

MEDICAL & LIFE SCIENCES

Postgraduate
- Prospectus -
2024

SUNWAY
UNIVERSITY



A CLASS ABOVE



CONTENTS

- 1 • Why study at Sunway University?
 - Scholarships & Bursaries
- 2 • Entry Requirements
- 4 • Master of Applied Behaviour Analysis
- 5 • MSc in Psychology
- 6 • PhD in Psychology
- 7 • Psychology Research Areas
- 8 • Psychology Research Facilities
- 10 • Psychology Research Centre
- 11 • Postgraduate Diploma in Primary Care for Elderly
- 12 • MSc in Life Sciences
- 13 • PhD in Biology
- 14 • Master in Medical Science
- 15 • PhD in Medical Science
- 16 • Biological Research Areas
- 17 • Biological Research Facilities
- 20 • Biological Research Centres



CONTACT:

SUNWAY UNIVERSITY DU025 (B)
 Owned and governed by the Jeffrey Cheah Foundation
 Registration no : 200701042913 (800944-T)



📍 No. 5, Jalan Universiti, Bandar Sunway, 47500 Selangor Darul Ehsan, Malaysia.

🌐 sunwayuniversity.edu.my

✉ info@sunway.edu.my

☎ +6 (03) 7491 8622

📘 SunwayUniversity

🐦 @SunwayU

This brochure is valid for our 2024 intakes. All information is correct at the time of printing (March 2024).
 Copyright Notice: The content of this brochure shall not be reproduced in any form nor distributed in part or in its entirety, without prior written permission from the University.

WHY STUDY AT SUNWAY UNIVERSITY?

SUNWAY IS ONE OF THE TOP 150 UNIVERSITIES IN THE WORLD UNDER 50 YEARS OLD

As one of Malaysia's leading and internationally recognised private universities, Sunway University is positioned amongst top universities in the world by QS World University Rankings. Sunway University is ranked #586 globally in the QS World University Rankings 2024 and is the #1 non-government linked private university in Malaysia in the Times Higher Education World University Rankings 2023.

Sunway University has been awarded #1 in Graduate Employability among all universities in Malaysia by Talentbank Group for two consecutive years (2022, 2023) through the National Graduate Employability Index.

The University emerged as an Overall 5 Star rated (Excellent) institution in the QS Stars University Ratings, as well as Five-Star ratings for the individual categories: teaching, facilities, employability, social responsibility, inclusiveness, academic development and internationalisation.

Collaborating with world class partners - Lancaster University and Le Cordon Bleu International, Sunway University offers premier education with international repute. The University also partners University of Oxford, University of Cambridge, Harvard University, Massachusetts Institute of Technology and University of California, Berkeley.

MALAYSIA'S #1 NON-GLU* PRIVATE UNIVERSITY
 as awarded by Times Higher Education



*Government-Linked University



EXCELLENT
 ★★★★★



Industry-relevant and job-ready programmes and curriculum



Numerous **research centres and research collaborations** with leading international universities



Abundant **networking opportunities** with renowned lecturers, distinguished research supervisors and industry experts



Flexible **full-time and part-time** study modes to accommodate your schedules



SCHOLARSHIPS & BURSARIES



For more information regarding available scholarships and bursaries, please refer to <https://scholarship.sunway.edu.my/>

** Terms and Conditions apply*

ENTRY REQUIREMENTS

Kindly email your Bachelor's/Master's degree transcript, completion certificate and your curriculum vitae for an eligibility check.

PROGRAMME	ENTRY REQUIREMENTS	ENGLISH LANGUAGE REQUIREMENTS
Master of Applied Behaviour Analysis	<ul style="list-style-type: none"> A Bachelor's Degree in Psychology or its equivalent with minimum CGPA 2.75 out of 4.00; or Other relevant or equivalent qualification, experience and a requirement accepted by the HEP Senate. International applicants are required to fulfil the English Language requirement of IELTS 6.0 or equivalent 	IELTS : 6.0 or equivalent TOEFL : 550 (paper-based), 200 (computer-based) or 75 (internet-based) PTE Academic : 50 overall Cambridge English : 170 (Grade B)/B2 (First/CEFR) Cambridge English : 170 (Grade B)/B2 (Advanced/CEFR) SPM English 1119 : 5C
MSc in Psychology*	<ul style="list-style-type: none"> A Bachelor's degree in Psychology or equivalent with a minimum CGPA of 3.00 	IELTS : 6.0 or equivalent TOEFL : 550 (paper-based), 200 (computer-based) or 75 (internet-based) PTE Academic : 50 overall Cambridge English : 170 (Grade B)/B2 (First/CEFR) Cambridge English : 170 (Grade B)/B2 (Advanced/CEFR) SPM English 1119 : 5C
PhD in Psychology*	<ul style="list-style-type: none"> A Bachelor's degree in Psychology at CGPA of 3.0 out of 4.0 or equivalent as accepted by the HEP Senate; AND A Master's degree in Psychology at CGPA of 3.0 out of 4.0 or equivalent (Level 7, MQF) as accepted by the HEP Senate 	IELTS : 7.0 or equivalent TOEFL : 600 (paper-based), 250 (computer-based) or 95 (internet-based) PTE Academic : 65 overall MUET : Band 5 Cambridge English : 185 (Grade A)/C1 (First/CEFR) Cambridge English : 185 (Grade C)/C1 (Advanced/CEFR) SPM English 1119 : 2A
Postgraduate Diploma in Primary Care for Elderly	<ul style="list-style-type: none"> At least 1 year of post housemanship experience Minimum 6-months direct patient care and/or in clinical medicine Must be in direct patient care during the period of this training programme Registered Malaysia Medical Council (MMC) / Country's Medical Licensing Board / members or equivalent Current Annual Practicing Certificate (APC) 	IELTS : 5.0 or equivalent TOEFL : 550 (paper-based), 200 (computer-based) or 75 (internet-based) MUET : Band 4

***RESEARCH PROPOSAL**

The research proposal should comprise between 1,000 and 1,500 words (excluding references), and covers the following structure:

- An appropriate title for the research project (and designated supervisor if known)
- An introduction and justification of the study which includes:
 - Research background
 - Problem statement
 - Research objective(s)
 - Research question(s)/hypothesis
- Literature review
- Research methodology
- Proposed research schedule
- List of references

PROGRAMME	ENTRY REQUIREMENTS	ENGLISH LANGUAGE REQUIREMENTS
MSc in Life Sciences*	<ul style="list-style-type: none"> A Bachelor's degree in Biological Sciences (e.g. Medical Biotech, Biomedicine, etc) or a related field with a minimum CGPA of 2.75 or equivalent Any other qualifications will be considered on a case-to-case basis 	IELTS : 6.0 or equivalent TOEFL : 550 (paper-based), 213 (computer-based) or 80 (internet-based) PTE Academic : 50 overall (minimum 46 in each skill)
PhD in Biology*	<ul style="list-style-type: none"> A Master's degree in the biological sciences discipline or a related field Any other qualifications will be considered on a case-to-case basis 	PTE Academic : 50 overall (minimum 46 in each skill)
Master in Medical Science*	<ul style="list-style-type: none"> A Bachelor's degree 	IELTS : 6.0 or equivalent TOEFL : 550 (paper-based), 213 (computer-based) or 80 (internet-based) PTE Academic : 50 overall (minimum 46 in each skill) Cambridge English : 75+ (First)
PhD in Medical Science*	<ul style="list-style-type: none"> A Master's degree related to Medical Science Other qualifications that are equivalent to a Master's degree or professional qualification related to a field of Medical Science and experience recognised by the University Senate 	Cambridge English : Minimum 67 (Advanced) Medium of instruction in previous degree in English

***RESEARCH PROPOSAL**

The research proposal should comprise between 1,000 and 1,500 words (excluding references), and covers the following structure:

- An appropriate title for the research project (and designated supervisor if known)
- An introduction and justification of the study which includes:
 - Research background
 - Problem statement
 - Research objective(s)
 - Research question(s)/hypothesis
- Literature review
- Research methodology
- Proposed research schedule
- List of references

MASTER OF APPLIED BEHAVIOUR ANALYSIS

JPT/BPP[U](N/0314/7/0002/PA16713)07/30

- The programme aims to transform graduates into Malaysia Certified Behaviour Analysts after achieving the minimal supervised practice hours satisfying the training guidelines of the Malaysia Association of Behaviour Analysis.
- Graduates will learn to analyse and modify behaviour using principles of applied behaviour analysis in any industry or circumstance that require behavioural change or maintenance.
- Graduates will contribute predominantly to the behavioural assessments and interventions involving individuals with developmental disabilities such as autism.

Practicum

Students will complete two practical placements at agencies with onsite behaviour analyst supervisors overseeing their work in applying behavioural analytic concepts in the real world. These placements contribute to the professional training hours required by the Malaysia Association of Behaviour Analysis (MABA) to be a Malaysian Certified Behaviour Analyst (MCBA).

PROGRAMME STRUCTURE

The programme consists of 6 core coursework modules, 2 research projects and 2 practical placements.

- Concepts and Principles of Behavioural Analysis
- Measurement and Experimental Design
- Identification and Assessment
- Ethical and Professional Conduct
- Behaviour Change Applications
- Intervention and Implementation
- Practicum 1
- Practicum 2
- Research Project 1
- Research Project 2

Mode of Delivery

- Lectures
- Workshops
- Online blended learning
- Practical Placements
- Industrial Visits
- Behavioural Research Projects

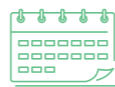
Research Projects

- The Research Projects involve the planning, execution and reporting of a behaviour modification intervention project for each of the semester when the subject is offered. One project focuses on increasing a target behaviour, and the second one focuses on decreasing a chosen behaviour, with both using behavioural analytic principles.



DURATION

Full-time - 2 years



INTAKES

April



TAUGHT PROGRAMME

CAREER PROSPECTS



- ABA Therapist
- Academician / Lecturer
- Behaviour Analyst
- Case Supervisor
- Clinical Director
- Early Intervention Programme Manager / Coordinator
- Occupational Health & Safety Adviser
- Rehabilitation Officer
- Special Education Consultant

CONTACT

For more information, please email info@sunway.edu.my



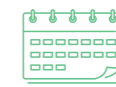
MSc IN PSYCHOLOGY

JPT/BPP[U](R2/311/7/0086/FA1400)04/27



DURATION

Full-time - 2 years
Part-time - 3 years



INTAKES

January & July



RESEARCH PROGRAMME

CAREER PROSPECTS



- Analyst
- Lecturer
- Operations director
- Project manager
- Research consultant
- Researcher
- Senior manager
- Technical author

- Specifically designed to enable you to develop your research skills and to undertake an independent investigation into your topic of interest, while broadening your knowledge and understanding of an area of psychology.
- Students will complete two courses on research methods and statistics before undertaking a research project.
- Learn how to critically review research literature, plan and manage a research project while developing skills in critical thinking, project management and report writing.
- The skills and attributes gained from this experience will contribute to your career potentials.
- This programme is also a springboard for those wishing to continue their studies through to PhD level.

PROGRAMME STRUCTURE

The programme consists of core modules followed by a master research thesis.

Core Modules

Intermediate Research Methods

This subject covers topics associated with the design of research in Psychology. As well as developing an understanding of methodological issues students learn skills such as those involved in reviewing published studies to inform the design of a specific project, and how to write a comprehensive research proposal for a quantitative study. The student will understand the process of designing complex research projects, collecting data, subsequently analysing data, APA format, concepts surrounding the types of research design, as well as ethical issues involved in research.

Class schedule for Intermediate Research Methods Full-time / Part-time:

- 2 hours per week;
Mondays – Fridays (8.00am to 6.00pm)

Intermediate Statistics

This course is to ensure that students are familiar with a variety of statistical techniques for use with differing forms of data. Teaching objectives relate to understanding the formulae that are used for univariate and basic multivariate statistics. Student will also learn coding and interpretation of quantitative data to answer research questions, using statistical softwares.

Class schedule for Intermediate Statistics Full-time / Part-time:

- 3 hours per week;
Mondays – Fridays (8.00am to 6.00pm)

Thesis

Master's Research Thesis

The thesis is designed to allow students to demonstrate their knowledge in a specific research area, identify a research problem and develop a research solution that contributes to the research area. The project will communicate this knowledge in the form of a written report that is of publication quality.

CONTACT

For more information, please email psyppg@sunway.edu.my



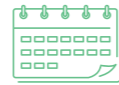
PhD IN PSYCHOLOGY

JPT/BPP[U](N/311/8/0101/FA9382)04/25



DURATION

Full-time - 3 years
Part-time - 4 years



INTAKES

January & July



RESEARCH PROGRAMME

- This research postgraduate programme equips graduates with advanced knowledge of research methods and the skills to independently conduct research in many areas of behavioural science.
- Students conduct original research which extends the frontiers of knowledge in a specialised area of psychology.
- As a result of acquiring the abilities needed to undertake independent research, graduates develop problem-solving and critical thinking skills that can be applied in future learning and work environments; completion of the programme allows students to become experts who are able to facilitate and contribute to the advancement of psychology.
- This is a required qualification for people who wish to go onto a career as an academic or independent researcher in psychology.

CAREER PROSPECTS



- Lecturer
- Research consultant
- Researcher
- Senior analyst
- Technical author
- Technical consultant

PROGRAMME STRUCTURE

Before starting their thesis, students complete two taught modules: Advanced Research Methods and Advanced Statistics. These modules help students develop the necessary skills to complete their research proposal.

In consultation with their research supervisors, students identify a research problem based on findings from existing research. They then design and conduct research on the identified problem or issue using a range of scientific techniques while following the required ethical standards. They therefore make a unique contribution to understanding the issue under consideration or develop new solutions to address the identified problem.

Core Modules

Advanced Research Methods

This subject covers topics associated with the design of research in Psychology. As well as developing an understanding of methodological issues, students learn skills such as those involved in reviewing published studies to inform the design of a specific project, and how to write a comprehensive research proposal for a quantitative and qualitative study. The objective of this course is to ensure that students understand the process of designing complex research projects, collecting data, and subsequently analysing data; APA format, concepts surrounding the types of research design; as well as ethical issues involved in research.

Class schedule for Advanced Research Methods

Full-time / Part-time:

- 2 hours per week;
Mondays – Fridays (8.00am to 6.00pm)

Advanced Statistics

The main aim of this course is to ensure that students are familiar with a variety of statistical techniques for use with different forms of data. Teaching objectives relate to understanding the formulae that are used for univariate and basic multivariate statistics. Student will also learn coding and interpretation of quantitative data to answer research questions, using statistical softwares.

Class schedule for Advanced Statistics

Full-time / Part-time:

- 3 hours per week;
Mondays – Fridays (8.00am to 6.00pm)

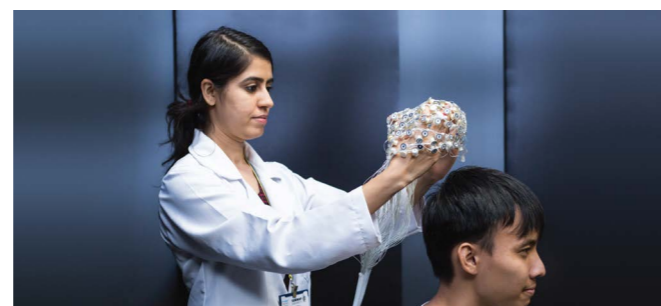
Thesis

Doctoral Thesis

The Doctor of Philosophy in Psychology programme aims to equip graduates with the skills to independently carry out work of international standard at the forefront of their field and to act as experts in the advancement of new knowledge.

CONTACT

For more information, please email
psypg@sunway.edu.my



PSYCHOLOGY RESEARCH AREAS



MSC IN PSYCHOLOGY & PHD IN PSYCHOLOGY

The Psychology Department has three research groups: Well-being & Community Psychology, Organisational & Work Psychology, and Cognitive & Experimental Psychology. This broad range of expertise means we can help you study the following areas:

- **Biological Psychology** – includes the areas of hormones and behaviour, brain function and genetics.
- **Cognitive Psychology** – includes the areas of attention, perception, learning and language.
- **Development Psychology** – includes the areas of lifespan development, and the social and cultural contexts of development.
- **Individual Differences** – includes the areas of personality, intelligence, motivation and mental health.
- **Social Psychology** – includes the areas of attribution, attitudes, group processes and intergroup relations and close relationships.
- **Applied Psychology** – includes the areas of clinical and health psychology, education or school psychology and industrial and organisational psychology.



PSYCHOLOGY RESEARCH FACILITIES



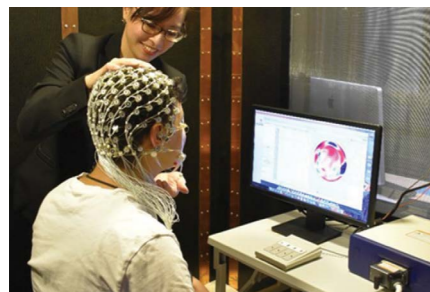
Sunway Psychology Laboratories

Sunway Psychology laboratories are located on Level 3 of the Sunway University New Building. There are 2 Psychology laboratories (Human Developmental Lab and Human Performance Lab) and 8 observation rooms.

Human Performance Lab

Location: Level 3

The Human Performance Lab houses two EEG systems (EGI EEG 128 channel, CGX Dry EEG headset – one 64 and two 32 channel), one Tobii TX300 Eye Tracker, and 6 computers equipped with MATLAB, Coglab, E-PRIME, and TOBII studio software that are used for various psychological research.

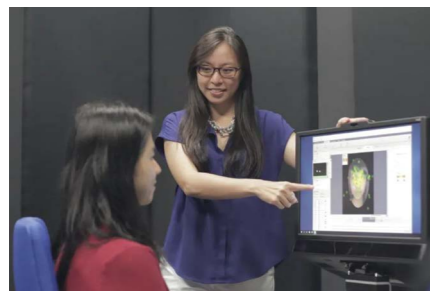


EGI EEG system



Dry EEG Headset

The electroencephalogram (EEG) is a wearable system to record the electrical activity of the brain. It is a non-invasive method that places electrodes along the scalp to detect brain activity.



Tobii TX300 Eyetracker



The eye tracker uses infrared light sensors that enable the machine to determine what the user is looking at in real-time. The technology converts eye movements into data that contains information such as gaze point, pupil position and size, and gaze vector.

Observation Rooms

Location: Level 3

There are 7 observation rooms and one control room that psychology students and staff use for counselling, interviews, and experiments. All observation rooms are equipped with CCTV cameras for recording purposes.



Human Developmental Lab and Baby Lab

Location: Level 3

The Human Developmental Lab also known as Sunway Baby Lab houses a looking time lab, observation playroom, and 6 computers equipped with Coglab, EPRIME, and SPSS software that are used for various psychological research.

At our Baby Lab, we are interested to investigate babies' cognitive development in the areas of speech and language development, emotions and face perception.



Looking Time Lab

The looking time lab uses habituation and preferential looking method to test whether infants can tell the difference between two stimuli (either sounds or images).

Using an infant's ability to pay attention to new and interesting things, infants' attention to the stimulus presented is recorded. Changes in attention are used as a tool to study the learning and thinking of young infants.



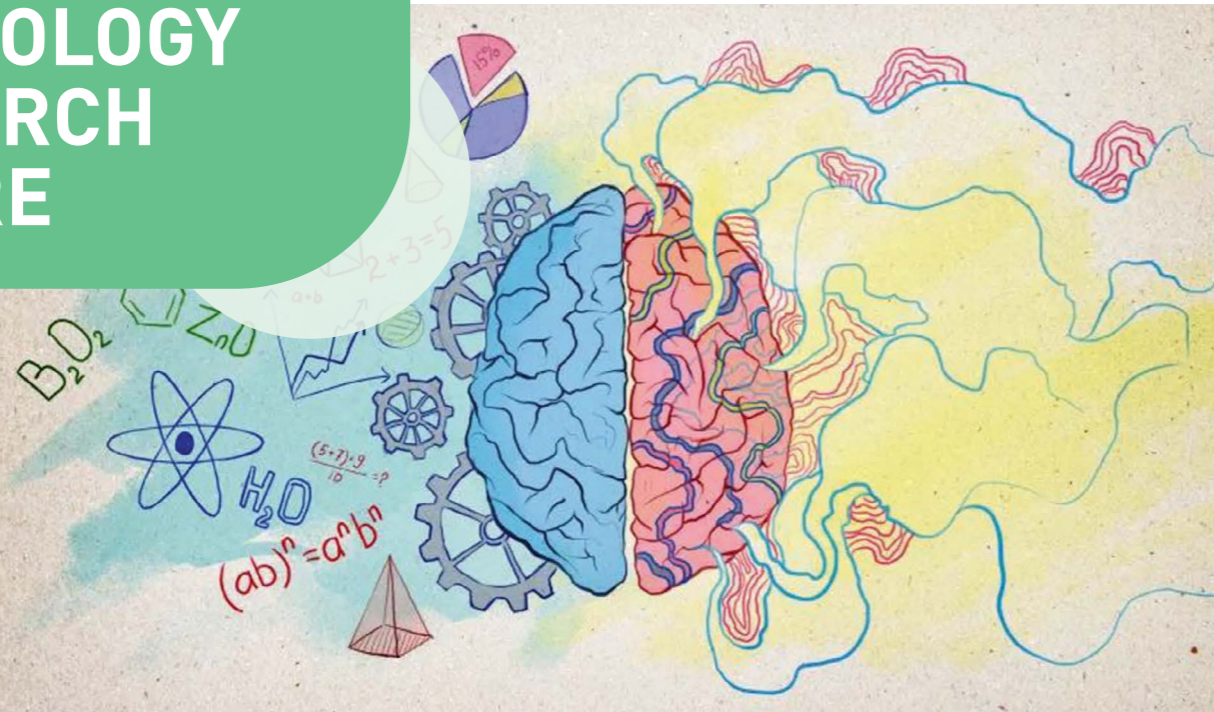
Observation Playroom

The observation play room is used for parent interviews, infant/child assessments, and behavior observation studies with young children to assess children's development and also for child psychological studies.

Computerised Experiments

Staff and students use the computers in both human performance and human developmental labs for various computerised experiments for their research projects.

PSYCHOLOGY RESEARCH CENTRE



Ageing Health and Well-Being Research Centre

This research centre aims to facilitate research on mental health from a neuropsychological perspective in South-East Asian communities with a focus on two main special interests:

- (1) To understand mental health from a multi-dimensional way (neural, cognitive, emotional, and physical health) amongst ageing citizens in South-East Asia.
- (2) To understand the determinants of mental health and well-being in low-income communities.

Programmes and collaborations:

- Neurobiology
- Oral Health
- Disease Diagnostics
- Food & Ageing

External Partners

PAWE (PUSAT AKTIVITI WARGA EMAS) Subang Jaya is one of the largest senior citizens clubs in the Klang Valley area, with which Sunway University has an active MOU.

The ongoing collaboration between our centre and PAWE-SJ has led to scientific findings about cultural differences in ageing and the effects of ageing on social cognition (Yong et al., 2022, in *The Journals of Gerontology: Series B*, 77(2), 332-340; and Phillips et al., 2021 in *Frontiers in Psychology*, 12, 631458.)



POSTGRADUATE DIPLOMA IN PRIMARY CARE FOR ELDERLY

JPT/BPP(U)(N/723/7/0140/FA10099)08/26



DURATION

Full-time - 1 year
Part-time - 2 years



INTAKES

January



TAUGHT PROGRAMME

- Aims to provide graduates with advanced knowledge and skills in Geriatric Medicine to deal with the increase in global population aging and increased complexity in the field of medicine.
- This programme will contribute to developing competent and skilled medical practitioners who have a caring and holistic approach in managing older patients.
- Graduates will contribute to the healthcare needs of older individuals as well as supporting the healthcare delivery system in providing better care for older individuals who have multiple medical illnesses.

VALIDATED BY:



In collaboration with the MSGM (Malaysian Society of Geriatric Medicine)

CAREER PROSPECTS



- Advisor for pharmaceuticals/nutritional products for elderly
- Analyst for primary care geriatrics
- Educators for allied healthcare and carers of elderly
- Lecturer
- Licensee for nursing home
- Primary care geriatricians
- Researcher in elderly care
- Track to specialist training

PROGRAMME STRUCTURE

The programme consists of 7 core modules followed by an elective module. Candidates are required to take all core modules and select one out of the three elective modules offered.

Core Modules

- Fundamentals of Geriatric Medicine
- General Medical Condition in Older Persons: Cardiovascular and Respiratory Diseases
- Communication, Counselling and Cognitive Spectrum Disorders, Legal and Ethical Aspects of Ageing
- General Medical Condition in Older Persons: Metabolic Renal and Musculoskeletal Diseases
- Preventive Health, Rehabilitation and Integrated Care of the Older Person
- Postural Instability and Falls
- General Medical Condition in Older Persons: Nervous, Endocrine, Gastroenterology and Genitourinary Diseases

Electives (Choose 1)

- Psychology and Ageing
- Nutrition and Oral Health in the Older Person
- Death and Dying in the Older Person

MODE OF DELIVERY

- Work-Based Learning
- Lectures
- Workshops
- Clinical Attachments
- Discussions
- Project
- Online & Blended Learning

Special Instructions

- The duration for each module is 6 weeks.
- Every week there is a live stream of 2 hours.
- Clinical attachment is 3 days every 6 weeks.
- Weekend Workshops and face-to-face learning for 2 days every 3 months.

CLASS SCHEDULE

Full-time Schedule:

- Online teaching once a week at 8.00pm (Malaysian time).
- Weekend workshops (Saturday & Sunday) in January, April, June and September from 9.00am to 5.00pm (Malaysian Time).

CONTACT

For more information, please email smls@sunway.edu.my / nurula@sunway.edu.my



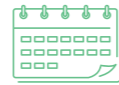
MSc IN LIFE SCIENCES

JPT/BPP[U][R/545/7/0034/FA4534]03/26



DURATION

Full-time - 2 years
Part-time - 3 years



INTAKES

January & July



RESEARCH PROGRAMME

- This programme accepts students for projects from all branches of biological and life sciences, from ecology and conservation to phylogenetics and molecular biology.
- Aims to give students a holistic education in the various aspects of biological research work, including field work, surveys, laboratory methods, theoretical statistics and bioinformatics.
- Graduates will be provided with advanced knowledge of, and training in, research methods that will enable graduates to apply their knowledge and skills as researchers, practitioners and administrators in many fields of life sciences and assist them in obtaining employment in areas such as education, health, and the bio-pharmaceutical industry.
- Students will be supervised by one of Sunway University's lecturers and professors in world-class research facilities, which also leverage on Sunway University's unique access to specialist medical (Sunway Medical) and biological (Sunway Wildlife Park) facilities that are part of the greater Sunway Group.

VALIDATED BY:



CAREER PROSPECTS



- Biochemist
- Conservation scientist
- Entrepreneur
- Healthcare manager
- Immunologist
- Laboratory manager
- Lecturer/Science educator
- Microbiologist
- Pharmacologist
- Physiologist
- Product specialist
- Quality control specialist
- Research scientist
- Sales manager
- Wildlife biologist

PROGRAMME STRUCTURE

The programme consists of one taught module – Research Methodology and one thesis. Candidates are required to complete the taught module before they proceed to the submission of thesis.

Core Modules

Research Methodology

Candidates will learn about current approaches to research design, data analysis and scientific writing. At the end of this module, candidates will be expected to formulate and submit a proposal for research in an area of their interest or specialisation. Candidates will also develop the necessary skills and knowledge to conduct research successfully.

Class schedule for Research Methodology

Full-time / Part-time:

- Classes are conducted once a week on a weekday (5.00pm to 7.00pm)*

*The schedule is subject to change if deemed necessary

Thesis

- Production of thesis is based on students' original research throughout the candidature. Students must submit a thesis and obtain a pass grade in the thesis examination in order to be awarded a Master's degree.

CONTACT

For more information, please email biosciencespg@sunway.edu.my



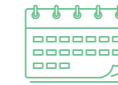
PhD IN BIOLOGY

JPT/BPP[U][R/421/8/0029/FA8022]12/27



DURATION

Full-time - 3 years
Part-time - 4 years



INTAKES

January & July



RESEARCH PROGRAMME

- The Doctor of Philosophy (PhD) in Biology programme aims to produce graduates equipped to become expert research scientists with the necessary advanced research and critical thinking skills to contribute nationally and globally to developments in biological sciences.
- Specifically, the programme equips graduates with strong foundation in science and advanced research skills that will enable graduates to critically think, apply and synthesise the concepts in the field of biology.
- It trains students to utilise scientific methods in solving problems while adhering to professional, moral and ethical principles in science. It also develops graduates to become effective communicators who are able to work independently as well as in multidisciplinary teams and display strong cognitive skills in advanced scientific research.
- It also produces graduates who are lifelong learners with effective leadership, entrepreneurial and information management skills.
- The school has an experienced and dedicated team of academicians and researchers to mentor candidates along research journey. Research monitoring and guidance will be conducted in an exclusive, one-to-one manner and supervisors will be on hand to support candidates throughout the duration of the programme.

CAREER PROSPECTS



- Academic journal manager
- Entrepreneur
- Medical Scientific Liaison
- Lecturer/Science educator
- Postdoctoral/Research scientist
- Quality control/Health and safety agencies
- R&D (Senior researcher)
- Scientific/Medical writer
- Scientific policy maker
- Senior laboratory manager

PROGRAMME STRUCTURE

The programme consists of one taught module (Research Methodology) and one thesis. Candidates are required to complete the taught module before they can proceed to thesis submission.

Core Modules

Research Methodology

This module equips postgraduate students with skills to design scientific research projects, analyse data using appropriate statistical analyses, and communicate research findings under the various biological research themes offered in the Department of Biological Sciences.

This course hones critical thinking and analytical skills of students to solve real world problems in science. As literacy in statistics is paramount in all fields of scientific inquiry, a statistical component is integrated into this course.

Thesis

- The PhD is awarded based on the successful completion of a thesis. The thesis should demonstrate critical thinking and mastery in the subject and chosen area of research.

CONTACT

For more information, please email biosciencespg@sunway.edu.my



MASTER IN MEDICAL SCIENCE

JPT/BPP[U](N/0910/7/0020FA12125)01/27



DURATION

Full-time - 2 years
Part-time - 3 years



INTAKES

January & July



RESEARCH PROGRAMME

- A research-based programme for students who graduate from a bachelor's degree in medical science or a related field.
- It aims to nurture students with holistic approaches through opportunities for national or international collaborations, specialised training courses (seminars, workshops, etc) and rich clinical experience.
- All research students have to take two modules, Clinical Research Methodology and Thesis.
- Clinical Research Methodology is a taught course and students are required to pass this module before the commencement of their thesis.
- Students will have a designated supervisor who is a member of academic staff with research expertise in the student's area of study.
- At the end of their work completion seminar, students are expected to submit their Master's thesis for examination and attend a defense for their thesis.

CAREER PROSPECTS



- Analyst
- Application specialist
- Educator
- Entrepreneur
- Laboratory manager
- Medical journalist
- Medical technologist
- Product specialist
- Researcher
- Sales Executive

PROGRAMME STRUCTURE

The programme consists of one taught module – Clinical Research Methodology and one thesis. Candidates are required to complete the taught module before they proceed to the submission of thesis.

Core Modules

Clinical Research Methodology

An advanced study in the management of a research project. The first part discusses the design of a scientific project in clinical and medical settings, including research questions, hypothesis, method selection, problem solving, and data collection and analysis. The second part focuses on scientific communication skills including proposal writing, oral presentation and publication.

Class schedule for Clinical Research Methodology Full-time / Part-time:

- Once a week on a weekday; (5.00pm to 7.00pm)

Thesis

- Production of thesis is based on students' original research throughout the candidature. Students must submit a thesis and obtain a pass grade in the thesis examination in order to be awarded a Master's degree.

CONTACT

For more information, please email medsciencepg@sunway.edu.my



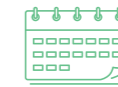
PhD IN MEDICAL SCIENCE

JPT/BPP[U](N/720/8/0107/PA11941)06/26



DURATION

Full-time - 3 years
Part-time - 4 years



INTAKES

January & July



RESEARCH PROGRAMME

- In this research-based programme, students are actively engaged in bidirectional translational medicine.
- This programme emphasises on the study that either brings the current issues from patients and medical care to the laboratory settings, or takes scientific discoveries made in the laboratory and transforms them into new treatments and approaches to improve health and medical care in the community.
- With supervisory guidance, students identify research questions within the scope of medical science and work independently on the research project.
- Students are required to complete one taught module – Clinical Research Methodology which is designed to prepare students to become competent in project planning and management, skilful in scientific communications, and ethically literate and socially responsible.
- To graduate, students must produce a thesis based on their original research findings and subsequently pass the thesis examination and viva voce.

CAREER PROSPECTS



- Chief medical technologist
- Health and safety officer
- Medical journalist
- Medical or pharmaceutical sales manager/Entrepreneur
- Post-doctoral Fellow
- Research Scientist
- Scientific policy maker

PROGRAMME STRUCTURE

The programme consists of one taught module – Clinical Research Methodology and one thesis. Candidates are required to complete the taught module before they proceed to the submission of thesis.

Core Modules

Clinical Research Methodology

An advanced study in the management of a research project. The first part discusses the design of a scientific project in clinical and medical settings, including research questions, hypothesis, method selection, problem solving, and data collection and analysis. The second part focuses on scientific communication skills including proposal writing, oral presentation and publication.

Class schedule for Clinical Research Methodology Full-time / Part-time:

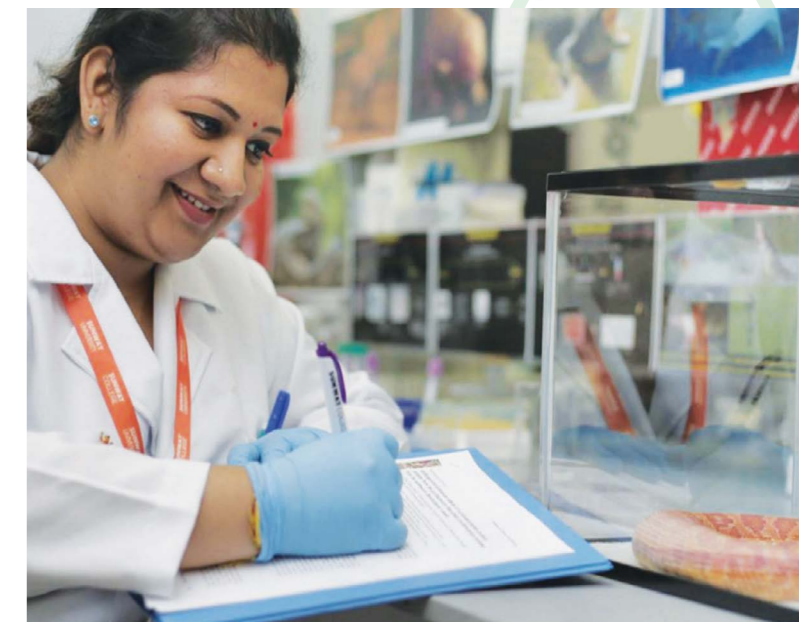
- Full-time: On one weekday: 5pm-7pm
- Part-time: On one weekday: 5pm-7pm

Thesis

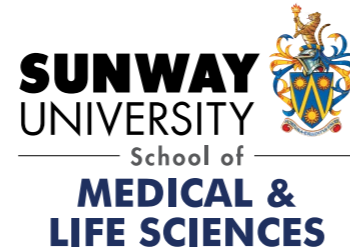
- Production of thesis is based on students' original research throughout the candidature. Students must submit a thesis and obtain a pass grade in the thesis examination in order to be awarded a PhD degree.

CONTACT

For more information, please email medsciencepg@sunway.edu.my



BIOLOGICAL RESEARCH AREAS



MSc IN LIFE SCIENCES & PHD IN BIOLOGY

- Antimicrobials
- Bioinformatics
- Cancer biology and therapeutics
- Cell biology
- Ecology and conservation
- Infectious diseases
- Microbiology
- Molecular biology and genetics
- Neurobiology
- Neurodegenerative diseases
- Virology



MASTER IN MEDICAL SCIENCE & PHD IN MEDICAL SCIENCE

Medical science studies the biological mechanism underlying the function of human body, with the emphasis on diagnosis, treatment and prevention of diseases. Research coverage of medical science is very broad and it ranges from the basic biology to oncology; chemistry to pharmacology; and physics to radiotherapy.

RESEARCH FOCUS AREAS

To be in line with the departmental mission and vision, we undertake research in 4 key focus areas.

- **Diseases**
Improve the knowledge of diseases and understand the underlying causes, the molecular pathways and their genes involved in the disease. This fundamental knowledge of disease can then be used to develop the diagnostic methods.
 - **Therapy & Cures**
Explore the use of modern technologies or natural resources to address the diseases and any other medical challenges. It can be a "proof of concept" study or a prototyping approach.
 - **Epidemiology**
Determine the pattern of distribution and effects of disease in community so that the future occurrence of disease can be prevented. Observational studies can be used to study distribution and analytical studies are used to study effects of disease.
 - **Sustainable Well-Being**
Promote human health and subsequently life satisfaction for all at all ages. We measure, analyse and manage well being in response to uncertainty and with respect to ageing, nutrition, climate change, physical, mental and social health.
- Ageing
 - Anatomy
 - Behavioral Health
 - Biochemistry
 - Biostatistics
 - Cancer
 - Cardiovascular Disease
 - Cell Biology
 - Counselling Psychology
 - Diabetes Mellitus
 - Genetics
 - Histology
 - Heart Failure
 - High Blood Pressure (Hypertension)
 - Immunology
 - Medical Imaging
 - Medical Physics
 - Metabolic Syndrome
 - Microbiology
 - Molecular Biology
 - Neuroscience
 - Nuclear Medicine
 - Nutrition Science
 - Pathology
 - Pharmacology
 - Pharmacy
 - Physiology
 - Primary Care Geriatrics
 - Radiation
 - Radiotherapy
 - Tissue Engineering
 - Toxicology
 - Virology

BIOLOGICAL RESEARCH FACILITIES



Sunway Biological Sciences Laboratories

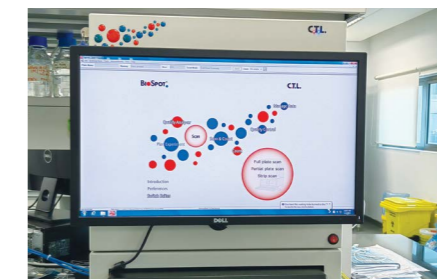
Sunway Biological Sciences Laboratories are located on Level 3 and Level 4 of the Sunway University Building. The laboratories are equipped with cutting-edge facilities for the best research experience, where innovation meets discovery in the theme of Medical & Life Sciences, Genetics & Cell Biology, and Biofunctional Molecule Discovery.

RESEARCH THEMES

Medical and Life Sciences



AKTA Pure Chromatography



CTL Immunospot S6 Versa



Flow cytometry



High resolution gel imaging



Microscopes fitted with digital camera



Microplate Reader

BIOLOGICAL RESEARCH FACILITIES (CONTINUED)

Genetics & Cell Biology



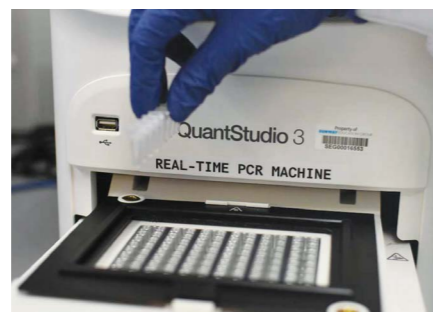
Dissecting Microscope



Histology Water Bath with Slide Warmer



Plant Growth Chamber



QuantStudio 3 Real-Time PCR System



Rotary Microtome

Biofunctional Molecule Discovery



Freeze Dryer



FT-IR Spectrometer



Gas Absorption Analyser



High-performance liquid chromatography



NMR Spectrometer



Polarising Microscope



Photoluminescence Spectrophotometer



Single Crystal X-ray Diffractometer



UV-Vis-NIR Spectrophotometer

BIOLOGICAL RESEARCH CENTRES



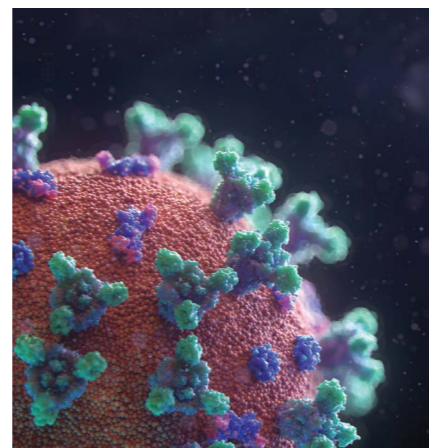
Sunway Microbiome Centre (SMC)

Sunway Microbiome Centre focuses primarily on the research of microbiota in health and disease. We collaborate nationally and internationally with researchers across multiple disciplines to advance microbiome research to unravel the complex microbiome-host-environment interactions.

The centre supports a dynamic research community and nurtures a new generation of scientists specializing in cutting-edge microbiome research.

Featured projects:

- Probiotic intervention for oral and gut health improvement for urban poor
- Live biotherapeutic products intervention for mental health amelioration for urban poor
- Novel anti-MRSA protein from novel *Streptomyces* strain
- Anti-biofilm activities from mangrove *Streptomyces*
- Respiratory microbiome dynamics during haze exposure
- Role of microbiome in colorectal cancer



ASEAN Microbiome Nutrition Centre (AMNC)

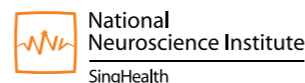


ASEAN Microbiome Nutrition Centre (AMNC) is a new research engine in SE Asia dedicated to prolonging human healthspan by identifying microbial mechanisms regulating biological ageing. It is a bidirectional partnership between Singapore and Malaysia engaging the National Neuroscience Institute of Singapore and Sunway University.

AMNC is an international virtual network Centre engaging several Universities and Institutes worldwide.

Programmes and collaborations:

- Neurobiology
- Oral Health
- Disease Diagnostics
- Food & Ageing



Sunway Biofunctional Molecules Discovery Centre (SBMDC)

The Sunway Biofunctional Molecules Discovery Centre (SBMDC) focuses on translation research and application-driven discoveries by leveraging the state-of-the-art facilities at the Research Centre. We aim to promote interdisciplinary research by constructively aligning the research focus to that of the School of Medical and Life Sciences as well as other research priorities of the University, primarily on the sustainable development related to health, environmental, agri- and aquaculture sectors.

Featured Health-related Projects

- Investigation of the mechanism of action of some bioactive metal-based molecules against dengue virus envelope protein.
- Structural and biological evaluation of coinage metal(I) complexes and their co-crystals.
- Assessing the biological properties of coordination compounds with ligands derived from amino acids.
- Exploring the Biological Evaluation of Dithiolate Metal Complexes.

Featured Environmental-related Projects

- Tailoring supramolecular isomerism for efficient carbon dioxide adsorption.
- Addressing climate issues with metal-organic frameworks featuring ligands derived from amino acids.

Featured Agri- and Aquaculture-related Projects

- The use of natural ingredients for the pre- and post-harvesting of plant crops.
- Identification of natural products for mitigation of diseases associated to aquatic life.



SUNWAY
UNIVERSITY



A CLASS ABOVE

MALAYSIA'S

1 *Again*

**IN GRADUATE
EMPLOYABILITY**

2022 & 2023

Sunway University is honoured to be recognised as Malaysia's No. 1 in Graduate Employability* for the 2nd consecutive year and would like to thank all the local & international brands who selected graduates from Sunway University as the nation's best for 2022 and once again in 2023.

We are immensely proud of our graduates who have gone on to excel in their chosen fields and made such a huge positive impact to the performances of Malaysia's and some of the world's biggest companies.

Sunway University Graduates, Truly A CLASS ABOVE.

*Talentbank GE Index 2023



sunwayuniversity.edu.my



SUNWAY UNIVERSITY 200401015434 (653937-U) DU025(B) A member of Sunway Education Group No.5, Jalan Universiti, Bandar Sunway, 47500 Selangor Darul Ehsan.