Panduan Akademik
Academic Guideline

Fakulti Sains & Matematik
Faculty of Science and Mathematics

Program Sarjana Muda
Degree Programmes

Kemasukan Semester 1
Sesi 2023/2024 (A231)

fsm 23/24

Panduan Akademik
Academic Guideline

CONTENT

SECTION / BAHAGIAN

FACULTY OF SCIENCE AND MATHEMATICS

'NURTURING CREATIVE MINDS'

B

JABATAN BIOLOGI

(BIOLOGY DEPARTMENT)

DIRECTORY OF EXPERTISE:

List of academic staff of the Biology Department

BACHELOR OF EDUCATION (BIOLOGY) WITH HONOURS:

- Program Structure
- Course Distribution
- English Language
- Teaching Practice

BACHELOR OF EDUCATION (SCIENCE) WITH HONOURS:

- Program Structure
- Course Distribution
- English Language
- Teaching Practice

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JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)

KETUA JABATAN/
HEAD OF DEPARTMENT

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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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JABATAN BIOLOGI
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JABATAN BIOLOGI
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FSMT

STRUCTURE PROGRAM B.Ed (Biology) AT11

Minor

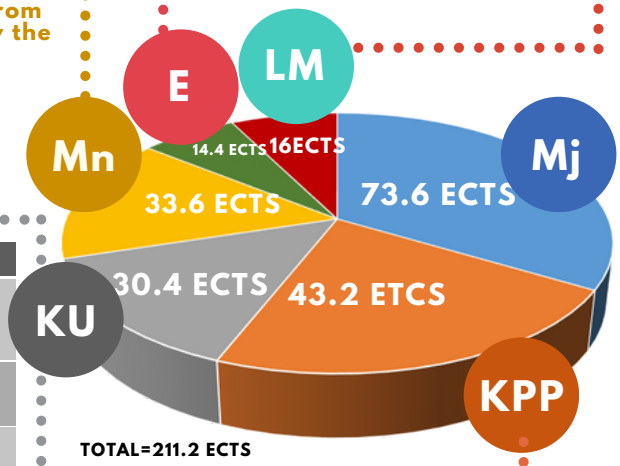
Students of Bachelor of Education (Biology) with Honours may choose 33.6 ECTS of minor courses from any programs offered by the university

Open Elective

Students need to take Level 1, 2 and 3 of Foreign Language courses as well as 1 open elective course

Teaching Practice

Course Code & Name	ECTS
KPR3068 Teaching Practice	12.8
KPR3072 Apprentice Teacher	3.2
TOTAL	16



TOTAL=211.2 ECTS

University Courses

University Course Package for local students:

Course Code & Name	ECTS
UPU2122 Appreciation of Ethics and Civilization	3.2
UPU3112 Philosophy and Current Issues	3.2
UBI3252 Essential English 1	3.2
UBI3262 Essential English 2	3.2
UPU3222 Entrepreneurial Culture	3.2
UBM3262 Malay Discourse Skills	3.2
UPU3312 National Studies	3.2
*** Ko-Kurikulum (Sports, Clubs/Associations and Uniformed Units)	4.8
UPU2342 Integrity and Anti-Corruption	3.2
TOTAL	30.4

University Course packages for international students:

Course Code & Name	ECTS
UPU2122 Appreciation of Ethics and Civilization	3.2
UBM2142 Malay Communication 1	3.2
UBI3252 Essential English 1	3.2
UBI3262 Essential English 2	3.2
UPU3222 Entrepreneurial Culture	3.2
UBM3362 Malay Communication 2	3.2
UPU3322 Malaysian Art and Cultural Heritage	3.2
*** Ko-Kurikulum (Sports, Clubs/Associations and Uniformed Units)	4.8
UPU2342 Integrity and Anti-Corruption	3.2
TOTAL	30.4

Core Course: Education Professional

Course Code & Name	ECTS
KPF3012 Education Development In Malaysia: Philosophy and Policy	3.2
KPS3023 Sociology of Education	4.8
KPP3023 Psychology in Education	4.8
KPD3036 Assessment Design and Teaching Technology	9.6
SBP3013 Implementation of Biology Teaching (MAJOR field)	4.8
****** Implementation of Minor Teaching (MINOR field)	4.8
KPR3012 Teaching Practice Reflection Seminar	3.2
KPK3012 Inclusive Education	3.2
KPG3013 Professional Teachers	4.8
TOTAL	43.2

Note: All the above courses must be repeated if the student obtains a Grade C- and below.

Major

Course Code & Name	ECTS
*SBC3013 Cell Biology	4.8
SBC3063 Plant Anatomy and Morphology	4.8
SBB3053 Biodiversity	4.8
SBC3053 Animal Anatomy and Histology	4.8
*SBU3033 Genetics	4.8
SBC3043 Developmental Biology	4.8
SBF3053 Physiological Processes in Plant	4.8
*SBF3014 Physiological Processes in Animal	6.4
SBB3033 Principles in Microbiology	4.8
SBK3013 Principles in Biochemistry	4.8
SBT3023 Principles of Biotechnology	4.8
SBV3013 Ecology	4.8
SPR3003 Educational Research Method	4.8
SBR3913 Final Year Project 1	4.8
SBR3923 Final Year Project 2	4.8
TOTAL	73.6

Note: Courses marked with * must be repeated if students obtain Grade C- and below.

DISTRIBUTION COURSE

B.Ed (Biology)

AT11

Suggested Course Registration by Semester
For Semester 1 Admission Session 2023/2024

SEMESTER 1

UPU3112/ *UBM2142	Philosophy and Current Issues/ *Malay Language Communication 1	3.2
KPF3012	Education Development in Malaysia: Philosophy and Policy	3.2
SBC3013	Cell Biology	4.8
SBC3053	Animal Anatomy and Histology	4.8
SBB3053	Biodiversity	4.8
SBV3013	Ecology	4.8
	TOTAL	25.6

SEMESTER 2

UBM3262/ *UBM3362	Malay Discourse Skills Language/ *Malay Language Communication 2	3.2
UPU3312/ *UPU3322	National Studies/ *Malaysian Art and Cultural Heritage	3.2
UPU2122	Appreciation of Ethics and Civilization	3.2
KPS3023	Sociology of Education	4.8
***	Club/Association Component Co-Curriculum	1.6
SBC3063	Plant Anatomy and Morphology	4.8
SBB3033	Principles in Microbiology	4.8
	TOTAL	25.6

SEMESTER 3

KPP3023	Psychology in Education	4.8
UPU3222	Entrepreneurial Culture	3.2
***	Component Co-Curriculum Uniformed unit	1.6
UBI3252	Essential English 1	3.2
SBC3043	Development Biology	4.8
SBU3033	Genetics	4.8
***	Minor 1	4.8
***	Foreign Language Level 1	3.2
	TOTAL	30.4

SEMESTER 4

KPK3012	Inclusive Education	3.2
***	Sports co-curriculum	1.6
UBI3262	Essential English 2	3.2
SBT3023	Principles of Biotechnology	4.8
SBK3013	Principles in Biochemistry	4.8
***	Minor 2	4.8
***	Minor 3	4.8
***	Foreign Language Level 2	3.2
	TOTAL	30.4

COURSE DISTRIBUTION B.Ed (Biology) AT11

Suggested Course Registration by Semester
For Semester 1 Admission Session 2023/2024

SEMESTER 5

KPD3036	Design, Assessment and Teaching Technology	9.6
KPG3013	Professional Teachers	4.8
UPU3242	Integrity and Anti-Corruption	3.2
SBF3014	Physiological Processes in Animals	6.4
SPR3003	Educational Research Method	4.8
***	Foreign Language Level 3	3.2

TOTAL 32

SEMESTER 6

SBF3053	Physiological Processes in Plants	4.8
SBR3913	Final Research Project 1	4.8
***	Minor 4	4.8
***	Minor 5	4.8
***	Minor 6	4.8

TOTAL 24

SEMESTER 6 BREAK

KPR3072 Apprentice Teacher 3.2

4 Weeks

SEMESTER 7

SBP3013	Implementation of Biology Teaching	4.8
SBR3923	Final Year Project 2	4.8
***	Implementation of Minor Teaching	4.8
***	Minor 7	4.8
***	Elective 1	4.8

TOTAL 24

SEMESTER 8

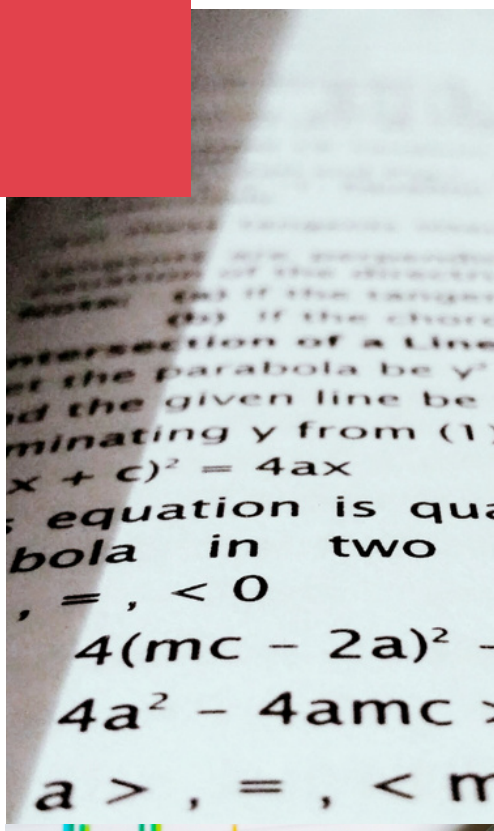
KPR3012	Teaching Training Reflection Seminar	3.2
KPR3068	Teaching practice	12.8

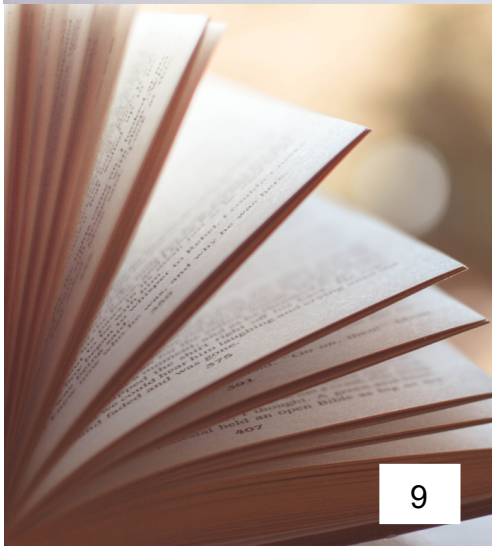
TOTAL 16

This course registration proposal is subject to course availability each semester. Students are advised to refer to their respective departments for any updates.

TEACHING

PRACTICE





IMPLEMENTATION OF TEACHING PRACTICE (LM) AND APPRENTICE TEACHER (PG)

The new structure of Teaching Training for UPSI Bachelor of Education students starting Semester 1 admission session, Session 2023/2024 (October 2023):

Program	Implementation	Duration	ECTS
Apprentice Teacher	Semester 6 Break	4 Weeks	3.2 ECTS
Teaching Practice	Semester 8	16 Weeks	12.8 ECTS
		TOTAL	16 ECTS

COURSE SYNOPSIS

University Course (KU)

KU

UPU3112 PHILOSOPHY AND CURRENT ISSUES

This course covers the relationship between philosophy and the National Philosophy of Education and Rukun Negara. The use of philosophy as a tool to purify the culture of thought in life through art and methods of thinking and human concepts. The main topics in philosophy namely epistemology, metaphysics and ethics are discussed in the context of current issues. Emphasis is given to philosophy as a basis for establishing dialogue between cultures and fostering common values. At the end of this course, students will be able to see the disciplines as a comprehensive and interrelated body of knowledge.

UBI3252 ESSENTIAL ENGLISH 1

This course aims to develop the student's ability to report the information collected and analyze texts in areas of interest to the student. It also allows students to present explanations of ideas to communicate effectively on topics that are unfamiliar to students.

UBI3262 ESSENTIAL ENGLISH 2

This course further strengthens students' abilities in evaluating texts related to abstract and complex topics. It helps students communicate effectively through essay writing in academic and workplace contexts. It also helps students to form teamwork skills to share ideas and opinions in common and complex contexts.

UBM2142 MALAY LANGUAGE COMMUNICATION 1

This course further strengthens students' abilities in evaluating texts related to abstract and complex topics. It helps students communicate effectively through essay writing in academic and workplace contexts. It also helps students to form teamwork skills to share ideas and opinions in common and complex contexts.

UBM3362 MALAY LANGUAGE COMMUNICATION 2

This course emphasizes the mastery of Malay language skills for international students to be able to communicate in daily life situations well. Students will be introduced to simple Malay speaking and writing. The main focus is to master basic communication skills including speaking, writing, reading and listening in Malay.

UBM3262 MALAY DISCOURSE SKILLS

This course aims to improve students' communication skills in academic discourse. Students are exposed to practical skills in searching for information to produce scientific writing and presentations effectively in Malay.

UPU2122 UNDERSTANDING ETHICS AND CIVILIZATION

This course prepares students to appreciate the ethics & civilization that exists in the ethnically diverse society in Malaysia to strengthen their critical & analytical thinking to deal with a more challenging life. Completion of this course focuses on the appreciation of ethics & civilization in the Malaysian mold. Students will be exposed to the dynamics of the concept of ethics & civilization which became the strength for the formation of the Malaysian nation based on the time course of its historical evolution from the pre-colonial era to the post-colonial. An understanding of the formation of ethics & civilization in a diverse society is discussed to increase the appreciation of ethics & civilization towards the strengthening of national unity & the Malaysian nation. The Malaysian model of civilization needs to be examined and debated in academic activities guided by the Federal Constitution as a site of integration & a vehicle for ethics & civilization. The construction of national unity is greatly influenced by globalization & the development of complex information & communication technology. Because of that, the appreciation of ethics & civilization reveals the behavior of social responsibility & is mobilized at the level of the individual, family, community, society & country. Therefore, the changes taking place in society & direct economic development have brought new challenges in strengthening the sustainability of ethics & civilization in Malaysia. High Impact Education Practices (HIEPs) are practiced in teaching and learning to deepen this course. (teaching & learning).

UPU2342 INTEGRITY AND ANTI-CORRUPTION

This course includes basic concepts about the value of integrity, forms of corruption and abuse of power in everyday life as well as in organizations and measures to prevent corruption. Actual corruption issues and cases are also discussed in the learning session. The main focus of this course is to develop the skills needed to deal with issues of corruption, abuse of power and white collar crime so that an individual can act and maintain integrity at all times.

COURSE SYNOPSIS

University Course (KU)

KU

UPU3222 ENTREPRENEURSHIP CULTURE

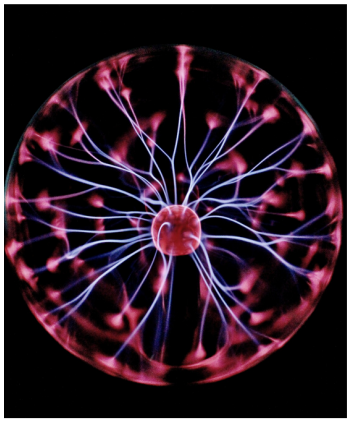
This course aims to give exposure to the basic concepts and principles of entrepreneurship to students so that they can generate interest in venturing into the field of entrepreneurship. This course focuses on the study of entrepreneurship and business skills with an emphasis on the implementation of interactive learning. Students are given the opportunity to experience real life as an entrepreneur by developing a business plan framework as well as carrying out activities based on entrepreneurship.

UPU3322 MALAYSIAN ART AND CULTURAL HERITAGE

This course introduces students to the various art forms of the multi-racial and ethnic communities that are part of Malaysia's cultural heritage. Students will study music, dance, theater and traditional crafts that represent the unique culture of the Malaysian community in Peninsular Malaysia, Sabah and Sarawak. Through hands-on involvement in performing arts and the making of selected crafts, students will develop a greater appreciation for Malaysian cultural heritage and a better understanding of Malaysian society.

UPU3312 NATIONAL STUDIES

This course emphasizes the aspects of nationhood in Malaysia. This covers the country's history, administrative system, constitution and government policies in the nation-building process. The Science of National Studies crosses various disciplines including History, Sociology, Anthropology, Political Science, Law and Economics.

SYNOPSIS KURSUS

Professional Education Course (KPP)

KPP

KPF3012 EDUCATION DEVELOPMENT IN MALAYSIA: PHILOSOPHY AND POLICY

This course critically discusses the philosophy and legal policy of education by analyzing it in the context of the development of education in Malaysia. This course also explores and discusses the development of national education as a continuation of practices that should occur continuously in the national development process. Philosophy, policies, curriculum and rules in education are also emphasized to enable students to acquire knowledge and skills as well as foster attitudes in carrying out their responsibilities effectively in the teaching profession.

KPS3014 LEARNING MANAGEMENT

This course discusses the role of the teacher as a learning manager in the context of various learning environments. Students will be introduced to various aspects of learning management including organization, leadership, behavior, resources, technology, culture and capabilities. This course will expose students to real school experiences that will ultimately enable them to function effectively in all learning situations.

KPK3012 INCLUSIVE EDUCATION

This course focuses on the policy and philosophy of special education aimed at inclusive education. The course discusses current issues, the characteristics of special education students and discusses teaching strategies and techniques through an inclusive approach. The course also discusses collaboration between stakeholders in making inclusive education a success.

SBP3013 IMPLEMENTATION OF BIOLOGY TEACHING

This course aims to strengthen students' skills in planning and implementing teaching through micro and macroteaching in the main aspects of the teaching process: (a) stating learning outcomes, (b) choosing and planning teaching materials and sequences, (c) choosing and implementing teaching methods, strategies and techniques that is appropriate, (d) prepare and use appropriate teaching and learning media and technology, and (e) prepare, select and use appropriate assessment methods and tools to evaluate learning outcomes in Biology subjects, and (f) plan Action Studies

KPP3014 STUDENT LEARNING AND DEVELOPMENT

This course discusses aspects of learning and development of teenagers with an educational background that covers the student, the learning process and the diversity of students. In addition, aspects of the learning experience based on the mind, culture, language, self-ability, personality, social, environmental, emotional and physical are also highlighted.

KPD 3016 TEACHING, TECHNOLOGY AND ASSESSMENT 1

This course discusses and guides students to develop teaching planning skills in the following five main aspects: (a) stating teaching and learning objectives, (b) choosing and organizing teaching content and materials (c) choosing appropriate teaching approaches, methods and techniques, (d)) provide appropriate tools and technology in the teaching and learning process, (e) provide, select and use appropriate assessment tools and methods to assess and evaluate learning outcomes. Students will gain the skills to prepare a set of lesson plans on a topic in their specialization subject.

KPR3012 TEACHING PRACTICE REFLECTION SEMINAR

This course will enable students to critically reflect on teaching practice, make decisions, and find alternative solutions in teaching and learning based on teaching practice experience.

COURSE SYNOPSIS

Apprentice Teacher (PG)/ Teaching Practice (LM)

PG/ LM

KPR3072 APPRENTICE TEACHER

This course provides an opportunity for students to understand the school environment and school culture. It also gives students the opportunity to critically relate the National Education Philosophy in the school environment. In addition, this course also gives students the opportunity to identify teaching planning and facilitation as well as involvement with school management and co-curricular activities. This course is a prerequisite for teaching training courses 1 and 2.

KPR3068 TEACHING PRACTICE

This course aims to strengthen the skills of applying knowledge in the real context of teaching, learning and educational management in schools.

COURSE SYNOPSIS

B.Ed (Biology)

AT11

SBC3013 CELL BIOLOGY

The course discusses cell biology, which includes scientific methods, experimental methodology, use of the microscope, as well as origin and history of life. This course will also emphasize on the theory of cell, prokaryote and eukaryote cells, organization of cell, cell organelles and its functions and processes, as an introduction to molecular biology.

SBB3053 BIODIVERSITY

This course discusses the concepts of evolution, biodiversity, classification, conservation, and teaching and learning issues related to biodiversity. The classification based on the life systems of the six Kingdom and the naming of organisms will be emphasized. Viruses as non-living things are also discussed. Characteristics of organisms in major phylums/divisions such as morphology, nutrition, life cycle, habitat and ecological and industrial importance are discussed. Awareness of the importance of biodiversity is demonstrated in students' commitment to fieldwork assignments and course work.

SBU3033 GENETICS

This course discusses the concept of Mendelian genetics, modification of Mendelian ratios including gene interactions, gene and environmental interactions, non -Mendelian inheritance, gender and sex chromosome determination, gene relationships and chromosome mapping. The course also provides students with knowledge related to genetic concepts in populations as well as description of DNA structure, DNA replication, genetic code and gene expression processes. At the end of this subject, students should be able to apply genetic knowledge in understanding and solving genetically related problems.

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.

SBB3033 PRINCIPLES IN MICROBIOLOGY

Principles of Microbiology covers relevant information on different aspects of microbes in a comprehensive style. This course provides the latest information available on microorganisms with analysis of their strategies for carrying out essential life functions and contribution to the overall health and welfare of humans and the environment.

SBC3012 PLANT ANATOMY AND MORPHOLOGY

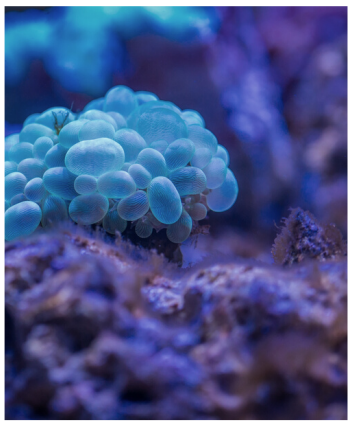
This course discusses the anatomical and morphological structure of plants including descriptions of cells, tissues and organs that constitute the entire plant organization. Primary and secondary growth in plants will also be clearly explained. In addition, the variety of morphological and anatomical 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.

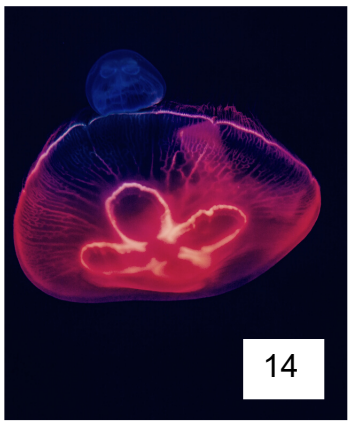
SBC3053 ANIMAL ANATOMY AND HISTOLOGY

This course discusses the basic anatomy and histology of vertebrate animals. 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 organs during practical training in the laboratory. At the end of this course, students will be able to identify the specialized cells and how they interact to form related tissues structurally and functionally.

SBC3043 DEVELOPMENTAL BIOLOGY

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.





COURSE SYNOPSIS

B.Ed (Biology)

AT11

SBK3013 PRINCIPLES IN BIOCHEMISTRY

This course addresses the significance of biomolecules, metabolism and its regulation, interconnections between pathways of carbohydrates, proteins, and lipids that occur in cells, and the connection to health and nutrition. The discussion will include the classification of enzymes, the mechanism of action, kinetics, co factors, and inhibition. The concept of aerobics and anaerobic metabolism will be explained using examples from daily life. Students will participate in collaborative learning activities, such as project-based learning.

SBV3013 ECOLOGY

The course discusses basic principle of ecology and ecological processes in the environment. The main components including the role of individuals, population, community, and ecosystem will be discussed and analyzed as dynamic entity. The course will also emphasize on the distribution and dominance of population and community. Laboratory and field work will emphasize on quantitative ecology such as sampling and analysis of population.

SBR3913 FINAL YEAR PROJECT 1

This course gives students the opportunity to apply their knowledge and understanding of biology/ physics/ chemistry/ 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.

SBT3023 PRINCIPLES OF BIOTECHNOLOGY

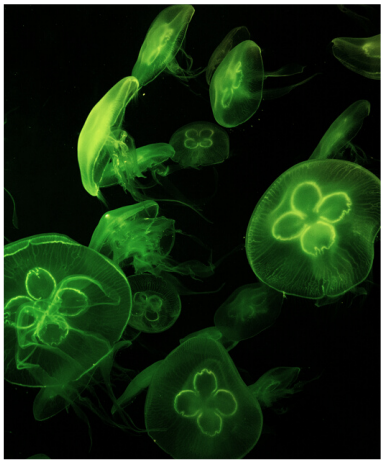
Kursus ini membincangkan konsep asas dalam bioteknologi. Pelajar juga dibekalkan dengan pemahaman tentang teknologi DNA rekombinan melalui teori dan amali serta aplikasinya dalam pelbagai bidang bioteknologi. Kemajuan dalam bioteknologi yang menyumbang kepada kesejahteraan umum juga akan dibincangkan. Pada akhir kursus, pelajar juga akan didedahkan kepada isu-isu berkaitan keselamatan, etika dan moral dalam bioteknologi.

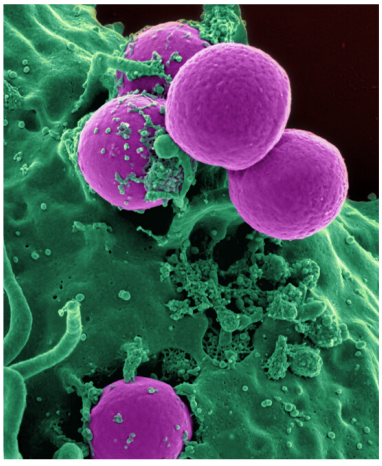
SPR3003 EDUCATIONAL RESEARCH METHOD

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.

SBR3923 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.





“ Nurturing creative minds ”

Panduan Akademik
Academic Guideline

Fakulti Sains & Matematik
Faculty of Science and Mathematics

Program Sarjana Muda
Degree Programmes

Kemasukan Semester 1
Sesi 2023/2024 (A231)

fsm 23/24

B

JABATAN BIOLOGI

(BIOLOGI DEPARTMENT)

DIREKTORI KEPAKARAN:

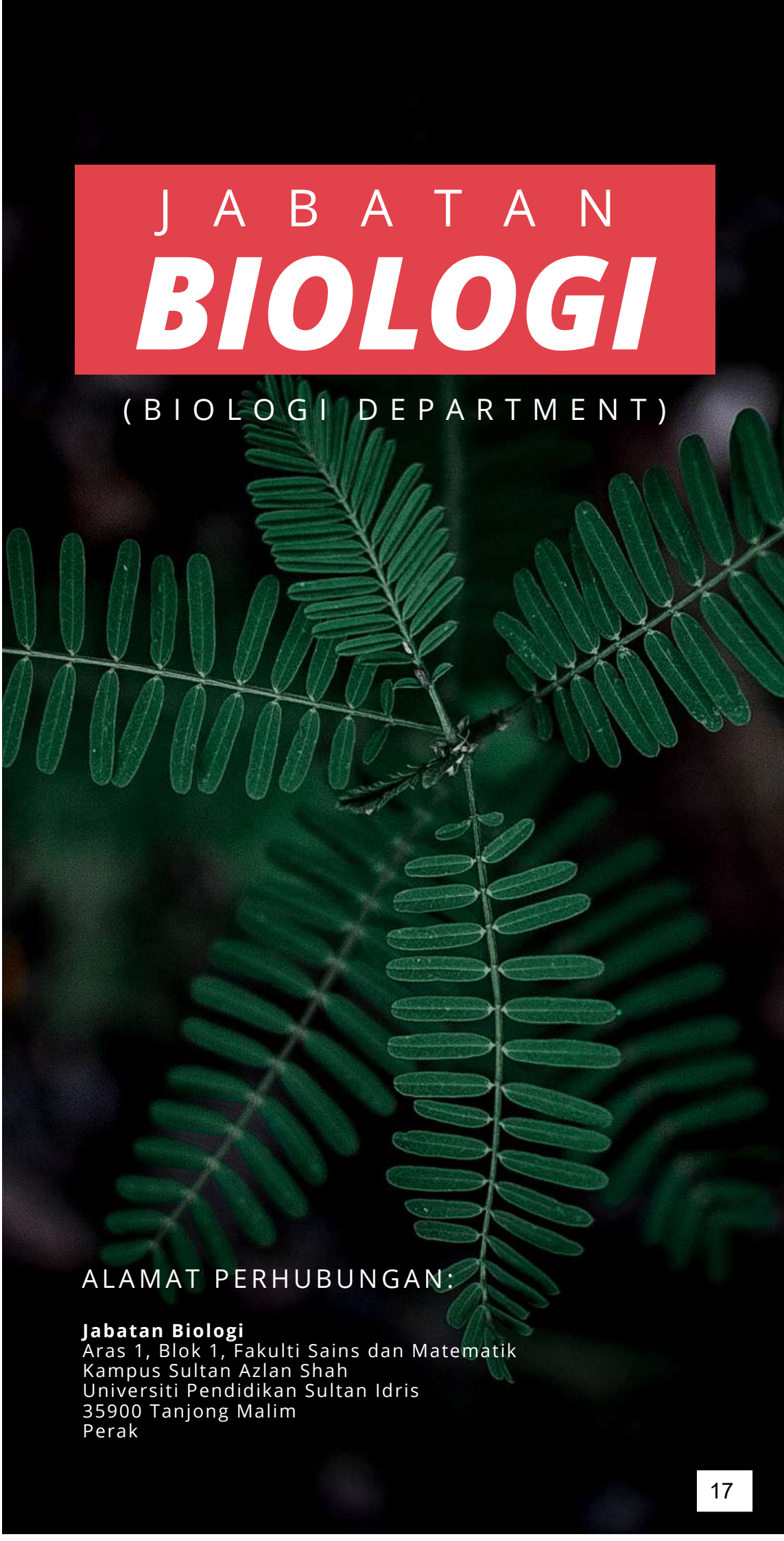
Senarai kakitangan akademik Jabatan Biologi

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:

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Kampus Sultan Azlan Shah
Universiti Pendidikan Sultan Idris
35900 Tanjong Malim
Perak

JABATAN BIOLOGI
(BIOLOGY DEPARTMENT)

KETUA JABATAN/
HEAD OF DEPARTMENT

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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
Medical Biotechnology, Proteomics, Allergy

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

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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Kepakaran/Expertise:
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Pn. Parizah Hassan

Pembantu Tadbir N26

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FSM

STRUKTUR PROGRAM ISMP (Biologi) AT11

Elektif Terbuka

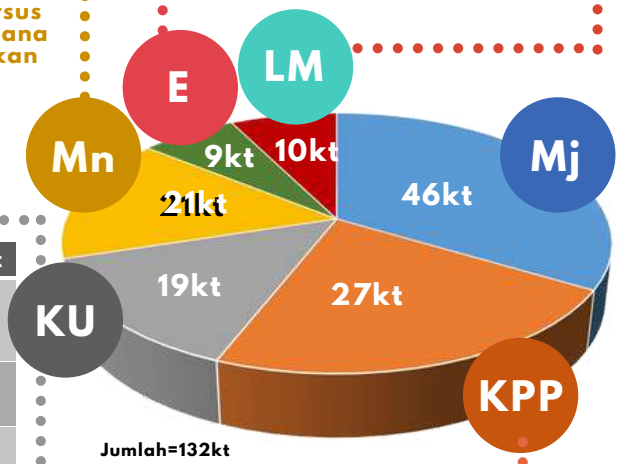
Pelajar perlu mengambil kursus Bahasa Asing Peringkat 1, 2 dan 3 serta 1 kursus elektif bebas

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 21 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
UPU2122	Penghayatan Etika dan Peradaban	2
UPU3112	Falsafah dan Isu Semasa	2
UBI3252	Essential English 1	2
UBI3262	Essential English 2	2
UPU3222	Budaya Keusahawanan	2
UBM3262	Keterampilan Wacana Bahasa Melayu	2
UPU3312	Pengajian Kenegaraan	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UPU2342	Integriti dan Anti Rasuah	2
	JUMLAH	19

Pakej Kursus Universiti bagi pelajar antarabangsa:

Kod & Nama Kursus		Kredit
UPU2122	Penghayatan Etika dan Peradaban	2
UBM2142	Bahasa Melayu Komunikasi 1	2
UBI3252	Essential English 1	2
UBI3262	Essential English 2	2
UPU3222	Budaya Keusahawanan	2
UBM3362	Bahasa Melayu Komunikasi 2	2
UPU3322	Warisan Seni dan Kebudayaan Malaysia	2
***	Ko-Kurikulum (Sukan, Kelab/ Persatuan dan Unit Beruniform)	3
UPU2342	Integriti dan Anti Rasuah	2
	JUMLAH	19

Kursus Teras: Profesional Pendidikan

Kod & Nama Kursus		Kredit
KPF3012	Perkembangan Pendidikan Di Malaysia: Falsafah dan Dasar	2
KPS3023	Sosiologi Pendidikan	3
KPP3023	Psikologi dalam Pendidikan	3
KPD3036	Rekabentuk Pentaksiran dan Teknologi Pengajaran	6
SBP3013	Pelaksanaan Pengajaran Biologi (bidang MAJOR)	3
******	Pelaksanaan Pengajaran Minor (bidang MINOR)	3
KPR3012	Seminar Refleksi Latihan Mengajar	2
KPK3012	Pendidikan Inklusif	2
KPG3013	Insan Guru Profesional	3
	JUMLAH	27

Nota: Semua kursus di atas wajib diulang sekiranya pelajar memperoleh Gred C- dan ke bawah.

Major

Kod & Nama Kursus		Kredit
*SBC3013	Cell Biology	3
SBC3063	Plant Anatomy and Morphology	3
SBB3053	Biodiversity	3
SBC3053	Animal Anatomy and Histology	3
*SBU3033	Genetics	3
SBC3043	Developmental Biology	3
SBF3053	Physiological Processes in Plant	3
*SBF3014	Physiological Processes in Animal	4
SBB3033	Principles in Microbiology	3
SBK3013	Principles in Biochemistry	3
SBT3023	Principles of Biotechnology	3
SBV3013	Ecology	3
SPR3003	Educational Research Method	3
SBR3913	Final Year Project 1	3
SBR3923	Final Year Project 2	3
	JUMLAH	46

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

AGIHAN KURSUS ISMP (Biologi) AT11

Cadangan Pendaftaran Kursus Mengikut Semester Bagi Sesi Kemasukan Semester 1 Sesi 2023/2024

SEMESTER 1

UPU3112/ *UBM2142	Falsafah dan Isu Semasa/ Bahasa Melayu Komunikasi 1	2
KPF3012	Perkembangan Pendidikan di Malaysia: Falsafah dan Dasar	2
SBC3013	Cell Biology	3
SBC3053	Animal Anatomy and Histology	3
SBB3053	Biodiversity	3
SBV3013	Ecology	3
	JUMLAH	16

SEMESTER 2

UBM3262/ *UBM3362	Keterampilan Wacana Bahasa Melayu/*Bahasa Melayu Komunikasi 2	2
UPU3312/ *UPU3322	Pengajian Kenegaraan/*Warisan Seni dan Kebudayaan Malaysia	2
UPU2122	Penghayatan Etika dan Peradaban	2
KPS3023	Sosiologi Pendidikan	3
***	Kokurikulum Komponen Kelab/Persatuan	1
SBC3063	Plant Anatomy and Morphology	3
SBB3033	Principles in Microbiology	3
	JUMLAH	16

SEMESTER 3

KPP3023	Psikologi dalam Pendidikan	3
UPU3222	Budaya Keusahawanan	2
***	Kokurikulum Komponen Unit Beruniform	1
UBI3252	Essential English 1	2
SBC3043	Development Biology	3
SBU3033	Genetics	3
***	Minor 1	3
***	Bahasa Asing Peringkat 1	2
	JUMLAH	19

SEMESTER 4

KPK3012	Pendidikan Inklusif	2
***	Kokurikulum Sukan	1
UBI3262	Essential English 2	2
SBT3023	Principles of Biotechnology	3
SBK3013	Principles in Biochemistry	3
***	Minor 2	3
***	Minor 3	3
***	Bahasa Asing Peringkat 2	2
	JUMLAH	19

AGIHAN KURSUS

ISMP (Biologi)

AT11

Cadangan Pendaftaran Kursus Mengikut Semester Bagi Sesi Kemasukan Semester 1 Sesi 2023/2024

SEMESTER 5

KPD3036	Rekabentuk, Pentaksiran dan Teknologi Pengajaran	6
KPG3013	Insan Guru Profesional	3
UPU3242	Integriti dan Anti Rasuah	2
SBF3014	Physiological Processes in Animals	4
SPR3003	Educational Research Method	3
***	Bahasa Asing Peringkat 3	2
	JUMLAH	20

SEMESTER 6

SBF3053	Physiological Processes in Plants	3
SBR3913	Projek Penyelidikan Akhir 1	3
***	Minor 4	3
***	Minor 5	3
***	Minor 6	3
	JUMLAH	15

CUTI SEMESTER 6

KPR3072	Perantis Guru	2
	4 Minggu	

SEMESTER 7

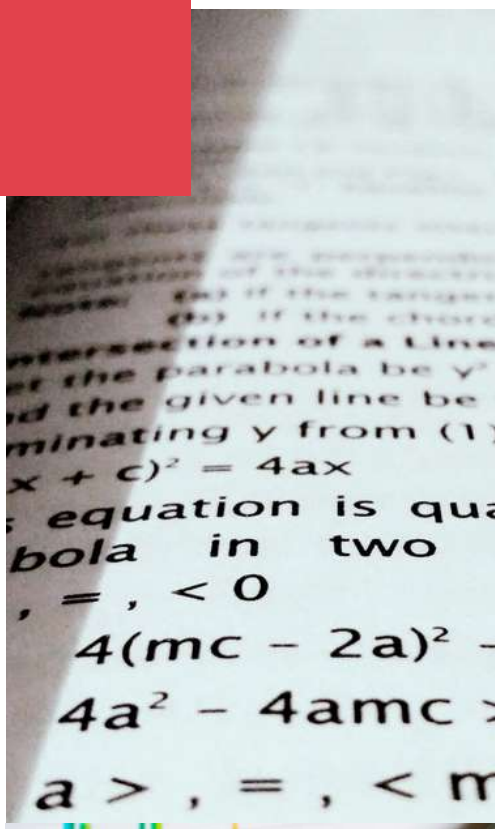
SBP3013	Pelaksanaan Pengajaran Biologi	3
SBR3923	Projek Tahun Akhir 2	3
***	Pelaksanaan Pengajaran Minor	3
***	Minor 7	3
***	Elektif 1	3
	JUMLAH	15

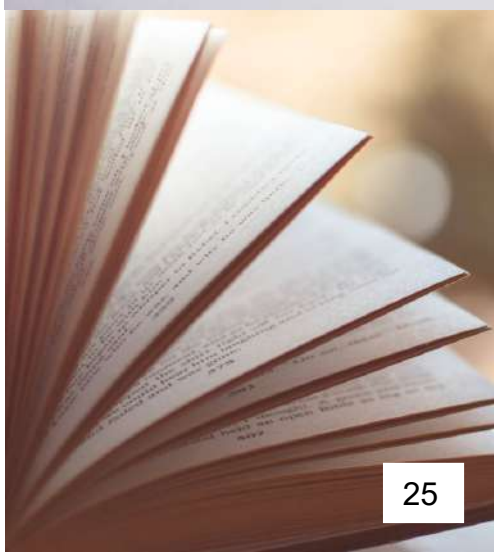
SEMESTER 8

KPR3012	Seminar Refleksi Latihan Mengajar	2
KPR3068	Latihan Mengajar	8
	JUMLAH	10

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 PROGRAM PERANTIS GURU (PPG)

Struktur baharu Latihan Mengajar bagi pelajar program Ijazah Sarjana Muda Pendidikan UPSI bermula sesi kemasukan Semester 1, Sesi 2023/2024 (Oktober 2023):

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

UBI3252 BAHASA INGGERIS ESENSIAL 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.

UBI3262 BAHASA INGGERIS ESENSIAL 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

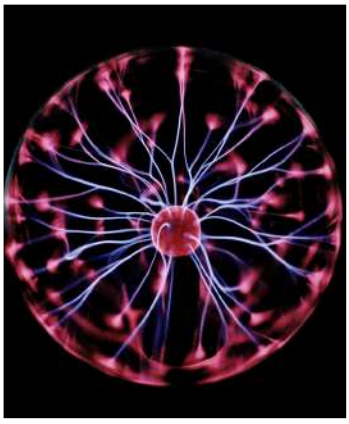
Kursus ini bertujuan untuk memberi pendedahan tentang konsep dan prinsip asas keusahawanan kepada pelajar supaya dapat menimbulkan minat untuk menceburi bidang keusahawanan. Kursus ini memberi fokus kepada pengajian keusahawanan dan kemahiran perniagaan dengan penekanan terhadap perlaksanaan pembelajaran 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

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

SINOPSIS KURSUS

Program Perantis Guru/Latihan Mengajar/ Latihan Industri

PPG/ 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.

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

The course discusses cell biology, which includes scientific methods, experimental methodology, use of the microscope, as well as origin and history of life. This course will also emphasize on the theory of cell, prokaryote and eukaryote cells, organization of cell, cell organelles and its functions and processes, as an introduction to molecular biology.

SBB3053 BIODIVERSITY

This course discusses the concepts of evolution, biodiversity, classification, conservation, and teaching and learning issues related to biodiversity. The classification based on the life systems of the six Kingdom and the naming of organisms will be emphasized. Viruses as non-living things are also discussed. Characteristics of organisms in major phylums/divisions such as morphology, nutrition, life cycle, habitat and ecological and industrial importance are discussed. Awareness of the importance of biodiversity is demonstrated in students' commitment to fieldwork assignments and course work.

SBU3033 GENETICS

This course discusses the concept of Mendelian genetics, modification of Mendelian ratios including gene interactions, gene and environmental interactions, non -Mendelian inheritance, gender and sex chromosome determination, gene relationships and chromosome mapping. The course also provides students with knowledge related to genetic concepts in populations as well as description of DNA structure, DNA replication, genetic code and gene expression processes. At the end of this subject, students should be able to apply genetic knowledge in understanding and solving genetically related problems.

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.

SBB3033 PRINCIPLES IN MICROBIOLOGY

Principles of Microbiology covers relevant information on different aspects of microbes in a comprehensive style. This course provides the latest information available on microorganisms with analysis of their strategies for carrying out essential life functions and contribution to the overall health and welfare of humans and the environment.

SBC3012 PLANT ANATOMY AND MORPHOLOGY

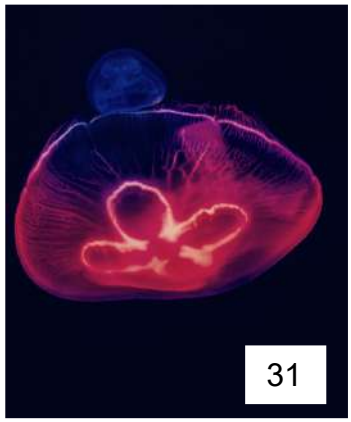
This course discusses the anatomical and morphological structure of plants including descriptions of cells, tissues and organs that constitute the entire plant organization. Primary and secondary growth in plants will also be clearly explained. In addition, the variety of morphological and anatomical 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.

SBC3053 ANIMAL ANATOMY AND HISTOLOGY

This course discusses the basic anatomy and histology of vertebrate animals. 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 organs during practical training in the laboratory. At the end of this course, students will be able to identify the specialized cells and how they interact to form related tissues structurally and functionally.

SBC3043 DEVELOPMENTAL BIOLOGY

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.



SINOPSIS KURSUS

ISMP (Biologi)

AT11

SBK3013 PRINCIPLES IN BIOCHEMISTRY

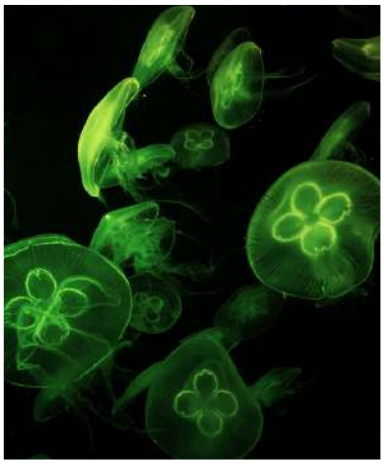
This course addresses the significance of biomolecules, metabolism and its regulation, interconnections between pathways of carbohydrates, proteins, and lipids that occur in cells, and the connection to health and nutrition. The discussion will include the classification of enzymes, the mechanism of action, kinetics, co factors, and inhibition. The concept of aerobics and anaerobic metabolism will be explained using examples from daily life. Students will participate in collaborative learning activities, such as project-based learning.

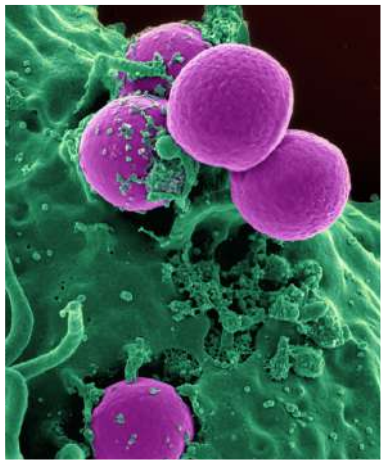
SBV3013 ECOLOGY

The course discusses basic principle of ecology and ecological processes in the environment. The main components including the role of individuals, population, community, and ecosystem will be discussed and analyzed as dynamic entity. The course will also emphasize on the distribution and dominance of population and community. Laboratory and field work will emphasize on quantitative ecology such as sampling and analysis of population.

SBR3913 PROJEK PENYELIDIKAN AKHIR 1

This course gives students the opportunity to apply their knowledge and understanding of biology/ physics/ chemistry/ 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.





SBT3023 PRINCIPLES OF BIOTECHNOLOGY

Kursus ini membincangkan konsep asas dalam bioteknologi. Pelajar juga dibekalkan dengan pemahaman tentang teknologi DNA rekombinan melalui teori dan amali serta aplikasinya dalam pelbagai bidang bioteknologi. Kemajuan dalam bioteknologi yang menyumbang kepada kesejahteraan umum juga akan dibincangkan. Pada akhir kursus, pelajar juga akan didedahkan kepada isu-isu berkaitan keselamatan, etika dan moral dalam bioteknologi.

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.

SBR3923 PROJEK PENYELIDIKAN AKHIR 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.

“ Memupuk Minda Kreatif ”