mathematical Science Project 2	3
SMN3083	Partial Differential Equations	3
SMS3153	Data Sciences	3
SMxxxx	Teras Lanjutan 3	3
SMxxxx	Teras Lanjutan 4	3
	JUMLAH	18

SEMESTER 7

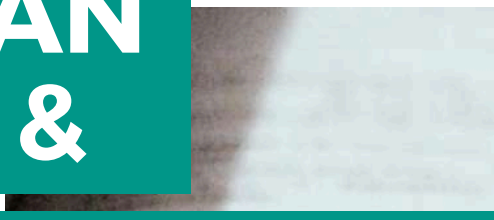
KPR3068	Latihan Mengajar	8
SML3014	Latihan Industri	4
	JUMLAH	12

Catatan: *Pelajar menjalani Perantis Guru (KPR3072) semasa cuti semester panjang (antara Semester 4 dengan 5).
Kursus didaftarkan dan diberi penilaian gred pada Semester 5.
Tempoh masa Perantis Guru adalah 4 minggu.

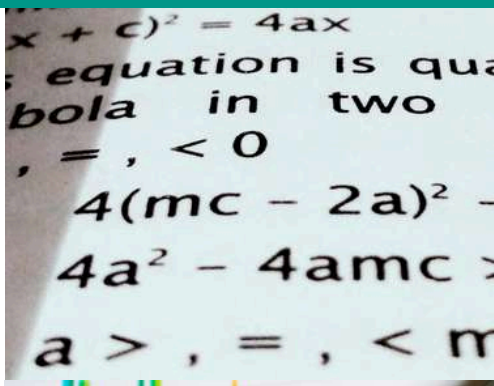
Cadangan pendaftaran kursus ini adalah tertakluk kepada penawaran kursus pada setiap semester. Pelajar dinasihatkan agar merujuk kepada jabatan masing-masing untuk sebarang pengemaskinian.

KURSUS

LATIHAN AMALAN PROFESIONAL &



LATIHAN INDUSTRI



PELAKSANAAN KURSUS LATIHAN AMALAN PROFESIONAL DAN LATIHAN INDUSTRI

Struktur baharu Latihan Mengajar (LM), Perantis Guru (PG) dan Latihan Industri (LI) bagi pelajar program Ijazah Sarjana Muda Sains Matematik dengan Pendidikan bermula sesi kemasukan Semester 1, Sesi 2026/2027 (September 2026):

Kursus	Pelaksanaan	Tempoh	Kredit
Perantis Guru	Cuti Semester 4	4 Minggu	2 Kredit
Latihan Mengajar	Semester 7	16 Minggu	8 Kredit
Latihan Industri	Semester 7	8 Minggu	4 Kredit





SINOPSIS KURSUS

Kursus Universiti

KU

UPU3112 FALSAFAH DAN ISU SEMASA

Kursus ini merangkumi hubungan ilmu falsafah dengan Falsafah Pendidikan Kebangsaan dan Rukun Negara. Penggunaan falsafah sebagai alat untuk memurnikan budaya pemikiran dalam kehidupan melalui seni dan kaedah berfikir serta konsep insan. Topik utama dalam falsafah iaitu epistemologi, metafizik dan etika dibincangkan dalam konteks isu semasa. Penekanan diberikan kepada falsafah sebagai asas bagi menjalin dialog antara budaya serta memupuk nilai sepunya. Di hujung kursus ini pelajar akan mampu melihat disiplin-disiplin ilmu sebagai satu badan ilmu yang komprehensif dan terkait antara satu sama lain.

UBI3282 BAHASA INGGERIS KOMPREHENSIF 1

Kursus ini bertujuan untuk membangunkan keupayaan pelajar untuk melaporkan maklumat yang dikumpul dan menganalisis teks dalam bidang yang diminati oleh pelajar. Ia juga membolehkan pelajar membentangkan penerangan idea untuk berkomunikasi secara berkesan mengenai topik yang tidak asing bagi pelajar.

UBI3292 BAHASA INGGERIS KOMPREHENSIF 2

Kursus ini mengukuhkan lagi kebolehan pelajar dalam menilai teks berkaitan topik abstrak dan kompleks. Ia membantu pelajar berkomunikasi secara berkesan melalui penulisan esei dalam konteks akademik dan tempat kerja. Ia juga membantu pelajar untuk membentuk kemahiran kerja berpasukan untuk berkongsi idea dan pendapat dalam konteks biasa dan kompleks.

UBM2142 BAHASA MELAYU KOMUNIKASI 1

Kursus ini menekankan penguasaan pelajar untuk mengetahui sebutan dan perbendaharaan kata. Tumpuan turut diberikan dalam penulisan semula ayat mudah dan berucap dalam bahasa Melayu secara berkesan pada peringkat asas.

UBM3362 BAHASA MELAYU KOMUNIKASI 2

Kursus ini menekankan penguasaan kemahiran bahasa Melayu kepada pelajar antarabangsa agar dapat berkomunikasi dalam situasi kehidupan harian dengan baik. Pelajar akan diperkenalkan dengan pertuturan dan penulisan Bahasa Melayu mudah. Fokus utama adalah untuk menguasai kemahiran asas komunikasi merangkumi aspek bertutur, menulis, membaca dan mendengar dalam bahasa Melayu.

UBM3262 KETERAMPILAN WACANA BAHASA MELAYU

Kursus ini bertujuan untuk meningkatkan kemahiran komunikasi dalam wacana akademik pelajar. Pelajar didedahkan dengan kemahiran praktikal dalam pencarian maklumat bagi menghasilkan penulisan ilmiah dan pembentangan secara berkesan dalam bahasa Melayu.

UPU2122 PENGHAYATAN ETIKA DAN PERADABAN

Kursus ini mempersiapkan pelajar untuk menghayati etika & peradaban yang wujud dalam masyarakat kepelbagaian etnik di Malaysia untuk memperteguhkan pemikiran kritikal & analitikal mereka bagi menangani kehidupan yang lebih mencabar. Pengisian kursus ini memfokuskan kepada penghayatan etika & peradaban dalam acuan Malaysia. Pelajar akan didedahkan dengan dinamika konsep etika & peradaban yang menjadi kekuatan kepada pembentukan negara Malaysia berdasarkan susur masa evolusi sejarahnya dari era prakolonial sehingga ke pascakolonial. Kefahaman tentang pembentukan etika & peradaban dalam masyarakat kepelbagaian dibincangkan bagi meningkatkan penghayatan etika&peradaban ke arah pemantapan kesepaduan nasional & bangsa Malaysia. Peradaban acuan Malaysia perlu dikupas serta diperdebatkan dalam aktiviti akademik berpandukan Perlembagaan Persekutuan sebagai tapak integrasi & wahana etika & peradaban. Pembinaan kesepaduan nasional amat dipengaruhi oleh globalisasi & perkembangan teknologi maklumat & komunikasi yang kompleks. Oleh kerana itu penghayatan etika&peradaban menzahirkan perilaku tanggungjawab sosial & digerakkan pada peringkat individu, keluarga komuniti masyarakat & negara. Justeru perubahan yang berlaku dalam masyarakat & pembangunan langsung ekonomi telah membawa cabaran baru dalam mengukuhkan kelestarian etika & peradaban di Malaysia. Amalan Pendidikan Berimpak Tinggi (HIEPs) dipraktikkan dalam pengajaran dan pembelajaran bagi mendalami kursus ini. (pengajaran & pembelajaran).

UPU2342 INTEGRITI DAN ANTI RASUAH

Kursus ini merangkumi konsep asas tentang nilai integriti, bentuk kesalahan rasuah dan salah guna kuasa dalam kehidupan seharian serta dalam organisasi dan langkah-langkah pencegahan rasuah. Isu dan kes rasuah sebenar juga dibincangkan dalam sesi pembelajaran. Fokus utama kursus ini adalah untuk membangunkan kemahiran yang di perlukan untuk menghadapi isu-isu rasuah, salah guna kuasa dan jenayah kolar putih supaya seseorang individu dapat bertindak dan kekal berintegriti setiap masa.

SINOPSIS KURSUS

Kursus Universiti

KU

UPU3222 BUDAYA KEUSAHAWANAN

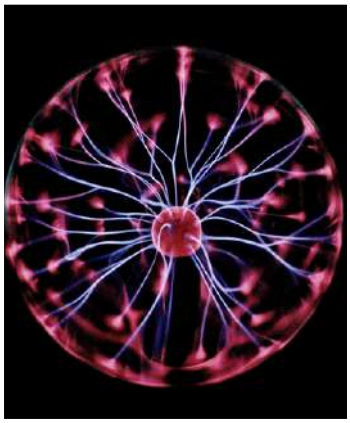
Kursus ini bertujuan untuk memberi pendedahan tentang konsep dan prinsip asas keusahawanan kepada pelajar supaya dapat menimbulkan minat untuk menceburi bidang keusahawanan. Kursus ini memberi fokus kepada pengajian keusahawanan dan kemahiran perniagaan dengan penekanan terhadap perlaksanaan pembelajaran secara interaktif. Pelajar diberi peluang untuk merasai pengalaman sebenar sebagai seorang usahawanan dengan membangunkan kerangka rancangan perniagaan serta menjalankan aktiviti berasaskan keusahawanan.

UPU3322 WARISAN SENI DAN BUDAYA MALAYSIA

Kursus ini memperkenalkan pelajar kepada pelbagai bentuk seni masyarakat berbilang bangsa dan kaum etnik yang menjadi sebahagian daripada warisan budaya Malaysia. Pelajar akan mengkaji muzik, tarian, teater dan kraf tradisional yang mewakili budaya unik masyarakat Malaysia di Semenanjung Malaysia, Sabah dan Sarawak. Melalui penglibatan secara praktikal dalam seni persembahan dan pembuatan kraf terpilih, pelajar akan membina penghargaan yang lebih tinggi terhadap warisan budaya Malaysia dan kefahaman yang lebih baik tentang masyarakat Malaysia.

UPU3312 PENGAJIAN KENEGARAAN

Kursus ini memberi penekanan kepada aspek-aspek kenegaraan di Malaysia. Ini meliputi sejarah negara, sistem pentadbiran, perlembagaan dan dasar-dasar kerajaan dalam proses pembinaan negara bangsa. Ilmu Pengajian Kenegaraan ini merentasi pelbagai disiplin antaranya Sejarah, Sosiologi, Antropologi, Sains Politik, Undang-undang dan Ekonomi.



SINOPSIS KURSUS

Kursus Profesional Pendidikan

KPP

KPF3012 PERKEMBANGAN PENDIDIKAN DI MALAYSIA: FALSAFAH DAN DASAR

Kursus ini membincangkan secara kritis tentang falsafah dan dasar perundangan pendidikan dengan menganalisisnya dalam konteks perkembangan pendidikan di Malaysia. Kursus ini juga meneroka dan membincangkan perkembangan pendidikan negara sebagai satu kesinambungan amalan yang sepatutnya berlaku secara berterusan dalam proses pembangunan negara. Falsafah, dasar-dasar, kurikulum dan peraturan dalam pendidikan juga diberi penekanan bagi membolehkan para pelajar memperoleh pengetahuan dan kemahiran serta pemupukan sikap dalam melaksanakan tanggungjawab secara berkesan dalam profesion keguruan.

KPS3014 PENGURUSAN PEMBELAJARAN

Kursus ini membincangkan peranan guru sebagai pengurus pembelajaran dalam konteks pelbagai persekitaran pembelajaran. Pelajar akan diperkenalkan kepada pelbagai aspek pengurusan pembelajaran termasuk organisasi, kepemimpinan, tingkah laku, sumber, teknologi, budaya dan keupayaan. Kursus ini akan mendedahkan pelajar kepada pengalaman sebenar di sekolah yang akhirnya membolehkan mereka berfungsi secara berkesan dalam semua situasi pembelajaran.

KPK3012 PENDIDIKAN INKLUSIF

Kursus ini memberi fokus kepada dasar dan falsafah pendidikan khas yang menjurus kepada pendidikan inklusif. Kursus membincangkan tentang isu-isu semasa, ciri-ciri murid pendidikan khas serta membincangkan strategi dan teknik pengajaran melalui pendekatan inklusif. Kursus juga membincangkan kolaborasi antara pihak yang berkepentingan dalam menjayakan pendidikan inklusif.

KPP3014 PEMBELAJARAN DAN PERKEMBANGAN PELAJAR

Kursus ini membincang aspek pembelajaran dan perkembangan remaja berlatar belakang pendidikan yang meliputi diri pelajar, proses pembelajaran dan kepelbagaian pelajar. Selain itu, aspek pengalaman pembelajaran yang berasaskan minda, budaya, bahasa, keupayaan diri, personaliti, sosial, persekitaran, emosi dan fizikal juga diketengahkan.

KPD 3016 PENGAJARAN, TEKNOLOGI DAN PENAKSIRAN 1

Kursus ini membincang dan membimbing pelajar membina kemahiran merancang pengajaran dalam lima aspek utama berikut: (a) menyatakan objektif pengajaran dan pembelajaran, (b) memilih dan menyusun kandungan dan bahan pengajaran (c) memilih pendekatan, kaedah dan teknik pengajaran yang sesuai, (d) menyedia alat dan teknologi yang sesuai dalam proses pengajaran dan pembelajaran, (e) menyedia, memilih dan mengguna alat dan kaedah penilaian yang sesuai untuk menaksir dan menilai hasil pembelajaran. Pelajar akan mendapat kemahiran menyedia set rancangan pelajaran dalam sesuatu topik dalam mata pelajaran pengkhususan mereka.

KPR3012 SEMINAR REFLEKSI LATIHAN MENGAJAR

Kursus ini akan membolehkan pelajar membuat refleksi latihan mengajar secara kritis, membuat keputusan, dan mencari penyelesaian alternatif dalam pengajaran dan pembelajaran berdasarkan pengalaman latihan mengajar

SINOPSIS KURSUS

Kursus Profesional Pendidikan

KPP

SBP 3013 PELAKSANAAN PENGAJARAN BIOLOGI

Kursus ini bertujuan mengukuhkan kemahiran pelajar merancang dan melaksanakan pengajaran melalui mikro dan makropengajaran dalam aspek utama proses pengajaran: (a) menyatakan hasil pembelajaran, (b) memilih dan merancang bahan dan urutan pengajaran, (c) memilih dan melaksanakan kaedah, strategi dan teknik pengajaran yang sesuai, (d) menyedia dan mengguna media dan teknologi pengajaran dan pembelajaran yang sesuai, dan (e) menyedia, memilih dan menggunakan kaedah dan alat pentaksiran yang sesuai bagi menilai hasil pembelajaran dalam mata pelajaran Biologi, dan (f) merancang Kajian Tindakan.

SFP3013 PELAKSANAAN PENGAJARAN FIZIK

Kursus ini bertujuan mengukuhkan kemahiran pelajar merancang dan melaksanakan pengajaran melalui mikro dan makropengajaran dalam aspek utama proses pengajaran: (a) menyatakan hasil pembelajaran, (b) memilih dan merancang bahan dan urutan pengajaran, (c) memilih dan melaksanakan kaedah, strategi dan teknik pengajaran yang sesuai, (d) menyedia dan menggunakan media dan teknologi pengajaran dan pembelajaran yang sesuai, (e) menyedia, memilih dan menggunakan kaedah dan alat pentaksiran yang sesuai bagi menilai hasil pembelajaran dalam mata pelajaran Fizik, dan (f) merancang Kajian Tindakan.

SKP3013 PELAKSANAAN PENGAJARAN KIMIA

Kursus ini bertujuan mengukuhkan kemahiran pelajar merancang dan melaksanakan pengajaran melalui mikro dan makropengajaran dalam aspek utama proses pengajaran: (a) menyatakan hasil pembelajaran, (b) memilih dan merancang bahan dan urutan pengajaran, (c) memilih dan melaksanakan kaedah, strategi dan teknik pengajaran yang sesuai, (d) menyedia dan mengguna media dan teknologi pengajaran dan pembelajaran yang sesuai, dan (e) menyedia, memilih dan menggunakan kaedah dan alat pentaksiran yang sesuai bagi menilai hasil pembelajaran dalam mata pelajaran Kimia dan (f) merancang Kajian Tindakan.

SMP3013 PELAKSANAAN PENGAJARAN MATEMATIK

Kursus ini bertujuan mengukuhkan kemahiran pelajar merancang dan melaksanakan pengajaran melalui mikro dan makropengajaran dalam aspek utama proses pengajaran: (a) menyatakan hasil pembelajaran, (b) memilih dan merancang bahan dan urutan pengajaran, (c) memilih dan melaksanakan kaedah, strategi dan teknik pengajaran yang sesuai, (d) menyedia dan menggunakan media dan teknologi pengajaran dan pembelajaran yang sesuai, (e) menyedia, memilih dan menggunakan kaedah dan alat pentaksiran yang sesuai bagi menilai hasil pembelajaran dalam mata pelajaran Matematik, dan (f) merancang Kajian Tindakan.

SSP3013 PELAKSANAAN PENGAJARAN SAINS

Kursus ini bertujuan mengukuhkan kemahiran pelajar merancang dan melaksanakan pengajaran melalui mikro dan makropengajaran dalam aspek utama proses pengajaran: (a) menyatakan hasil pembelajaran, (b) memilih dan merancang bahan dan urutan pengajaran, (c) memilih dan melaksanakan kaedah, strategi dan teknik pengajaran yang sesuai, (d) menyedia dan menggunakan media dan teknologi pengajaran dan pembelajaran yang sesuai, (e) menyedia, memilih dan menggunakan kaedah dan alat pentaksiran yang sesuai bagi menilai hasil pembelajaran dalam mata pelajaran Sains, dan (f) merancang Kajian Tindakan.

SINOPSIS KURSUS

Perantis Guru/Latihan Mengajar/ Latihan Industri

PG/ LM/LI

KPR3072 PERANTIS GURU

Kursus ini menyediakan peluang untuk pelajar memahami persekitaran warga sekolah dan budaya sekolah. Ianya juga memberi peluang kepada pelajar mengaitkan secara kritikal Falsafah Pendidikan Kebangsaan dalam persekitaran sekolah. Selain itu kursus ini juga memberi peluang kepada pelajar mengenalpasti perancangan pengajaran dan pemudahcaraan serta penglibatan dengan pengurusan sekolah dan aktiviti ko-kurikulum. Kursus ini merupakan prasyarat kepada kursus latihan mengajar 1 dan 2.

SML3014 LATIHAN INDUSTRI

Pelajar menjalani Latihan Industri di syarikat-syarikat atau organisasi-organisasi yang berkaitan dengan bidang pengajian masing-masing dalam tempoh yang ditetapkan. Pelajar akan mendapat pengalaman keadaan sebenar operasi syarikat atau organisasi tersebut. Prestasi pelajar akan dipantau oleh penyelia daripada fakulti dan syarikat tempat latihan industri dijalankan. Pelajar perlu melengkapkan tugasan khusus dan menyediakan laporan akhir mengikut bidang pengajian mereka.

KPR3068 LATIHAN MENGAJAR

Kursus ini bertujuan untuk memantapkan kemahiran mengaplikasi ilmu dalam konteks sebenar pengajaran, pembelajaran dan pengurusan pendidikan di sekolah.

SINOPSIS KURSUS

ISMP (Biologi)

AT11

SBC3013 CELL BIOLOGY AND MOLECULAR FOUNDATION

Cell Biology and Molecular Foundation introduce the structure, organization and function of cells as the fundamental unit of life, covering the cell membrane, organelles, the cytoskeleton, cell division and the relationship between cellular structure and function. The course also provides a molecular foundation through the study of DNA, RNA and proteins, including replication, transcription, translation and gene regulation. Students explore how cellular structures and molecular processes interact to support biological function. By the end of the course, students will be able to explain key principles of cell biology and molecular foundations, compare major cellular structures and processes, and conduct basic scientific experiments collaboratively.

SBU3033 GENETICS

This course discusses the fundamental principles of genetics, including mitosis and meiosis, Mendelian genetics, modification of Mendelian ratios, non-Mendelian inheritance, gene linkage, crossing over, chromosome mapping, population genetics and basic molecular biology. The discussion covers monohybrid and dihybrid crosses, testcrosses, backcrosses, probability principles, human pedigree analysis, autosomal and sex-linked inheritance, mutation, codominance, incomplete dominance, multiple alleles, lethal alleles, epistasis, pleiotropy, polygenic inheritance and environmental effects on phenotype. The course also explains the Hardy-Weinberg law, genetic changes in populations, experimental evidence of DNA as genetic material, DNA structure and replication, transcription and translation. Students will execute genetic experiments using animal and plant model systems, analyse genetic problems using critical thinking skills, and evaluate ethical issues and technological implications related to genetics. By the end of the course, students will be able to describe genetic phenomena and apply important genetic principles in scientific and societal contexts.

SBF3053 PHYSIOLOGICAL PROCESSES IN PLANTS

The course discusses important aspects in plant physiological processes. It includes the relation of water with plants, inorganic nutrients, photosynthesis, translocation, phytoremediation, plant hormone, plant movement, photoperiodism and plants under stress. Discussion related to the current issues involved in the interaction between the plant and environment in physiological aspects will also be conducted. At the end of the course, students will be able to explain and analyse plant physiological processes and relate them to the growth and development of the plants.

SBC3043 DEVELOPMENTAL BIOLOGY AND REPRODUCTION

This course discusses the development and growth of vertebrate animals and angiosperm plants starting from the process of fertilization, embryo formation until the organism matures. The discussion will also involve the latest technological developments in the field of reproduction as well as ethics and professionalism in both fields.

SBC3063 PLANT ANATOMY AND MORPHOLOGY

This course discusses the anatomical and morphological structure of plants including descriptions of cells, tissues and organs that constitute the entire plant organization. Primary and secondary growth in plants will also be clearly explained. In addition, the variety of morphological and anatomical structures of plants, the relationship with the environment and adaptation to the habitat will also be discussed. The structure of vegetative and reproductive organs of Angiosperms and other plant groups will be described, where this course provides a basic understanding before students learn the physiological processes, development and metabolism of plants in other courses. Students will also be strengthened with practical skills and preparation of microscope slides. At the end of the course, students will be able to apply their knowledge of plant anatomy and morphology through observation, information analysis, and effective collaboration in assigned tasks.

SBC3053 ANIMAL ANATOMY AND HISTOLOGY

This course discusses the basic anatomy and histology of vertebrates. Students will be provided with an understanding of the types and structures of cells that make up vertebrate tissues and internal organs through microscopic identification and organ-organ identification during practical training in the laboratory. At the end of this course, students will be able to identify specialized cells and how they interact to form structurally and functionally related tissues.

SBB3053 BIODIVERSITY

This course discusses the concept of biodiversity, which includes evolutionary theory, organism classification and issues related to biodiversity conservation. The discussion covers the domains Archaea and Bacteria, viruses, and Eukaryotic organisms consisting of the kingdoms Protista, Fungi, Plantae and Animalia. In the kingdom Plantae, emphasis is given to non-vascular plants, seedless vascular plants and seed plants. In the kingdom Animalia, the course discusses animal symmetry, major phyla such as Mollusca, Arthropoda, Echinodermata and Chordata, as well as vertebrate groups including fishes, amphibians, reptiles, birds and mammals. Diagnostic characteristics, morphology, habitat, nutrition, life cycle and the importance of organisms are also described to determine organism classification. Students analyse organism characteristics through group fieldwork activities and interact using interpersonal skills regarding the importance of biodiversity to the economy, environment and sociocultural aspects. At the end of the course, students will be able to analyse organism classification, conduct fieldwork ethically and appreciate the importance of biodiversity conservation in sustaining life.

SINOPSIS KURSUS ISMP (Biologi) AT11

SBK3013 PRINCIPLES IN BIOCHEMISTRY

This course discusses the fundamental principles of biochemistry, including biochemical processes, enzymes, carbohydrates, lipids and proteins metabolism, as well as aerobic and anaerobic metabolism. Emphasis is given to biochemical reactions, anabolism, catabolism, oxidation and reduction reactions, and the roles of ATP, NADH, $FADH_2$ and NADPH in energy transfer. The course also covers enzyme properties, classification, mechanisms of action, kinetics, cofactors and inhibition. Students will interconnect metabolic pathways during energy storage and energy consumption, including glycolysis, gluconeogenesis, glycogen metabolism, fatty acid metabolism, ketone bodies, amino acid metabolism, the citric acid cycle, electron transport chain and fermentation. In addition, students will practise scientific procedures to test hypotheses, participate in collaborative learning activities, and produce a project report by integrating suitable digital technologies, media sources and AI literacy. By the end of the course, students will be able to understand the relationship between metabolism, health and nutrition in an integrated manner.

SBR3913 PROJEK TAHUN AKHIR 1

This course exposes students to the basic concepts in Biology Education research. This course focuses on the processes and procedures in Biology Education research such as problem identification, objective and research question, literature review, research design, analysis, data interpretation and report writing. Students will be evaluated through research proposal writing and presentation, attitude and personality assessments. By the end of this course, student would be able to understand proper way to produce complete Biology education research proposal.

SBR3923 PROJEK TAHUN AKHIR 2

This course strengthens skills in analysing and interpreting data through workshops. Discussion and research report writing in Biology Education is carried out through supervision. Students will be assessed through final year project presentations, academic writing and theses, as well as attitude and personality assessments. By the end of this course, student would be able to grip proper understanding in conducting Biology educational research after completing their final year project report.

SPR3003 EDUCATIONAL RESEARCH METHOD

At the end of the course the student is able to discusses the knowledge, skills and processes for planning research project in science and mathematics education. Topics covered are: types of research, ethics in research, problem statement; research purpose/objectives; research questions/hypotheses; research/learning theories and models; literature review; methods of data collection and analyses; discussion of findings, conclusion and recommendation for future research and final report writing.

SBT3033 APPLICATIONS OF BIOTECHNOLOGY

This course explores the fundamental concepts and diverse applications of biotechnology. It covers essential topics including an overview of biotechnology, recombinant DNA technology, molecular analysis of DNA and proteins, functional analysis, and protein production as biotechnological products. The course further discusses specialized fields such as plant, animal, microbial, environmental, forensic, and medical biotechnology, alongside recent developments in the industry.

SBB3033 PRINCIPLES IN MICROBIOLOGY

Principles of Microbiology provides a comprehensive foundation on the diversity, structure, and functions of microorganisms. The course integrates current scientific knowledge with critical analysis of microbial strategies in sustaining essential life processes, including growth, metabolism, and interaction with hosts and environments. Emphasis is placed on the roles of microorganisms in human health, disease, and environmental sustainability, fostering students' ability to relate microbiological concepts to real-world issues and societal well-being. Upon completion of the course, students will acquire fundamental microbiological knowledge and analytical skills, enabling them to evaluate the roles of microorganisms in various biological and societal contexts and to apply microbiological principles responsibly in support of public health, environmental sustainability, and community development.

SBV3033 ECOLOGY FOR SUSTAINABLE FUTURES

This course provides a comprehensive understanding of ecological principles and their applications in addressing contemporary environmental challenges. It introduces fundamental concepts in ecology, including ecological components and processes, followed by key topics such as population ecology, species interactions, community ecology, and ecosystem ecology. The course further explores applied ecology in real-world contexts and includes ethical considerations in environmental conservation and sustainability. This course also emphasizes thinking, practical, and leadership-skills, as well as ethical values in academic and professional contexts. At the end of the course, students will be able to apply ecological principles collaboratively and ethically in fieldwork activities and ecosystem sustainability initiatives.

SBS3023 DIGITIZING BIOLOGY: OMICS AND CELLULAR DATA SCIENCE

This course introduces future biology educators to the revolution in data-driven biology. The course explores what biological data are, from DNA sequences to protein and metabolite profiles, and how they are stored in public databases. Students will learn the basic principles behind genomics, transcriptomics, proteomics, metabolomics technologies, with an emphasis on conceptual understanding rather than technical or programming details. The course emphasises data interpretation and understanding omics data using basic bioinformatics tools and digital platforms. Real-world applications in health, medicine, agriculture, environmental sustainability, and biotechnology are examined through case studies that are suitable for classroom discussions.

SINOPSIS KURSUS ISMP (Sains) AT16

SBU3043 CONCEPTS IN BIOLOGY

This course discusses several aspects of biology in animal and plant which include cell biology, cell structure and functions, the chemistry and physical characteristics of macromolecules, cellular metabolism and molecular biology. Cell division, genetic inheritance, organism evolution and classification are also emphasized.

SBF3024 PHYSIOLOGICAL PROCESSES IN PLANTS AND ANIMALS

This course discusses physiological processes including homeostasis and regulation in plants and animals. Among the plant physiological processes discussed are transport, nutrition, movement, photoperiodism, hormone response, immune and reproduction. Aspects of animal physiological processes include nervous, sensory, cardiovascular, respiratory, digestive, endocrine, skeletal muscle, excretory and reproductive. The latest issues related to the physiological processes of plants and animals are also discussed.

SPR3003 EDUCATIONAL RESEARCH METHOD

This course discusses the knowledge, skills and processes for planning research project in science and mathematics education. Topics covered are: types of research, ethics in research, problem statement; research purpose/objectives; research questions/hypotheses; research/learning theories and models; literature review; methods of data collection and analyses; discussion of findings, conclusion and recommendation for future research and final report writing.

SKU3073 CHEMISTRY

This course discusses the fundamental concepts of chemistry. Topics include matter and measurements, chemical equations, gaseous state, atomic structure, Modern Periodic Table and chemical bonding, principles of Chemical Equilibrium, Acids and Bases Equilibrium, Solubility and Complex-ion Equilibrium, Thermochemistry, Electrochemistry and Nuclear Chemistry.

SKO3013 BASIC ORGANIC CHEMISTRY

The course discusses the classification of organic compounds, nomenclature, hybridization and resonance concept, isomerism, stereochemistry, basic synthesis and reactions of alkane, alkene, alkyne, alkyl halide, alcohol, ether, amine, aldehyde, ketone, carboxylic acid, acid chloride, ester and benzene and derivatives. Basic mechanism of alkene, alkyl halide, alcohol and ester will also be discussed.

SMU3013 FOOD SCIENCE AND NUTRITION

The course discusses basic understanding in the discipline of food science and nutrition. The biological, chemical and physical principles associated with the study of food composition, safety, technology and product development will be covered. Nutrition requirement and effect on human health will be highlighted including physiological, biochemical and social aspects of food.

SSV3013 ENVIRONMENTAL SCIENCE

This course discusses basic aspects and conflicts related to environment. Environmental issues such as human population growth, climate change, exploitation of natural resources, pollution and energy resources are also emphasized. Principles of sustainable development and the impact of development on the environment as well as laws created to improve the quality of the environment are also discussed.

SSR3913 FINAL YEAR PROJECT 1

This course gives students the opportunity to apply their knowledge and understanding of science education research through writing and presenting research proposals. The content of the research proposal includes problem statement, research objectives and questions, scope of research, research framework, literature review, research design, sampling, and data analysis. The assessment of learning outcomes also includes the student's attitude and personality as a researcher.

SSR3923 FINAL YEAR PROJECT 2

This course gives students the opportunity to collect, analyse, and interpret research data based on the written research proposal. Students will write a final year project report and an academic writing and present the research findings in a final year project seminar/conference. The assessment of learning outcomes also includes the student's attitude and personality as a researcher.





SINOPSIS KURSUS

ISMP (Sains)

AT16

SKU3053 INDUSTRIAL AND CURRENT ISSUES IN CHEMISTRY

This course discusses about production of industrial chemicals, manufacturing of soap and detergent, metal extraction, industry of polymer, petroleum, oleochemical, glass, ceramics, composites, food, pharmaceuticals and cosmetics. In addition, the course also discusses the application of nanotechnology in industries.

SFT3023 VIBRATIONS, WAVES AND OPTICS

This course covers vibrations, waves and optics concepts such as simple harmonic motion, damped oscillations, forced oscillations, mechanical waves and electromagnetic waves. The nature of waves including refraction, dispersion, scattering, polarization, interference and diffraction are also discussed. Discussion are extended to the application of the concepts in optical instruments such as microscope, telescope and thin film.

SFT3113 MATHEMATICS FOR PHYSICS

This course discusses the basic mathematics used in physics problem solving. The following topics are algebraic manipulative, functions and graphs, vectors and matrix algebra, differentiation and integration

SFT3033 MECHANICS

This is a calculus based elementary mechanics which introduces fundamental concept in mechanics as applied to one dimension motion, Newton's laws of motion, work, kinetic and potential energy, momentum, impulse, rotational motion, elasticity and fluid mechanics.

SFT3013 ELECTROMAGNETISM

The course focuses on basic principles and knowledge of electricity and magnetism. Topics discussed in this course are electric charges, Coulomb's law, electric field, electric potential, capacitance, Ohm's law, electromotive force (EMF), direct and alternating current, series and parallel circuit, Kirchoff's circuit laws, magnetic force, magnetic fields and inductance.

SFU3073 ASTRONOMY

This course discusses the solar system, stars, galaxies and the universe. The course also discusses special topics such as space weather and observational equipment in astronomy.

“ Memupuk Minda Kreatif ”





SINOPSIS KURSUS

ISMP (Fizik)

AT12

SFT3033 MECHANICS

This calculus-based elementary mechanics course introduces the fundamental concepts of physics, covering units and physical quantities, vectors, motion in one and two dimensions, Newton's laws of motion, work and energy, momentum and impulse, rotational motion, and fluid mechanics. Throughout this course, students will apply these mechanics concepts critically to solve complex physical problems. Beyond theoretical lectures, students will engage in practical laboratory sessions to reinforce their understanding through collaborative teamwork and the production of effective scientific reports. Numeracy skills are also emphasized to ensure precise data analysis. Upon completion of this course, students are expected to master systematic problem-solving skills in mechanics, demonstrate strong teamwork capabilities, and exhibit personal resilience in overcoming academic and practical challenges.

SFT3013 ELECTROMAGNETISM

The course focuses on basic principles and knowledge of electricity and magnetism. The objectives for this course are to integrate knowledge related to electricity, magnetism and electromagnetism in solving specific scientific situations, perform practical task effectively, to learn independently via various reliable resources and to demonstrate entrepreneurial thinking and skills in project management. Topics discussed in this course are electric charges, Coulomb's law, electric field, electric potential, capacitance and dielectrics, Ohm's law, electromotive force (EMF), direct current and alternating current, series and parallel circuit, Kirchhoff's law, magnetic force, magnetic fields, electromagnetic induction and inductance. At the end of this course, students will able to master the knowledges and concepts of electromagnetism.

SFG3023 THERMODYNAMICS

This course discusses the fundamental concepts of thermodynamics. It covers the following topics: temperature and heat, thermal properties of matter, heat capacity of gases, the First Law of Thermodynamics, the Second Law of Thermodynamics, entropy, and applications of the Second Law of Thermodynamics. The course exposes students to the relationship between key concepts in thermodynamics and real-world applications through discussions, group presentations, practical work, and active learning. By the end of the course, students will be able to understand how energy is transferred and transformed, and apply this knowledge to solve scientific problems.

SFT3023 VIBRATIONS, WAVES AND OPTICS

Kursus ini memberi pendedahan kepada pelajar tentang konsep getaran, gelombang dan optik secara menyeluruh. Topik-topik yang dibincangkan merangkumi gerakan harmonik ringkas, ayunan teredam dan ayunan paksa, serta gelombang pegun pada tetali. Kursus ini seterusnya menerokai harmonik bunyi, Kesan Doppler, dan gelombang elektromagnet termasuk spektrum serta penambahan dan penolakan cahaya. Sifat gelombang bagi cahaya dikaji melalui pantulan, pembiasan, penyebaran, pengutuban dan penyerakan berdasarkan Prinsip Huygens. Optik geometri dan instrumen optik turut dibincangkan, meliputi pembiasan dan pantulan sinar pada permukaan satah dan sfera, cermin, kanta, mata, kanta pembesar, mikroskop dan teleskop. Kursus ini diakhiri dengan fenomena interferens dan pembelauan, termasuk interferens dua sumber, saput tipis, ujikaji dwicelah Young, serta pembelauan celah tunggal dan celah berbilang. Pada akhir kursus, pelajar berupaya mengenal pasti konsep getaran, gelombang dan optik, menyelesaikan masalah fizik secara kualitatif dan kuantitatif, menghasilkan laporan saintifik berdasarkan tugasan amali, serta berkomunikasi secara aktif berkaitan kandungan kursus dalam sesi pembelajaran.

SFT3053 SOLID STATE PHYSICS

This course introduces the fundamental concepts of solid-state physics, emphasizing the relationship between atomic structure and material properties. Topics include crystal structures, wave diffraction, reciprocal lattices, crystal bonding, lattice vibrations and phonons. Thermal properties and electrical conductivity are discussed using free electron models and band theory. Semiconductor crystals, band gaps, and intrinsic carriers are introduced to explain material applications. Throughout the course, students relate concepts to current issues and industrial applications through presentations and group work. By the end of the course, students will be able to analyse structure–property relationships and propose innovative solutions collaboratively and ethically.





SINOPSIS KURSUS

ISMP (Fizik)

AT12

SFT3093 MODERN AND QUANTUM PHYSICS

This course covers the fundamental principles of Modern Physics and Quantum Physics, including special relativity, photons, electrons, atoms, wave-particle duality, atomic structure, as well as quantum mechanics and the Schrödinger equation. Emphasis is placed on the analysis of physical concepts and laws, the application of numeracy skills in problem-solving, and effective communication in related assignments. The course also explores issues in modern and quantum physics with due consideration for integrity and ethical awareness. By the end of the course, students will be able to analyze, apply, and synthesize knowledge of modern and quantum physics to solve problems and evaluate issues in an ethical manner.

SFT3103 NUCLEAR AND PARTICLE PHYSICS

This course covers nuclear and particle physics. Nuclear physics topics: properties of nuclei, stability & radioactivity, reactions, fission & fusion, and nuclear models. Particle physics topics: fundamental particles & interactions, accelerators & detectors, and the Standard Model. Students are also exposed to ethics, societal impact, and radiation safety. By the end of the course, students will be able to explain concepts, analyse fundamental laws considering ethics & safety, integrate digital technology, and solve related problems.

SFU3093 PHYSICS OF SUSTAINABLE ENERGY

This course introduces contemporary issues related to energy and technology based on fundamental principles of physics. It covers the basic knowledge of various forms of energy, energy resources, and their practical applications, including energy concepts and energy conversion processes through the application of physical principles such as mechanics and thermodynamics. The course also discusses issues, philosophies, and policies related to energy sustainability. Both non-renewable energy sources, such as coal, petroleum, natural gas, and nuclear energy, and renewable energy sources, including solar, wind, hydro, biomass, and geothermal energy, are examined, together with their operatinpg rinciples and system performance. Emphasis is placed on the concepts of energy efficiency, optimal energy utilization, and green technology within the context of sustainable development. In addition, the course explores the impacts of energy use on the environment and society, as well as the challenges associated with achieving energy sustainability.

SFT3113 MATHEMATICS FOR PHYSICS

This course provides exposure to mathematical concepts and methods used in solving physics problems. The course content covers fundamental functions and mathematical techniques in physics, including trigonometric, exponential, and logarithmic functions. Students will also learn differentiation and its applications in analysing rates of change, determining maxima and minima, and interpreting graphs. In addition, the course discusses integration, antidifferentiation techniques, definite and indefinite integrals, and their applications in calculating areas, centres of mass, and moments of inertia. Topics on probability, random variables, probability distributions, and descriptive statistics are also introduced, including their applications in physics education research. The course aims to develop students' ability to interpret mathematical concepts, analyse physics problems using appropriate techniques, apply numeracy skills, and produce technical documents systematically. By the end of the course, students will be able to effectively utilise various mathematical techniques to solve and analyse physics problems in academic and professional contexts.

SFU3073 ASTRONOMY

This course provides an introduction to astronomy covering the fundamental concepts, objects, phenomena of the universe and the instruments. Topics include introduction of astronomy, observing the sky, coordinate systems and constellations, the motions of the Earth, Sun, planets, and the Solar System, the Moon, phases and eclipses, orbital mechanics, light and electromagnetic radiation, stars, galaxies, cosmology, telescopes and space technology, the Sun and space weather, as well as basic astrophotography. The course also introduces radio astronomy and the technologies used in astronomical observation and research. Through lectures, practical activities, and collaborative learning, students will develop the ability to explain fundamental concepts in astronomy and space weather. Students will also learn to operate astronomical instruments to observe astronomical phenomena and apply basic astrophotography techniques, demonstrate effective teamwork and collaborative engagement during group activities, and manage relevant information from various media sources and digital technologies. Upon completion of the course, students will be able to understand and explain fundamental astronomical concepts, conduct basic astronomical observations, and utilize appropriate technologies and information resources to support lifelong learning in astronomy.

SINOPSIS KURSUS

ISMP (Fizik)

AT12

SFE3043 COMPUTER PROGRAMMING AND INTERFACING

This course introduces the concepts and applications of computer programming and interfacing in modern computerized measurement systems. Topics covered include computerized measurement systems and the Internet of Things (IoT), sensors and signal conditioning, data conversion, computer architecture and communication, algorithms, high-level programming languages, and microcontrollers. Students are exposed to programming approaches for analysing and solving problems, as well as developing applications involving data acquisition, processing, and communication. The course also emphasizes the ethical use of digital technologies and artificial intelligence (AI) tools to support code development and problem solving. Through a mini project, students integrate programming, sensors, microcontrollers, and IoT technologies to develop solutions for real-world applications. Upon completion of the course, students will be able to apply programming, numeracy, and digital technology skills in the development of computerized measurement and computer interfacing systems.

SFP3013 IMPLEMENTATION OF PHYSICS TEACHING

This course emphasizes the effective implementation of Physics teaching and learning through the aspects of planning, delivery, assessment, and instructional reflection. The course content covers course orientation, microteaching skills, preparation of daily lesson plans, selection of strategies, methods, techniques, teaching aids, media, and technology in Physics instruction. The course also includes practical components of microteaching and macroteaching, the use of appropriate assessment methods to evaluate learning outcomes, reflective writing, as well as the development of personal appearance, character, and teacher professionalism. Through this course, students will design and implement well-planned Physics lessons, evaluate the effectiveness of their teaching through self-reflection, and demonstrate professional values in classroom practice. At the end of the course, students will be able to carry out effective, reflective, and professional Physics instruction in line with current educational needs.

SPR3003 EDUCATIONAL RESEARCH METHOD

This course provides fundamental knowledge on electronics, semiconductor device characteristics, testing and their practical circuit applications. The objectives of this course are to explain basic electronics concepts, to analyse electronics circuit to solve a problem, to perform practical tasks with integrity and to apply numeracy skills in the given task. Topics consist in this course are circuit theory, diode theory, dioder circuit, special purpose diode, transistor, introduction to digital electronics, binary, logic gates, Boolean algebra and Karnaugh Map. This course establishes a foundation for understanding the operation and problem-solving in electronic circuits. Practical circuit examples and troubleshooting exercises are incorporated throughout the semester.

SFE3053 ELECTRONICS

This course provides fundamental knowledge on electronics, semiconductor device characteristics, testing and their practical circuit applications. The objectives of this course are to explain basic electronics concepts, to analyse electronics circuit to solve a problem, to perform practical tasks with integrity and to apply numeracy skills in the given task. Topics consist in this course are circuit theory, diode theory, dioder circuit, special purpose diode, transistor, introduction to digital electronics, binary, logic gates, Boolean algebra and Karnaugh Map. This course establishes a foundation for understanding the operation and problem-solving in electronic circuits. Practical circuit examples and troubleshooting exercises are incorporated throughout the semester.

SFT3063 MATHEMATICAL PHYSICS

This course covers the fundamental mathematics used in advanced physics. Topics include vector analysis, differential equations, complex variables, and Fourier analysis.

SFR3913 FINAL YEAR PROJECT 1

This course gives students the opportunity to apply their knowledge and understanding of physics education research through writing and presenting research proposals. The proposal content includes problem statement, research objectives and questions, research scope, research framework, literature highlights, research design, sampling, and data analysis and interpretation. The assessment of learning outcomes also emphasizes students' attitude and personality as researchers. The course highlights students' ability to write a physics educational research proposal that demonstrates anticipatory thinking competency (C6, PLO2, SC2), conduct content validity based on the research proposal (P3, PLO3), adhere to ethics and exercise professional practices in preparing the proposal (A5, PLO11, V3), and communicate effectively during the research proposal presentation (A2, PLO5). By the end of the course, students will be able to produce a critical, ethical, and relevant research proposal in physics education.

SFR3923 FINAL YEAR PROJECT 2

This course gives students the opportunity to collect, analyse, and interpret research data based on the written research proposal. Students will produce a final year project report, academic writing, and present their research findings in a final year project seminar or conference. The assessment of learning outcomes also emphasizes students' attitude and personality as researchers. The course highlights students' ability to produce educational research reports (C6, PLO2), produce scientific writing based on the final year project (C6, PLO7), adhere to ethics and professionalism through self-awareness in completing the final year project (A5, PLO11, SC8), and communicate effectively and politely during the final year project presentation (A2, PLO5, V4). By the end of the course, students will be able to produce high-quality, ethical, and relevant research reports in physics education.

SINOPSIS KURSUS ISMP (Kimia) AT13

SKU3013 CHEMISTRY I

This course covers the fundamental concepts of chemistry, including matter and measurements, chemical equations, the gaseous state, atomic structure, the Modern Periodic Table, chemical bonding, and carbon compounds. It provides students with a strong foundation in understanding chemical principles and their applications. At the end of the course, students will be able to apply fundamental chemistry concepts in problem solving, demonstrate scientific skills in conducting chemistry experiments, use numerical skills to solve problems related to chemistry concepts, and utilise chemical knowledge to enhance sustainable practices. The course also develops critical thinking, analytical ability, and scientific communication for real life applications.

SKU3023 CHEMISTRY II

This course introduces fundamental chemistry concepts and their applications in solving scientific problems. The topics covered include chemical equilibrium, acid–base equilibrium, solubility and complex-ion equilibrium, chemical kinetics, thermochemistry, electrochemistry, nuclear chemistry, and industrial chemistry. By the end of the course, students are able to apply fundamental chemistry concepts to solve various chemistry problems, analyze numerical information and make accurate interpretations, demonstrate practical skills in conducting experiments, and exhibit effective presentation skills through the clear, precise, and courteous delivery of ideas.

SKI3013 INFORMATION AND COMMUNICATION TECHNOLOGY IN CHEMISTRY

This course is designed to equip students with digital knowledge and the application of artificial intelligence within the context of chemistry teaching and learning. Students will explore the fundamentals, current issues, and ethical safety considerations surrounding ICT and generative AI. The curriculum encompasses technical proficiency in image and video editing, alongside online documentation via e-portfolios for community project management. Entrepreneurial components are integrated through the preparation of the Business Model Canvas, budgetary management, and media promotion using ICT applications. Furthermore, students will engage with interactive instructional technologies involving note preparation, teaching activities, digital assessment, and information sharing through webinars and social media platforms. At the end of this course, students will be able to integrate diverse digital resources equitably within groups to produce effective, ethical, and innovative educational outcomes.

SKO3023 ORGANIC CHEMISTRY I

The course discusses the classification of organic compounds, resonance concepts, stereochemistry, and IUPAC nomenclature for various functional groups in organic chemistry. Students are also exposed to the synthesis, physical properties, reactions, and selected mechanisms of alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, amines, aldehydes, ketones, as well as carboxylic acids and their derivatives. The course further incorporates learning activities through lectures, discussions, e-learning, and laboratory practical sessions to enhance students' theoretical understanding and practical skills. Course assessments are conducted through quizzes, tests, practical reports, group assignments, and final examinations to evaluate students' mastery of concepts and communication skills. At the end of the course, students are expected to be able to apply organic chemistry knowledge and skills effectively in learning activities and laboratory practices.

SKT3013 INORGANIC CHEMISTRY 1

This course introduces fundamental topics in inorganic chemistry, including symmetry and point groups, crystal structures and defects, the general properties and elemental chemistry as well as applications of elements in the Periodic Table. Students will develop understanding of symmetry concepts and inorganic solid structures, apply knowledge to solve inorganic chemistry problems, utilise information technology in preparing assignments, and conduct inorganic chemistry experiments. At the end of the course, students will be able to integrate theoretical knowledge, problem-solving, digital skills, and laboratory techniques in basic inorganic chemistry tasks.

SKT3023 INORGANIC CHEMISTRY II

This course covers the fundamental concepts and principles of coordination chemistry. Students will explore topics such as the historical development of coordination compounds, nomenclature, isomerism, coordination number, effective atomic number (EAN), and the 18-electron rule. The course also discusses various bonding theories and electronic spectroscopy of coordination compounds. Students will develop problem-solving skills related to coordination chemistry concepts and demonstrate practical skills through inorganic chemistry laboratory experiments. The course fosters scientific communication skills through written reports and oral presentations in explaining assignment output. At the end of the course, students will be able to use coordination chemistry concepts in problem solving.





SINOPSIS KURSUS

ISMP (Kimia)

AT13

SKO3033 ORGANIC CHEMISTRY II

This course covers advanced topics in organic chemistry, including benzene and its derivatives, carbohydrates, amino acids and proteins, natural compounds, phytochemical screening, principles of chromatography, as well as modern spectroscopic methods for the structural determination of organic compounds. Students are also exposed to practical skills in advanced organic chemistry research, such as extraction methods, separation techniques, and purification of organic compounds. In addition, they are trained to interpret spectroscopic data in solving problems related to chemical structure determination through group assignments, while also developing interpersonal skills. At the end of the course, students will be able to demonstrate mastery of advanced organic chemistry concepts, interpret organic structures, conduct basic experiments, and collaborate effectively in academic activities.

SKF3013 PHYSICAL CHEMISTRY 1

This course covers the fundamental principles of physical chemistry, focusing on thermodynamics and related concepts. Topics include work, enthalpy, entropy, heat flow, the Zeroth to Third Laws of Thermodynamics, the Carnot cycle, Gibbs free energy, Gibbs–Helmholtz equation, Maxwell relations, partial molar quantities, chemical potential, ideal solutions, Raoult's Law, phase diagrams, distillation, adsorption, and colloid chemistry. At the end of the course, students will be able to differentiate main concepts in thermodynamic principles, perform experiments using appropriate practical skills, analyze graphical and numerical data to solve physical chemistry problems, and participate effectively in collaborative assignments.

SKF3023 PHYSICAL CHEMISTRY II

This course provides comprehensive knowledge of chemical kinetics, reaction mechanisms, electrolyte properties, ion interactions, conductivity, electrochemical cells, and thermodynamic electrochemistry. Students are able to analyse kinetics theories, reaction pathways, and electrochemical processes using scientific principles and mathematical approaches. The course also develops practical laboratory competencies through experimental techniques related to reaction rates, conductivity, and electrochemical measurements. At the end of this course, students can utilise graphical and numerical data to interpret and solve problems in physical chemistry effectively. Collaborative learning activities further enhance communication, teamwork, and critical thinking skills, enabling students to apply theoretical and practical knowledge in addressing challenges related to modern physical chemistry applications.

SKA3013 ANALYTICAL CHEMISTRY

This course introduces the fundamental principles and important concepts in analytical chemistry. The discussion covers theories, procedures, and interpretation of qualitative and quantitative analytical data. The course includes topics such as gravimetry, solvent extraction, titrimetry, chromatography, electrochemical methods, and thermal analysis. Emphasis is also placed on accuracy, precision, and the selection of appropriate analytical methods in various chemical applications. At the end of this course, students will be able to apply the principles of analytical chemistry, analyse graphical and numerical data to interpret results in solving problems related to analytical chemistry, demonstrate skills in conducting analytical chemistry experiments and communicate effectively and rationally during analytical chemistry assignment presentation.

SKA3023 INSTRUMENTAL ANALYTICAL CHEMISTRY

This course introduces the principles and applications of spectroscopy in analytical chemistry for the characterization and structural determination of chemical substances. The topics covered include infrared spectroscopy (IR), ultraviolet/visible spectroscopy (UV-Vis), nuclear magnetic resonance spectroscopy (NMR), mass spectrometry (MS), atomic absorption and emission spectroscopy (AAS/AES), luminescence spectroscopy, and Raman spectroscopy. At the end of the course, students are able to apply the principles of instrumental analytical chemistry, analyze graphical and numerical data, conduct experiments safely, and communicate effectively, systematically, and rationally in presenting assignments related to instrumental analytical chemistry.

SKU3033 ENVIRONMENTAL CHEMISTRY

This course discusses the basic concepts of environmental chemistry. It includes an introduction to environmental chemistry, water and soil quality analysis, water supply sources, water pollution and treatment, air quality and pollution, climate change and its effects, pollution, soil conservation and restoration, waste management, and principles of green chemistry. At the end of this course, students will be able to explain various types of environmental pollution, apply chemical knowledge autonomously in solving environmental issues, demonstrate practical skills in conducting experiments, and be responsible in planning and implementing group activities involving environmental awareness.





SINOPSIS KURSUS

ISMP (Kimia)

AT13

SKU3043 POLYMER CHEMISTRY

This course provides an overview of key concepts in polymers, including their structure, classification, and nomenclature. It covers monomers, homopolymers, copolymers, and natural polymers, along with their chemical, physical, and mechanical properties. Students are introduced to major synthesis methods such as addition and condensation polymerization, including free-radical, cationic, anionic, polyester, and polyamide formation, as well as Carothers' theory. The course also explores polymer characterization techniques like spectroscopy and thermal analysis for determining molecular weight and properties. In addition, it addresses polymer degradation through thermal, UV, chemical, and biological factors, and highlights industrial applications. By the end, students can identify, analyze, and apply polymer concepts in real-world contexts

SPR3003 RESEARCH METHOD

This course discusses the knowledge, skills and processes for planning research projects in science and mathematics education. Topics covered include types and designs of research; ethics in research; problem statement; research purposes/objectives; research questions/hypotheses; research/learning theories and models; literature review; methods of data collection and analyses; discussion of findings, conclusion, educational implications, recommendations for future research, and final report writing. The course emphasizes students' ability to explain basic concepts of educational research, analyze the literature systematically and rationally, identify the appropriateness of data analyses with research design and purpose, and write research proposals in science education strategically. By the end of the course, students will be able to produce a critical, ethical, and relevant research proposal in science education.

SKR3913 FINAL YEAR PROJECT 1

This course guides students in the systematic, well-planned, and ethical preparation of a chemistry education research proposal. The course content encompasses educational research approaches, the formulation of research objectives and research questions, the writing of Chapters 1 to 3 of a research proposal, literature review, research methodology, research proposal presentation, as well as the process of revising and refining the proposal based on feedback received. The course also covers the validity and reliability of research instruments through the implementation of a pilot study to ensure that the proposed study is developed on a sound and rigorous foundation. In addition, the course emphasises adherence to research ethics, the practice of professionalism, the development of anticipatory thinking competency, and effective communication skills in academic presentations. At the end of the course, students will be able to produce a complete, high-quality, ethical, and implementable chemistry education research proposal for actual research undertaking..

SKR3923 FINAL YEAR PROJECT 2

This course provides students with the opportunity to conduct educational research systematically based on the research proposal developed in Final Year Project 1. The course covers the writing of Chapters 1 to 5, including the identification of research problems, research objectives and questions, scope of study, research framework, literature review, research methodology, instrument validity, data collection, analysis, and interpretation of findings. Students are also exposed to APA-style referencing, the preparation of scientific writing based on the final year project, and the presentation of research findings in Final Year Project seminars or conferences. In addition, the course emphasizes research ethics and professionalism, effective communication skills, and responsible attitudes in conducting research. At the end of the course, students will be able to produce a complete educational research report, prepare quality scientific writing, and present research findings professionally and ethically.

SKU3053 INDUSTRIAL AND CURRENT ISSUES IN CHEMISTRY

This course offers a comprehensive exploration of the application of chemical principles within the industrial sector, focusing on the history and progress of industries in Malaysia. Students will analyze chemical principles across various fields such as metallurgy, petrochemicals, polymers, and advanced materials, including high-performance glass and ceramics. Additionally, the course covers technical aspects and quality control (GMP, QA/QC) in the manufacturing of soaps, food products, pharmaceuticals, and cosmetics, including halal certification issues. Students are also exposed to future innovations through the integration of AI-driven nanotechnology. To strengthen learning, students must demonstrate professional interpersonal skills through interaction with industry and the community during field trips and community service. The course also fosters accountability in group projects by evaluating the impact of chemical processes from the perspectives of ethics, social justice, and global sustainability. Finally, through critical reflection, students will assess the evolution of their own knowledge and attitudes to demonstrate a commitment to lifelong learning. By the end of the course, students will be able to apply and analyze chemical principles in industrial processes across various industries by evaluating the relationship between chemical reactions, process efficiency, and environmental impact.

SINOPSIS KURSUS

ISMP
(Matematik) &
ISM
Sains Matematik dengan Pendidikan

AT14 & AT48

SMA3013 LINEAR ALGEBRA

This course provides an introduction to linear algebra topics such as matrices, systems of linear equations, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. This course also discusses some related theoretical concepts.

SMA3023 DISCRETE MATHEMATICS

This course focuses on mathematical logic and reasoning which stresses on methods of proving theorems. The topics include logic and proofs, set, sequences and series, counting methods, relations and functions, and also include trees and graph.

SMA3033 ALGEBRAIC STRUCTURES

This course begins with an introduction of algebra and introduces the concepts of algebraic structures such as groups, rings, integral domains and fields. This course also discusses theoretical concepts related to isomorphism and homomorphism, cyclic groups, symmetric groups, quotient groups and homomorphism groups.

SMA3043 ELEMENTARY NUMBER THEORY

This course is designed to help students in developing strong foundations in number theory by emphasizing reasoning and proving skills. Topics include integer representation, divisibility theory, prime numbers, congruences, Fermat's Theorem, Wilson's Theorems and Euler's Theorem, number theoretic functions as well as the main application of number theory in cryptology.

SMG3013 GEOMETRY

This course is designed to help students in developing strong foundations in geometry. The course integrates the procedural skills with reasoning and proof. Topics include points, lines and angles; triangles, quadrilaterals and circles; polygons; lengths, areas and volumes; proportions, congruence and similarity; transformations and symmetry; reasoning and proof in geometry; and, introduction to non-Euclidean geometry.

SMS3133 THEORY OF PROBABILITY

This course discusses and enhances the understanding of concepts regarding probability, random variables and probability distributions, discrete probability distributions, continuous probability distributions, mathematical expectation, functions of random variables, random sampling, and sampling distributions.

SMF3013 FINANCIAL MATHEMATICS

This course encompasses the knowledge about finance, which includes the basic counting techniques. In addition, this course also encompasses the topic related to the time value of money, various types of annuities, amortization of loans, sinking funds, and cash flow.

SMN3093 CALCULUS I

This course discusses the fundamental concepts in single variable calculus such as limits and continuity, derivatives, integral, and sequences and series, and related skills that support the understanding of the concepts.

SMN3103 CALCULUS II

This course discusses the advanced concepts in single and multivariable calculus such as parametric equations, polar coordinates, vectors and geometry of space, vector functions, partial derivatives, and multiple integrals, and related skills that support the understanding of the concepts.

SMN3043 ORDINARY DIFFERENTIAL EQUATIONS

This course introduces students to the basic concepts of first and higher order, linear and non linear ordinary differential equations. It discusses various analytical methods of solving ordinary differential equations and their applications in solving real life problems.



SINOPSIS KURSUS

ISMP
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AT14 & AT48

SMQ3043 LINEAR PROGRAMMING

This course will focus on formulation of linear programming (LP) model from the management problems, solving LP problem by using simplex algorithm, sensitivity analysis of LP problem, formulation of the LP dual, relationships between primal and dual, solving LP problem by using dual simplex algorithm, formulating and solving transportation problem.

SMP3013 IMPLEMENTATION OF MATHEMATICS TEACHING

This course aims to equip students with the knowledge and skills to professionally and systematically plan and implement Mathematics instruction. Primary focus is placed on the ability to design innovative lesson plans and implement effective macro-teaching sessions within the classroom. Furthermore, students are encouraged to critically justify their selection of instructional strategies, digital technology integration, and assessment instruments to ensure holistic learning quality. The cultivation of a high standard of teacher personality and professional ethics is also integrated throughout the learning process. By the end of the course, students are expected to produce meaningful and dynamic Mathematics learning experiences that align with the demands of current educational transformation.

SMS3013 INTRODUCTORY STATISTICS

This course discusses the basic concepts in statistics which can be divided into descriptive and inferential statistics. This include the data representation, estimation parameters, hypothesis testing, chi-square test ANOVA and determination of correlation between two variables. This course also emphasizes the application of statistics by providing real-world (REAL) learning experiences through the analysis of real data, case studies, and the use of statistical software to help students understand how statistical concepts are applied in evidence-based decision-making.

SINOPSIS KURSUS ISMP (Matematik) AT14

SMR3013 RESEARCH METHOD

This course discusses on knowledge and skills in planning mathematics and mathematics education research project. It covers the meaning and types of research, qualitative and quantitative research approach, characteristics of good research and the importance of research ethics. In addition, emphasis is given in literature review, research tools including instrument validity and reliability. Furthermore, the relationship between the problem statement, research question and research design as well as its relation to methodology will be discussed. The important role of data, quantitative or qualitative data analysis and interpretation will also be emphasized. Finally, this course will produce a research proposal.

SMR3913 FINAL YEAR PROJECT 1

This course requires students to systematically plan a research project in mathematics education. Students are guided through a series of workshops and experiential-based (REAL) consultation sessions to produce a high-quality research proposal. The ethical integration of Artificial Intelligence (AI) tools is embedded within the processes of literature searching, idea generation, and draft structuring to enhance research efficiency. Students will be assessed on their ability to produce a comprehensive research proposal, professional presentation skills, as well as the practice of research ethics and academic integrity in utilizing digital technologies throughout the research process.

SMR3923 FINAL YEAR PROJECT 2

This course is a continuation of Final Year Project 1, focusing on the comprehensive implementation of a mathematics education research project. Students will engage in experiential learning (REAL) through the process of field data collection, analysis, and data interpretation by integrating Artificial Intelligence (AI) tools. Subsequently, the preparation of the full research project report and the writing of a scholarly article are produced ethically using digital technologies. Evaluation covers the ability to produce a high-quality report, communicate findings effectively by demonstrating entrepreneurial thinking, and the ability to evaluate the professionalism and research ethics practiced.

SINOPSIS KURSUS

ISM SAINS Matematik Dengan Pendidikan

AT48

SMN3083 PARTIAL DIFFERENTIAL EQUATIONS

This course discusses on theories and applications of partial differential equations. Topics covered include the basic concept of partial differential equations, second order differential equations, Fourier series, and boundary value problems.

SMQ3013 PROGRAMMING LANGUAGE FOR NUMERICAL COMPUTING

The course introduces the basics of computing concepts, algorithm, variables, operators, functions and program structures, storage classes, arrays, index, input/output and introduction to object-oriented programming concepts through C ++ programming language.

SMS3153 DATA SCIENCE

This course introduces the basic of data science concepts and skills in various sector such as education, economic, agriculture and other sectors. Aspects discussed are data processing; data retrieval, collecting data, organizing data, analyzing data and interpreting data. For analyzing data, it is focused on machine learning methods using various data sets from any problem domains such as education, economic, agriculture and other sectors.

SMR3022 MATHEMATICAL RESEARCH METHODS

This course equips students with the basic concepts and methodologies for conducting scientific research, particularly in the field of mathematics. The main framework includes exposure to the research process, such as exploring branches of mathematical study, identifying problems and motivations, formulating research questions and objectives, conducting critical literature reviews, and understanding various mathematical methodologies. Students are also exposed to research ethics and scientific writing techniques.

SMN3063 REAL ANALYSIS

This course is designed to introduce students on the real analysis and its properties. In this course, students discuss about sets, functions and mathematical induction as well as the concepts in real analysis involving real number system and its properties, sequences and series, limits and continuity, differentiation and integration.

SMR3933 MATHEMATICAL SCIENCE PROJECT 1

This course requires students to systematically plan a research project in mathematical science. Students are guided through a series of workshops and experiential-based (REAL) consultation sessions to produce a high-quality research proposal. The ethical integration of Artificial Intelligence (AI) tools is embedded within the processes of literature searching, idea generation, and draft structuring to enhance research efficiency. Students will be assessed on their ability to produce a comprehensive research proposal, professional presentation skills, as well as the practice of research ethics and academic integrity in utilizing digital technologies throughout the research process.

SMR3943 MATHEMATICAL SCIENCE PROJECT 2

This course is a continuation of Mathematical Science Project 1, focusing on the comprehensive implementation of a Mathematical Science research project. Students will engage in experiential learning (REAL) through the process of field data collection, modelling, analysis, and data interpretation by integrating Artificial Intelligence (AI) tools. Subsequently, the preparation of the full research project report and the writing of a scholarly article are produced ethically using digital technologies. Evaluation covers the ability to produce a high-quality report, communicate findings effectively by demonstrating entrepreneurial thinking, and the ability to evaluate the professionalism and research ethics practiced.

SMA3063 GRAPH THEORY

This course is designed to introduce students the fundamentals of graph theory, types of graph and its related concepts. In this course, students will be exposed on the structure and properties of graphs, together with a variety of applications. Topics include paths, cycles, trees, connectivity, matchings, colorings, planarity, directed graphs and algorithms.

SMQ3053 INTRODUCTION TO MATHEMATICAL MODELLING

This course discusses various discrete mathematical modelling that includes linear models and nonlinear models. Through this course, deterministic model is also being analysed. Several models in real life such as financial models and population models being examined by focusing on their linear and nonlinear representations. Furthermore, students also will be exposed to the investigation of the dynamics of the models.

SMS3143 NON-PARAMETRIC STATISTICS

The course is a continuation of the Introductory Statistics course where the focus is on non-parametric methods. The nonparametric methods are used when the set of data collected are not distributed normally or do not have a specific distribution like the exponential distribution. Nonparametric can also be used when the numerical data are ordinal or categorical. In this course, some nonparametric tests discussed include sign test, Wilcoxon rank sum test, Kruskal Wallis H test and Friedman r-test.

SMS3163 BIG DATA ANALYSIS

This course will introduce the basic concepts, applications, process and techniques in analyzing big data. Students are exposed to some available framework such as MapReduce and Hadoop for large-scale data collection, storage and processing. This course will also discuss basic analysis and advanced analysis of big data such as the use associative law, cluster analysis, classification and prediction, where basic of multivatiate statistics related to analysis of big data will also be emphasized.

SMS3083 TIME SERIES

This course discusses the concepts of making predictions and several statistical methods that are used to generate predictions. The mastery of these concepts and methods would enable students to predict future events based on the information given by previous events that have already occurred. Both qualitative and quantitative methods are given due consideration.

SMS3073 SAMPLING TECHNIQUES

The aim of this course is to enable students to understand the underlying principles of the various probability sampling techniques employed on a finite population so as to estimate some attributes of the said population. Some sampling techniques to be discussed and given prominence here include simple random sampling, stratified random sampling, cluster sampling and systematic sampling and non-probability sampling.

SMQ3123 NUMERICAL METHODS

This course introduces the fundamental principles and techniques of numerical analysis for solving mathematical problems in science, engineering, and applied fields. It covers numerical computation, including error analysis, accuracy, and stability, and examines both direct and iterative methods for solving systems of linear equations as well as techniques for nonlinear equations. The course also includes interpolation and polynomial approximation, numerical integration and differentiation, and numerical methods for ordinary and partial differential equations (ODEs and PDEs), including initial and boundary value problems. Emphasis is placed on algorithm development, convergence, and practical implementation using computational tools such as Scilab or similar platforms. At the end of the course, students will be able to select, implement, and evaluate appropriate numerical methods to solve real-world problems efficiently and accurately.

SMS3103 EXPERIMENTAL DESIGN AND ANALYSIS

This course introduces to the students the basic principle of experimental design, analysis of variance, experiments with blocking factors, factorial experiments, two level factorial designs, random effects model and split plot design.

SMQ3143 GAMES AND NETWORKS

This course involves two main topics, which are Game Theory and Network Models. Game Theory is a study of strategic decision making using mathematical models. It is mainly used in economics, political science, and psychology, as well as logic and biology. Theory of Games such as Two-Person Zero-Sum Games and Mixed Strategy Games will be taught. In the second part of the course, students will be introduced to Network Models which involved The Shortest Path Problem, The Minimal Spanning Tree Problem and Flows in Networks. Many real life problems can be modelled using networks such as traffic in a road system, fluids in pipes, currents in an electrical circuit, or anything similar to object that travels through a network of nodes.



PERATURAN-PERATURAN UNIVERSITI PENDIDIKAN SULTAN IDRIS (ETIKA BERPAKAIAN DAN SAHSIAH RUPADIRI PELAJAR) 2014

PERATURAN AWAM

- Semua pelajar hendaklah pada setiap masa dan ketika, mematuhi peraturan-peraturan dan arahan-arahan Universiti dan tidak bertindak melakukan sesuatu yang bertentangan dengan peraturan-peraturan dan arahan-arahan tersebut.
- Semua pelajar Muslim tidak boleh bertindak atau melakukan sesuatu yang bertentangan dengan peraturan dan hukum Islam, atau mengabaikan tanggungjawab Islam yang diwajibkan ke atas mereka sama ada ketika bersendirian atau di tempat awam, di dalam atau di luar kampus.
- Semua pelajar termasuk pelajar bukan Islam dan pelajar antarabangsa hendaklah sentiasa mematuhi peraturan Universiti yang dibuat dari semasa ke semasa dan bertindak sesuai dengan sahsiah diri sebagai pelajar Universiti, sama ada ketika bersendirian atau di tempat awam, di dalam atau di luar kampus.

PERATURAN BERPAKAIAN DI DALAM KAMPUS, SEMASA MENJALANI LATIHAN MENGAJAR ATAU INDUSTRI DAN MENGHADIRI MAJLIS ATAU URUSAN RASMI UNIVERSITI

1. Semasa berada di dalam kampus, semua pelajar hendaklah sentiasa:
   - berpakaian kemas, sopan dan tidak melanggar peraturan Universiti; dan
   - mempamerkan kad pelajar, kecuali ketika menjalankan kegiatan sukan dan kokurikulum.
2. Pelajar lelaki adalah dibenarkan tidak memakai tali leher ketika berada dalam kawasan kampus, kecuali diwajibkan oleh pensyarah masing-masing bagi sebarang tujuan pengajaran dan pembelajaran.
3. Semua pelajar dilarang memakai pakaian atau eksesori yang melambangkan sebarang pertubuhan atau kumpulan tertentu yang boleh mengakibatkan ketidakharmonian atau ketenteraman Universiti terganggu.
4. Semua pelajar dilarang mempamerkan sebarang unsur yang pada pandangan Naib Canselor atau mana-mana orang yang diberi kuasa oleh Naib Canselor adalah bertentangan dengan moral yang baik atau mengandungi reka bentuk, perkataan atau frasa yang tidak diingini dari segi nilai atau norma.

PERATURAN BERPAKAIAN DI DALAM KAMPUS, SEMASA MENJALANI LATIHAN MENGAJAR ATAU INDUSTRI DAN MENGHADIRI MAJLIS ATAU URUSAN RASMI UNIVERSITI

(sambungan)

5. Semasa menjalani latihan mengajar atau industri dan menghadiri majlis rasmi atau urusan rasmi Universiti:
   - pelajar dikehendaki berpakaian kemas dan sopan mengikut etika pakaian yang ditetapkan oleh pihak sekolah, industri atau penganjur dan tidak melanggar peraturan Universiti; dan
   - pemakaian jeans adalah tidak dibenarkan.
6. Semasa menghadiri makmal, aktiviti sukan, aktiviti kebudayaan, aktiviti beruniform atau aktiviti pelajar:
   - pelajar hendaklah mematuhi etika pakaian dan peraturan yang ditetapkan dalam aktiviti tersebut;
   - seluar pendek dan baju tanpa lengan hanya dibenarkan dipakai semasa melakukan aktiviti sukan dan sekitar gelanggang sukan sahaja; dan
   - pakaian renang hanya dibenarkan dipakai semasa melakukan aktiviti renang dan ketika berada di dalam kawasan kolam renang sahaja.
7. Fakulti boleh memberi kelonggaran kepada pelajar-pelajar daripada Fakulti berkenaan sahaja untuk berpakaian seperti berikut bagi hari-hari tertentu"
   - T-Shirt berkolar semasa kuliah seni dan muzik, aktiviti amali, studio, bengkel dan persembahan; dan
   - T-shirt berkolar dan track bottom untuk aktiviti fizikal, dan termasuk aktiviti bukan fizikal khusus bagi Fakulti Sains Sukan dan Kejurulatihan.



KEMPEN PEMATUHAN PEMAKAIAN KAD PELAJAR DI KAMPUS

"Kami tahu, kami patuh"

PAKAIAN KHUSUS UNTUK PELAJAR LELAKI DAN PEREMPUAN

Semua Pelajar Lelaki:

1. Hendaklah berpakaian yang sesuai dan sopan sebagai mahasiswa Universiti; dan

2. Dilarang mengenakan pakaian dan berpenampilan seperti berikut:
   - memakai pakaian atau aksesori yang melambangkan sebarang pertubuhan atau kumpulan tertentu;
   - memakai pakaian atau perhiasan diri yang menampakkan kekeliruan jantina;
   - berseluar ketat;
   - memakai seluar jeans, seluar pendek atau T-shirt ketika berurusan di pejabat dan menghadiri kuliah;
   - berambut panjang (sehingga mencecah kolar baju, menutup telinga dan mencecah kening), berekor, berwarna dan berfesyen rambut yang tidak kemas;
   - berseluar pendek; dan
   - memakai selipar ketika berurusan di pejabat dan menghadiri kuliah.





Semua Pelajar Perempuan:

1. Hendaklah berpakaian yang sesuai dan sopan sebagai mahasiswa Universiti; dan

2. Dilarang mengenakan pakaian dan berpenampilan seperti berikut:
   - memakai pakaian atau aksesori yang melambangkan sebarang pertubuhan atau kumpulan tertentu;
   - memakai pakaian atau perhiasan diri yang menampakkan kekeliruan jantina;
   - memakai pakaian tanpa lengan, sendat dan menjolok mata;
   - memakai kain atau skirt di atas paras lutut;
   - memakai seluar ketat dan jeans;
   - memakai seluar pendek ketika berurusan di pejabat dan menghadiri kuliah; dan
   - memakai selipar ketika berurusan di pejabat dan menghadiri kuliah.

3. Seseorang pelajar adalah dilarang memakai purdah di dalam kampus, termasuklah ketika menghadiri majlis rasmi anjuran Universiti atau mana-mana pihak yang diluluskan oleh Universiti di dalam atau di luar kampus kecuali sebagaimana yang diluluskan secara bertulis oleh Naib Canselor.

Sistem Penasihat Akademik



UNIVERSITI PENDIDIKAN SULTAN IDRIS

Pengenalan

Sistem Penasihat Akademik adalah kerjasama yang diberikan oleh kakitangan akademik untuk membimbing, menasihat dan membantu mengatasi masalah-masalah pelajar dalam hal ehwal akademik. Dalam sistem semester berkredit, pelajar dibenarkan memilih kursus-kursus mengikut minat dan kemampuannya sendiri.

Oleh itu, pelajar perlu diberikan nasihat oleh Penasihat Akademik (PA) dari semasa ke semasa supaya pelajar dapat menggunakan masanya di universiti ini dengan lebih terancang untuk mencapai kejayaan sehingga dapat menamatkan pengajian di universiti.

Konsep Penasihat Akademik

Penasihat Akademik ialah seorang kakitangan universiti (biasanya kakitangan akademik sesebuah fakulti) yang ditugaskan membimbing seseorang pelajar dalam perancangan akademiknya. Di bawah sistem ini, pada dasarnya seseorang Penasihat Akademik (PA) akan ditugaskan untuk membantu pelajar-pelajar dalam memperjelaskan objektif-objektif pengajian, menyusun pengambilan kursus-kursus akademik dan menggunakan keupayaan-keupayaan yang ada pada diri mereka untuk memenuhi keperluan pengijazahan. Biasanya seseorang Penasihat Akademik (PA) akan ditugaskan membantu dan menasihatkan sekumpulan pelajar (10-15) orang bermula dari awal pengajian, iaitu semasa mereka memasuki universitisehinggalah mereka tamat pengajian di universiti ini.

Objektif Sistem Penasihat Akademik (PA)

1. Membantu meningkatkan potensi akademik pelajar
2. Memberi bimbingan kepada pelajar dalam perancangan pengajian dan aktiviti lain yang boleh meningkatkan pencapaian akademik dan potensi individu pelajar
3. Membantu menyelesaikan masalah akademik pelajar
4. Mengeratkan hubungan antara pelajar dan pensyarah
5. Memberi nasihat mengenai peluang – peluang kerjaya pelajar
6. Memotivasikan pelajar-pelajar yang didapati lemah dan memaksimumkan keupayaan pelajar-pelajar cemerlang di UPSI.

Peranan dan Tanggungjawab Penasihat Akademik

Tanggungjawab penasihat Akademik adalah seperti berikut :

1. Memberi nasihat kepada pelajar-pelajar di bawah jagaannya dalam hal-hal akademik, seperti pemilihan bidang-bidang pengkhususuan, minor dan pendaftaran kursus-kursus prasyarat dan sebagainya. Dalam hal ini, Penasihat Akademik diminta mengadakan pertemuan sebanyak tiga (3) kali dalam satu semester;
2. Memberi nasihat tentang keperluan bidang pengkhususuan minor, elektif dan keperluan pengijazahan keseluruhannya;

3. Meneliti kemajuan pelajar-pelajar yang di bawah jagaanya dari semasa ke semasa dan memberi nasihat kepada pelajar-pelajar tersebut tentang keperluan-keperluan yang mesti dipenuhi untuk pengijazahan;
4. Meneliti masalah-masalah yang dihadapi oleh pelajar-pelajar berhubung dengan pengajian mereka dan membuat syor kepada Ketua Jabatan atau Pensyarah yang berkenaan tentang langkah-langkah yang perlu diambil bagi membantu pelajar-pelajar berkenaan seperti mengadakan perjumpaan atau tutorial khas atau menasihatkan pelajar berkenaan supaya menggugurkan kursus tersebut atau perkara-perkara lain;
5. Menjelaskan kepada pelajar-pelajar tentang system pengajian berkredit dan keperluan-keperluannya;
6. Merujukkan pelajar-pelajar yang di bawah jagaannya kepada pihak-pihak berkenaan jika pelajar mempunyai masalah-masalah bukan akademik;
7. Menasihati pelajar-pelajar di bawah jagaannya tentang kaedah-kaedah belajar yang dapat membantu mereka dalam pengajian;
8. Menjelaskan kepada pelajar-pelajar di bawah jagaannya tentang peluang-peluang kerjaya yang terbuka kepada mereka;
9. Memberi ulasan berkenaan permohonan menangguh pengajian atau cuti dengan kebenaran pelajar-pelajar di bawah jagaannya;
10. Memberi nasihat-nasihat lain yang dapat membantu pelajar-pelajar dalam pengajian mereka.

Agihan pelajar-pelajar untuk setiap Penasihat Akademik (PA)

Sebaik-baiknya pelajar-pelajar dari sesebuah fakulti/program diletakkan di bawah penasihatan pensyarah-pensyarah di fakutli /jabatan bagi program berkenaan. Tanggungjawab ini adalah sebahagian daripada tugas seseorang pensyarah.

Penutup

Untuk memastikan Sistem Penasihat Akademik (PA) ini berjalan secara berkesan, ia memerlukan kerjasama kedua-dua pihak iaitu pensyarah-pensyarah yang telah dilantik sebagai Penasihat Akademik dan juga pelajar-pelajar. Kedua-dua pihak perlu memainkan peranan masing-masing untuk mendapat faedah yang diharapkan.

Dekan atau Timbalan Dekan (Akademik) hendaklah sentiasa memantau perkembangan dan memastikan Sistem Penasihat Akademik ini berjalan dengan baik.



ALAMAT PERHUBUNGAN

Fakulti Sains dan Matematik (FSM)



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WAKTU BERURUSAN FAKULTI SAINS DAN MATEMATIK

ISNIN HINGGA KHAMIS

Waktu Operasi : 8:30 pagi hingga 4.30 petang
Waktu Rehat : 1.00 petang hingga 2.00 petang

JUMAAT

Waktu Operasi : 8:30 pagi hingga 4.30 petang
Waktu Rehat : 12.15 petang hingga 2.45 petang

SABTU, AHAD DAN CUTI UMUM

Tutup