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## 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 #1 private university in ASEAN region by AppliedHE ASEAN Private University Ranking 2025 and recognised as the #1 Malaysia's highest-ranked private non-government linked university in the Times Higher Education World University Rankings 2026. The University is also #410 in QS World University Ranking 2026.

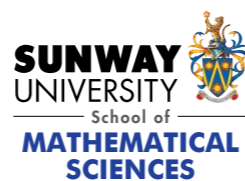
Sunway University has been awarded #1 in Graduate Employability among all universities in Malaysia, for the fourth consecutive year, by Talentbank Group through the National Graduate Employability Index.

The University has achieved a significant milestone by making its debut in the Academic Ranking of World Universities (ARWU) for 2024. This achievement places Sunway University among the top five universities in Malaysia, alongside the top four research-intensive public universities, and establishes it as the only private higher education institution in the country to be included in this prestigious global ranking.

Collaborating with world class partners - Lancaster University, Arizona State 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.



The Only Private University in Malaysia to be included in the Academic Ranking of World Universities (ARWU) 2024



# INTRODUCTION



The School of Mathematical Sciences was established in **2017**, and it offers both undergraduate and postgraduate programmes, in the fields of actuarial science, statistics, and the broader field of mathematical sciences.

To date, the School of Mathematical Sciences has produced more than **1,200 graduates**, who are now working in various industries, which include insurance, reinsurance, banking, finance and many more. The school ensures that the programmes offered are closely aligned with the industry needs and the programmes provide a distinctive Sunway experience for students.

All these great efforts have culminated in the recognition of the highest 6 stars rating for Employability and Best in Class by Talentbank for the Bachelor of Science (Hons) in Actuarial Studies and Bachelor of Science (Honours) in Statistical Data Modelling.

The Actuarial Studies programme prepares students for the professional exams leading to qualified actuary status, making it the ideal pathway for prospective students wishing to enter the actuarial profession. The Statistical Data Modelling programme equips students with the skills to analyse complex data using advanced mathematical and statistical methods and AI-computational tools. This supports data-driven decision-making and generates impactful insights, which are in high demand for AI-related machine learning roles across almost every industry.

**#CampusWithAConscience** is an underlying principle that embraces everything you will experience during your time at Sunway Education Group. This is the fundamental spirit at the heart of Sunway Campus Life as we educate, encourage, and engage all aspects of our diverse community to adopt a lifestyle and lifestyle habits that truly reflect a society determined to create a better living environment for this generation and generations to come.

This # campaign aims to encourage conscientious efforts of the Sunway campus community in areas such as...

1. The goals of the UN SDGs;
2. Acceptance and tolerance towards each community member of the campus and the wider national and global community;
3. Inclusiveness of all and unity with all;
4. Well-being, both physical and mental;
5. Doing things right for society.

Join our journey as we seek to create a better environment for all, starting with you.



Actuarial Practice Course (APC) conducted by in-house actuary, Ms Sophia Ch'ng, Fellow of the Institute & Faculty of Actuaries (FIA).



A Symposium 2024 actuarial conference organised by Sunway Actuarial & Financial Excellence (SAFE) student society.



Convocation ceremony with School of Mathematical Sciences graduates.

**#MostHappeningCampus** is a vibrant concept to promote a positive sense of inclusiveness whilst also generating a genuine feeling of community spirit. This # campaign has been successful in developing positive energy, togetherness and working as a team towards a common goal. It encompasses all the energy of Sunway life and supports student activities that happen on our campus.

May it be iconic events hosted on campus, unique student activities, academic presentations, or even visits by global personalities that inspire us, **#MostHappeningCampus** expresses our feeling of positive energy and encourages all our community to work together and develop personal attributes and qualities that will support their academic achievements at Sunway.

The most happening part of our campus is YOU.

# SUNWAY CHANGEMAKERS ADVANTAGE INVESTED IN YOU

Our bold, future-focused initiative transforming how we teach, engage, and support student success to make education holistically enriching for each student - an investment in your future. We aim to develop graduates who are:

- Collaborative and solution-oriented
- Competent in their discipline
- Digitally fluent and innovation-driven
- Ethically grounded with value-based leadership
- Globally competitive and culturally agile



## YOUR PERSONAL GROWTH

### Personalised pathways for every ambition

#### Success X-Factor Coaching

- Year 1 :** Academic Success Coach for academic growth and goal setting guidance.
- Year 2 :** Industry Success Coach for career mentorship.
- Year 3 :** Executive Success Coach with executive leaders for leadership growth.



**Inaugural Executive SuccessCoach Session** featuring **Tan Sri Sir Jeffrey Cheah**, Founder & Chairman of Sunway Group



**Appointment of 100 Industry Success Coaches** from Sunway Group & its subsidiaries



**First Coaching Session** between industry coaches and Sunway University students

### Career Xcellerator & FleX Pathways

Design your own learning journey, dive deep into specialisations or explore interdisciplinary flexibility to curate your own purpose-driven future. Students can choose to deepen expertise in a focused career track or explore across disciplines, such as Business + AI or Healthcare + Innovation while aligning with their evolving interests and strengths.

### Xplorer Hub

Choose from hundreds of curated electives from across disciplines for breadth of learning and interdisciplinary knowledge. Featuring high-demand courses in areas such as digital innovation, data analytics and exploration of emerging fields to enhance career competitiveness within a flexible learning ecosystem.

For more information regarding Xplorer Hub, please refer to <https://sunwayuniversity.edu.my/courses/xplorer-hub>

or scan



## YOUR CAREER DEVELOPMENT & GLOBAL READINESS

### CareerX Internships

Flexible pathways tailored to each students' career goals - choose from industry placements, freelance projects, or entrepreneurship opportunities which will enhance employability and graduate quality.

### Global Mobility & Cultural Fluency

Opportunities for international internships, exchanges, and research projects build cross-cultural competence and global networks. Global placements and exchange opportunities to operate confidently across borders for international career success.

### Dual Degrees & Global Partners

With many courses offering dual degrees through our partnership with Lancaster University, UK and Arizona State University, USA, students benefit from studying locally and graduating globally.

### 8,000+ Employers

Students have access to over 8,000 local and international companies through Sunway's Career Portal, with robust opportunities for global placements, internships and employment.

### Triple International Rankings

Sunway is one of the only private universities in ASEAN with triple global rankings in:

- QS World University Rankings;
- Times Higher Education (THE) World University Rankings, and;
- Academic Ranking of World Universities (ARWU)



## YOUR FUTURE RELEVANCE & LIFELONG LEARNING

Stay ahead and make a difference with the robust support and preparation.

### AI for All: AI literacy embedded across all disciplines.

### Immersive AR-VR powered courses and labs

Forward-looking co-learning spaces for experiential learning opportunities.

### Sunway XCeED Platform

Sunway alumni will have exclusive access to Sunway's lifelong learning portal with customised, stackable and flexible education (micro-credentials, short courses) to empower our alumni to upskill, reskill, and stay future-ready at every stage of life.



### Industry-empowered learning, real-world curriculum

Our programmes are co-designed with industry partners and enriched by live case studies, expert talks, and tools used by professionals. Integrating feedback from the industry on what are future skills and talents needed to prepare students for the future.

Strategic partnerships to co-develop curriculum, assessments, and real-world training. Appointment of practice professors and industry leaders to collaborate in teaching and learning.



Unlocking the Basics of AI



Interview Mastery: Ace Your Dream Job



## INNOVATION AND SUSTAINABILITY OF OUR COMMUNITY

### SUSTAIN Strategy (Sustainability & values-based education)

An interconnected approach to sustainability education, connecting 3 signature courses

- Entrepreneurial Mindset & Skills
- Integrity and Sustainable Development, and
- Community Service for Planetary Health

Be equipped to tackle real-world Sustainable Development Goals (SDG) challenges through ethical, interdisciplinary, and community-focused learning.

For more information, please refer to <https://sunwayuniversity.edu.my/explore/teaching-and-learning/sustain-now-better-tomorrow> or scan



## THE ENTREPRENEURIAL MINDSET AND SKILLS (EMS) WITH PARADOX OF THERON (POT)

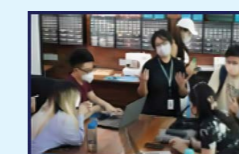
### The EMS with POT module combines



**Flipped Classroom**  
Instructional content like lectures, readings, and multimedia resources are provided to students through an eLearning platform.



**Paradox Of Theron (POT)**  
Online game-based learning enhancing entrepreneurship understanding through simulated entrepreneurial experiences.



**Face-2-Face Sessions**  
Interactive lectures and reflective tutorials consolidate experiences with theoretical concepts to deepen understanding of key lessons.



### Paradox of Theron (POT)

- is an **online game-based learning** platform
- is **integrated into EMS**
- provides **immersive and experiential learning opportunities**
- mirrors entrepreneurial challenges to students



# DISTINCTIVE SUNWAY EXPERIENCE

## ACTUARIAL PRACTICE COURSE (APC)

This 3-month additional professional course - Actuarial Practice Course (APC) is offered exclusively for actuarial students. It is conducted by the school's in-house actuary, Ms Sophia Ch'ng, Fellow of the Institute and Faculty of Actuaries (FIA), providing students with hands-on assignments to better prepare them to be employment-ready.

The APC syllabus is closely aligned with the industry's needs and covers a wide range of relevant topics including:

- Pricing and reserving for life
- General and Takaful business
- Reinsurance concepts
- Participating products features
- Capital management
- Risk-based capital (RBC) guidelines from Bank Negara Malaysia
- IFRS 17 guidelines



## ACTUARIAL ANALYTICS COURSE (AAC)

AAC is a hands-on course conducted by our in-house actuary, Mr. Nicholas Cheong, the Fellow of the IFoA. It is designed to bridge the gap between theory and practice and equips our students with the skills needed to meet industry demands and kick-start their actuarial careers seamlessly.

Through real-world case studies, students use Excel to perform data checks, analyse data patterns, build flexible models that adapt to parameter changes, calculate key statistics and automate and optimize tasks using Macro VBA.



## EMPOWERING FUTURE LEADERS

The School of Mathematical Sciences (SMS) develops students' leadership and professional skills through two student societies: SAFE (Sunway Actuarial & Financial Excellence) and STAMP (Sunway Statistical Modelling Professionals).

Founded in 2013, SAFE has organised leadership camps, alumni sharing sessions, industry visits, and the ASymposium Actuarial Conference, supported by IFoA and the insurance industry.

STAMP actively connects students with industry experts through knowledge-sharing events, enhancing their professional exposure.



## ALUMNI HOMECOMING

The School of Mathematical Sciences (SMS) Alumni Homecoming event brought together alumni, industrial partners, students, and lecturers in a meaningful engagement session.

The event featured the presentation of Outstanding Alumni Awards and Top Employers Award, as well as a forum sharing session by alumni.



## LEARNING BEYOND THE CLASSROOM



UIMACT Hackathon (Champion)



Eastspring Business Challenge (2<sup>nd</sup> runner up)



MASA Hackathon (1<sup>st</sup> runner up)



Field trip to AIA

### PeakRe Sponsored CAS ARECA Case Competition 2024

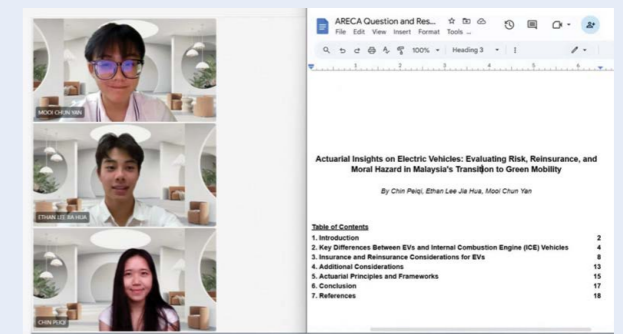


Sunway University Actuarial Science Team crowned Champions of the CAS ARECA Case Competition 2024! The winning team: Mooi Chun Yan (Alex), Ethan Lee Jia Hua, and Chin Peiqi, secured the top prize of USD 1,800 and one free CAS exam registration.

Competing against over 40 teams from 21 universities across Malaysia, Singapore, Australia, Hong Kong, Indonesia, China, and more, they impressed the judges with a comprehensive 22-page report analysing the impact of electric vehicles (EVs) on the insurance industry. Their work included pricing models, Monte Carlo simulations, and frequency-severity analysis for both EVs and conventional vehicles.

This remarkable achievement reflects the team's dedication and underscores Sunway University's commitment to nurturing future actuarial professionals equipped to tackle complex industry challenges.

Scan the QR code to read the post by Casualty Society Actuary (CAS):



# STELLAR ACHIEVEMENTS

We are proud to have a growing number of graduates who have become qualified actuaries from internationally recognised actuarial professional bodies. Additionally, some of our graduates have obtained credentials from CFA and CERA. Below, we are showcasing some of their achievements:

## Fellow of the IFoA (FIA)



**Nicholas Cheong Yeow Hoe**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Generali Malaysia  
**Position :** Specialist, IFRS17 Financial Planning & Analysis



**Tan Jun Jie**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Munich Re, Singapore  
**Position :** Regional Actuary



**Voon Jian Yeang**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** FWD Insurance  
**Position :** Analyst - Group Actuarial IFRS17

## Fellow of the SOA (FSA)



**Wai Chong Yin**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** SunLife Assurance Berhad  
**Position :** Senior Manager, Actuarial Valuation & Financial Reporting



**Marcel Chang Jie Qin**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Milliman, Taiwan  
**Position :** Consulting Actuary



**Foo Hui Sze**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Zurich Insurance  
**Position :** Pricing Assistant Manager

## Fellow of the CAS (FCAS)



**Pui Yik Shen**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Berkshire Hathaway Specialty Insurance  
**Position :** Pricing Actuary, Asia & Middle East



**Tan Khai Swen**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Great Eastern General Insurance (Malaysia)  
**Position :** Assistant Vice President - Actuarial



**Desmond Chong**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Income Insurance Limited, Singapore  
**Position :** Actuarial Manager, GI IFRS17

## ACCELERATED IFoA PATHWAY

We offer a supportive learning environment to help our students pass additional IFoA exams during university, shortening the time to qualify as an actuary. Some achievements are featured below:



**Nicholas Cheong Yeow Hoe**  
Class of 2022  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 7 IFoA papers



**Chew Jian Xun**  
Class of 2023  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 7 IFoA papers



**Matthew Philippe Liu Man Hin**  
Class of 2023  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 8 IFoA papers



**Brandon Lee Han**  
Class of 2025  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 9 IFoA papers



**Foo Zi Yee**  
Class of 2025  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 8 IFoA papers



**Erin Ling Li Lin**  
Class of 2025  
Bachelor of Science (Hons) in Actuarial Studies

Graduated with 7 IFoA papers

## Chartered Financial Analyst (CFA)



**Edmund Ng**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** MUFG  
**Position :** Treasury Sales Dealer, Global Markets

## Chartered Enterprise Risk Analyst (CERA)



**Marcel Chang Jie Qin**  
Bachelor of Science (Hons) in Actuarial Studies

**Company :** Milliman, Taiwan  
**Position :** Consulting Actuary

## STELLAR ACHIEVEMENTS (cont.)

### WINNERS OF SIR EDWARD JOHNSTON PRIZE 2021 TO 2024



Institute and Faculty of Actuaries

The prize was established by the Institute and Faculty of Actuaries (IFoA) in 2013 and is awarded to the top performing graduating students on the actuarial programmes at several universities which are linked to the IFoA.



Chin Siew Mei



Matthew Philippe Liu Man Hin



Nicholas Cheong Yeow Hoe



Brandon Lee Han



Ong Huai Zheng



Tan Jun Jie



Tan Min Li



Tey Wen Xian

## RECOGNITION

We have been recognised as the "Best in Class" and "Champion" for **Actuarial Science** and **Analytics** by Talentbank.

Sunway University is being classified by Talentbank as the employers' choice of university. On top of that, our programme demonstrates an impressive job placement rate, as evidenced by the 6-star employability rating awarded by Talentbank.



**TALENTBANK**<sup>®</sup>

<https://www.talentbankgroup.com>

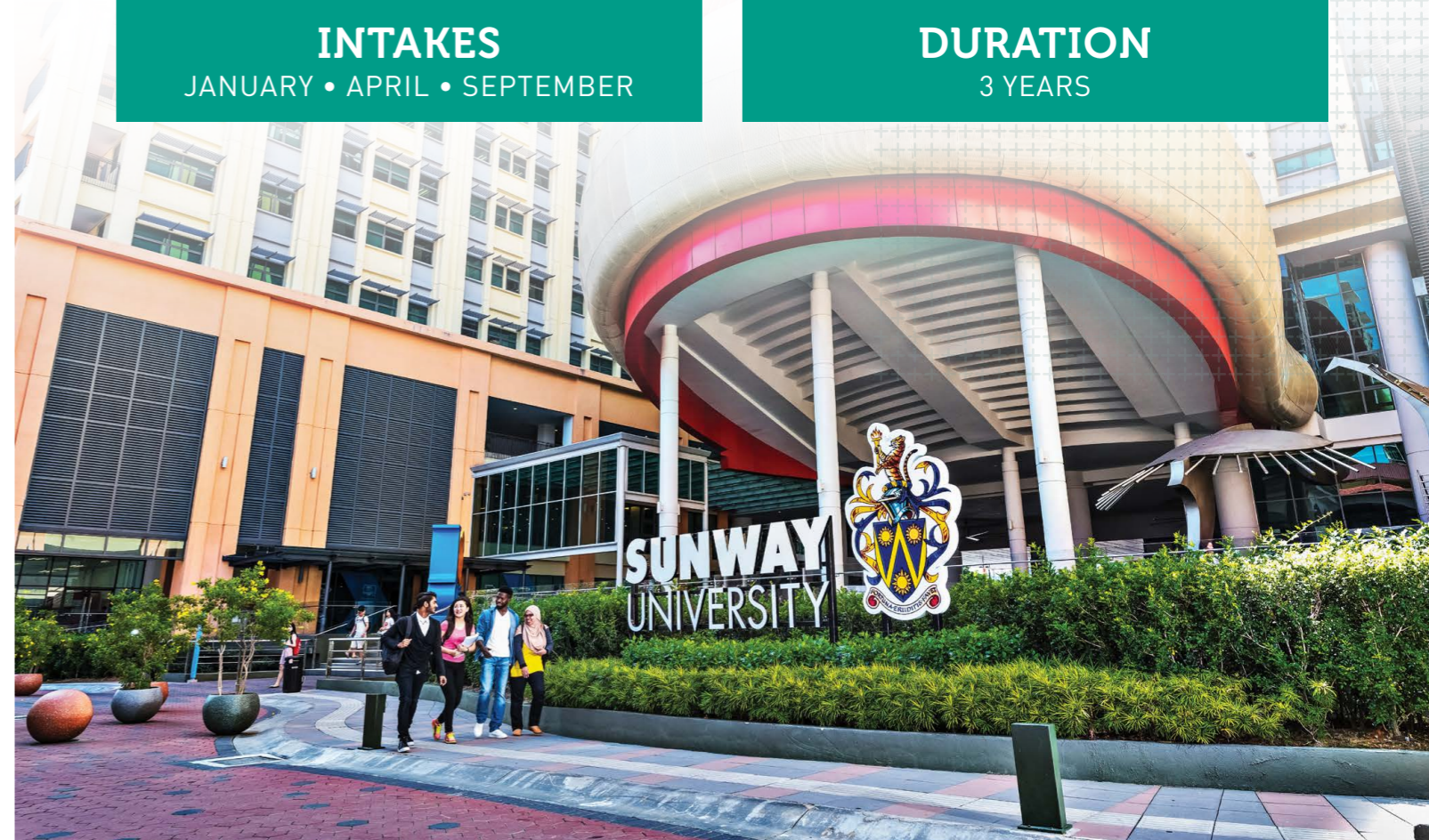
# ENTRY REQUIREMENTS

PROGRAMME	ENTRY REQUIREMENTS	ENGLISH REQUIREMENTS	SPECIFIC REQUIREMENTS
<b>Bachelor of Science (Hons) in Actuarial Studies</b>	STPM Average C+ or CGPA 2.33 (Minimum 2 principals)	<b>IELTS or equivalent 6.0</b> <b>MUET Band 4</b> <b>SPM English B</b> <b>UEC English B6</b> <b>O-Level English Credit</b> <b>Sunway Intensive English Programme (IEP) Pass Level 4 with minimum 65%</b> <b>ESL/English Satisfactory level in Pre-University programmes, where the medium of instruction is English</b>	Credit in Mathematics at SPM or equivalent
	<b>A-Level</b> Minimum 12 points (Minimum of Grade D from 2 subjects) <b>Australian Matriculation</b> ATAR 60 <b>Canadian International Matriculation Programme</b> 60% <b>MUFY</b> 60% <b>Sunway Foundation in Arts</b> CGPA 2.00 <b>Sunway Foundation in Science &amp; Technology</b> CGPA 2.00		
<b>Bachelor of Science (Honours) in Statistical Data Modelling</b>	<b>UEC</b> Maximum 26 points from 5 subjects (all Grade Bs) <b>IB Diploma</b> Completed with minimum 25 points (excluding bonus points) <b>Sunway Diploma*</b> CGPA 2.00 or equivalent <small>*Students may obtain advanced standing if credit transfer requirements are met.</small> <b>Other Qualifications</b> Any other qualifications will be considered on a case-to-case basis		

Note: For A-Level points calculation  
 A = 10 points B = 8 points C = 6 points D = 4 points E = 2 points

**INTAKES**  
 JANUARY • APRIL • SEPTEMBER

**DURATION**  
 3 YEARS



# BACHELOR OF SCIENCE (HONS) IN ACTUARIAL STUDIES

## PROGRAMME INTRODUCTION

**Bachelor of Science (Hons) in Actuarial Studies** draws together a variety of subjects that involve applying mathematical and statistical techniques in the financial services industry.

Designed to pave the way for students who want to enter a career as an actuary, they will be prepared for professional exams that will lead to a recognised actuary status or specialist in financial risk and insurance industries.

The Society of Actuaries (SOA) USA, Institute and Faculty of Actuaries (IFoA) UK, Casualty Actuarial Society (CAS) USA, The Institute of Actuaries of Australia (IAA), and Canadian Institute of Actuaries (CIA) conduct actuarial professional exams leading to professional designations such as Fellow of the Society of Actuaries (FSA), Fellow of the Institute of Actuaries (FIA), Chartered Enterprise Risk Analyst (CERA), Fellow of the Casualty Actuarial Society (FCAS), Fellow of the Institute of Actuaries of Australia (FIAA) and Fellow of the Canadian Institute of Actuaries (FCIA).

ACCREDITED BY:  Institute and Faculty of Actuaries

RECOGNISED BY:  SOCIETY OF ACTUARIES

SILVER PARTNER OF:  Casualty Actuarial Society

## CAREER PROSPECTS

- Actuarial reserving analyst
- Catastrophe risk analyst
- Chief actuary in life/ health/ property and casualty insurance
- Chief executive officer
- Chief financial officer
- Financial risk manager

### Institute and Faculty of Actuaries (IFoA) UK

Our programme has been fully accredited by the Institute and Faculty of Actuaries (IFoA), UK. Students in our programme who attain an overall average of 65% and above are eligible for block exemptions from the IFoA professional exams for CS1, CS2, CM1, CM2, CB1, and CB2. Students who did not attain an overall average of 65% shall be recommended for subject exemptions instead.

### Society of Actuaries (SOA) USA

This programme provides exemptions for 3 papers from the Society of Actuaries (SOA) USA through the Validation by Educational Experience (VEE) pathway. Students have to score at least 55% (B- or above) in the designated subjects offered in the programme.

### Casualty Actuarial Society (CAS) USA

Our programme has been recognised by the Casualty Actuarial Society (CAS) as a Silver Level partner. We offer students comprehensive preparation for the CAS exams and a career in general insurance. Our students have the opportunity to earn up to five exam credits and we also equip them to take additional exams such as Exam 5 and MAS-II.

## PROGRAMME STRUCTURE - Subjects

### Year 1

- Advanced Calculus
- AI Foundation and Applications
- Calculus
- Fundamentals of Accounting ●
- Introduction to Probability
- Linear Algebra and Applications
- Principles of Business Finance ●●●
- Principles of Economics ●●●
- Programming Principles
- Theory of Interest ●●

### Year 2

- Derivative Securities I
- Derivative Securities II ●●
- Essentials of Employability
- Introduction to Statistics ●●●
- Life Contingencies I
- Life Contingencies II ●●
- Mathematical Methods
- Risk Theory
- Free Elective 1

### Year 3

- Free Elective 2
- Internship
- Ratemaking and Loss Reserving for General Insurance
- Regression Analysis ●●
- Simulation and Credibility Theory
- Stochastic Processes ●●



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## ELECTIVES WITH SPECIALISATION

- **Advanced Actuarial**
- **Finance & Risk Management**
- **Actuarial AI**

### List of electives (Choose 3):

- Advanced Actuarial Statistics ●●
- Advanced Actuarial Mathematics and Finance ●●
- Survival Models
- Time Series and Forecasting
- Multivariate Analysis
- Machine Learning Techniques for Data Mining
- Design of Experiments
- Categorical Data Analysis
- Research Project
- Discrete Mathematics

## MOHE COMPULSORY GENERAL STUDIES SUBJECTS

### For Local students:

- Appreciation of Ethics and Civilisation
- Bahasa Kebangsaan A (Applicable to students who did not sit for SPM or did not obtain a Credit in SPM Bahasa Melayu)
- Entrepreneurial Mindset & Skills
- Community Service for Planetary Health
- Integrity and Anti-Corruption
- Philosophy and Current Issues

### For International students:

- Appreciation of Ethics and Civilisation
- Community Service for Planetary Health
- Entrepreneurial Mindset & Skills
- Integrity and Anti-Corruption
- Malay Language for Communication 2

### Subjects indicated lead to:

- SOA VEE exemptions
- IFoA exemptions
- CAS exam credits

# THE SUNWAY ADVANTAGE

## LSE SUMMER SCHOOL (3 WEEKS)



Obtain additional credits from the world-renowned London School of Economics.

Courses taught during the Summer School are based on regular LSE undergraduate courses, and taught to the same standards by leading LSE faculty. Lecturers are experts in their chosen fields and committed to teaching with academic rigour and contemporary relevance.



## IN-HOUSE ACTUARY

Together with academic staff, our in-house actuaries ensure that our programme syllabus is in close alignment with the industry needs. Our students are highly employable as they are at the forefront in meeting the rising needs for actuarial expertise globally.



### Nicholas Yeo

Founder of Actomate, with clients across the ASEAN region. Lectures on Actuarial Statistics and Mathematics subjects.



### Sophia Ch'ng




Past President of Actuarial Society of Malaysia. About 20 years of experience in the insurance industry, ranging from life insurance, general insurance, takaful business to shared services.



### Nicholas Cheong

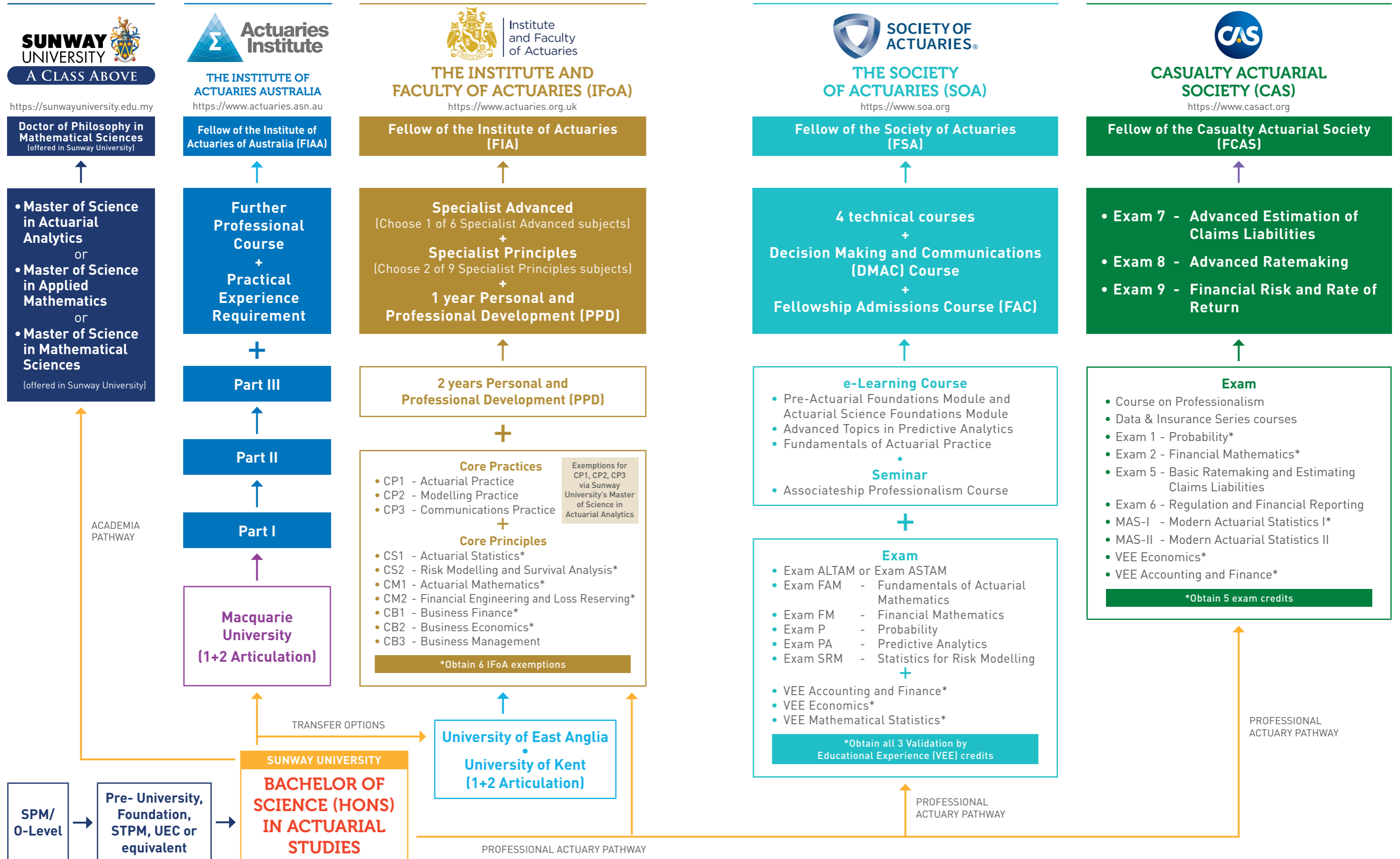
Graduate of the BSc (Hons) in Actuarial Studies at Sunway University, Class of 2022. An instructor for the Actuarial Analytics course.

## PARTNER UNIVERSITIES

UNIVERSITY	TRANSFER OPTION: 1+2 ARTICULATION
	Students must achieve a minimum overall average of 65% in the 1 <sup>st</sup> year of study*
	Students must achieve a minimum overall average of 65% in the 1 <sup>st</sup> year of study* and Pre-U results stated below or equivalent: <ul style="list-style-type: none"> <li>• A Level/STPM – ABB (A in Mathematics)</li> <li>• UEC – 4A</li> <li>• CIMP – 80%</li> <li>• ATAR 88</li> <li>• MUFY 65%</li> </ul> English: <ul style="list-style-type: none"> <li>• SPM 1119 English – C</li> <li>• IELTS – 6.5</li> </ul>
	Students must achieve a minimum overall average of 80% in the 1 <sup>st</sup> year of study* and Pre-U results stated below or equivalent: <ul style="list-style-type: none"> <li>• A Level – AAA</li> <li>• ATAR 96 or equivalent</li> </ul>

\*Please consult with programme leader on the subjects.

# PATHWAYS for Bachelor of Science (Hons) in Actuarial Studies



# BACHELOR OF SCIENCE (HONOURS) IN STATISTICAL DATA MODELLING

## PROGRAMME INTRODUCTION

**Bachelor of Science (Honours) in Statistical Data Modelling** is a 3-year degree programme designed to equip students with the skills to analyse complex data through advanced mathematical and statistical methods and AI-computational tools. This supports data-driven decision-making and generate impactful insights.

The AI and Machine Learning track equips students with the skills to leverage AI and advanced data science techniques for analysing large, complex datasets. It enables them to design and implement machine learning algorithms, build predictive models, and handle data preprocessing and visualisation to uncover valuation insights across various industries using cutting-edge AI tools.

The Econometrics track furnishes students with advanced statistical and mathematical methodologies for the analysis of economic data, utilising techniques such as regression analysis and time series modelling. This empowers them to interpret economic trends and tackle complex real-world challenges across diverse sectors, including finance, policy analysis, market research, healthcare, energy, government, agriculture, transportation, and telecommunication.

Graduates are equipped for high-demand careers as Data Scientists, AI Analysts, and Econometricians.

## CAREER PROSPECTS

- Audit analytics
- Biostatistician
- Business/Corporate data analyst
- Chief statistician
- Cryptographer
- Data analytics expert
- Data scientist
- Fraud investigator
- Healthcare statistician
- Investment/Risk data analyst
- Operations research analyst
- Optimisation & Forecasting engineer
- Quantitative analyst
- Researcher
- SAS programmer
- Sports performance analyst
- Statistical project consultant
- Statistical quality control engineer

This programme is the first in ASEAN to be fully aligned with the prestigious SAS Certified Data Scientist credential, giving students a competitive edge with industry-relevant skills and preparation for this globally recognized certification.

- Exam 1 : Base Programming using SAS 9.4
- Exam 2 : Forecasting and Optimization using SAS Viya
- Exam 3 : Machine Learning using SAS Viya
- Exam 4 : Natural Language Processing and Computer Vision using SAS Viya
- Exam 5: Advanced Programming using SAS 9.4



To produce industry-ready graduates and enhance their employability, we offer professional exam preparatory courses and workshops in R, SAS, Excel, and Python.

## PROGRAMME STRUCTURE - Subjects

### Year 1

- Advanced Calculus
- AI Foundation and Applications
- Calculus
- Data Modelling Essentials
- Introduction to Operations Research
- Introduction to Probability
- Principles of Economics
- Linear Algebra and Applications
- Principles of Business Finance
- Programming Principles

### Year 2

- AI-Driven Forecasting and Modelling
- Computer-Intensive Statistical Methods
- Design of Experiments
- Essentials of Employability
- Free Elective 1
- Introductory Econometrics
- Mathematical Statistics I
- Quality Control and Survey Sampling
- Statistical Data Technologies and Fluency

### Year 3

- Applied Econometrics
- Internship
- Free Elective 2
- Machine Learning Techniques for Data Mining
- Multivariate Analysis
- Time Series and Forecasting

## ELECTIVE WITH SPECIALISATION

- AI and Machine Learning
- Econometrics

## List of Electives (Choose 3)

- Advanced Data Analytics
- Applied Nonparametric Statistics
- Applied Time Series Econometrics
- Discrete Mathematics
- Research Project
- Risk Theory
- Stochastic Processes
- Simulations and Credibility Theory
- Survival Models

## MOHE COMPULSORY GENERAL STUDIES SUBJECTS

### For Local students:

- Appreciation of Ethics and Civilisation
- Bahasa Kebangsaan A (Applicable to students who did not sit for SPM or did not obtain a Credit in SPM Bahasa Melayu)
- Entrepreneurial Mindset and Skills
- Community Service for Planetary Health
- Integrity and Anti-Corruption
- Philosophy and Current Issues

### For International students:

- Appreciation of Ethics and Civilisation
- Community Service for Planetary Health
- Entrepreneurial Mindset & Skills
- Integrity and Anti-Corruption
- Malay Language for Communication 2



(R/0542/6/0007)(10/28)(MQA/FA9749)

# THE SUNWAY ADVANTAGE

## LSE SUMMER SCHOOL (3 WEEKS)



Obtain additional credits from the world-renowned London School of Economics.

Courses taught during the Summer School are based on regular LSE undergraduate courses, and taught to the same standards by leading LSE faculty. Lecturers are experts in their chosen fields and committed to teaching with academic rigour and contemporary relevance.



## PROFESSIONAL SPECIALISATIONS WITH AI COMPUTATIONAL TOOLS

In this programme, students will be awarded two SAS specialisation digital badges, which is

- (i) Advanced Techniques for Data Science and Predictive Analytics, and
- (ii) Data Science.



The programme covers key programming languages such as Python, R, SAS and SQL. Additionally, students can have the opportunity to explore tools like Excel, Power BI and Tableau.



## PROFESSIONAL PATHWAY

Our programme prepares students for the globally recognised

- (i) SAS Certified Data Scientist Certification;
- (ii) Certified Analytics Professional (CAP).

## PARTNER UNIVERSITIES

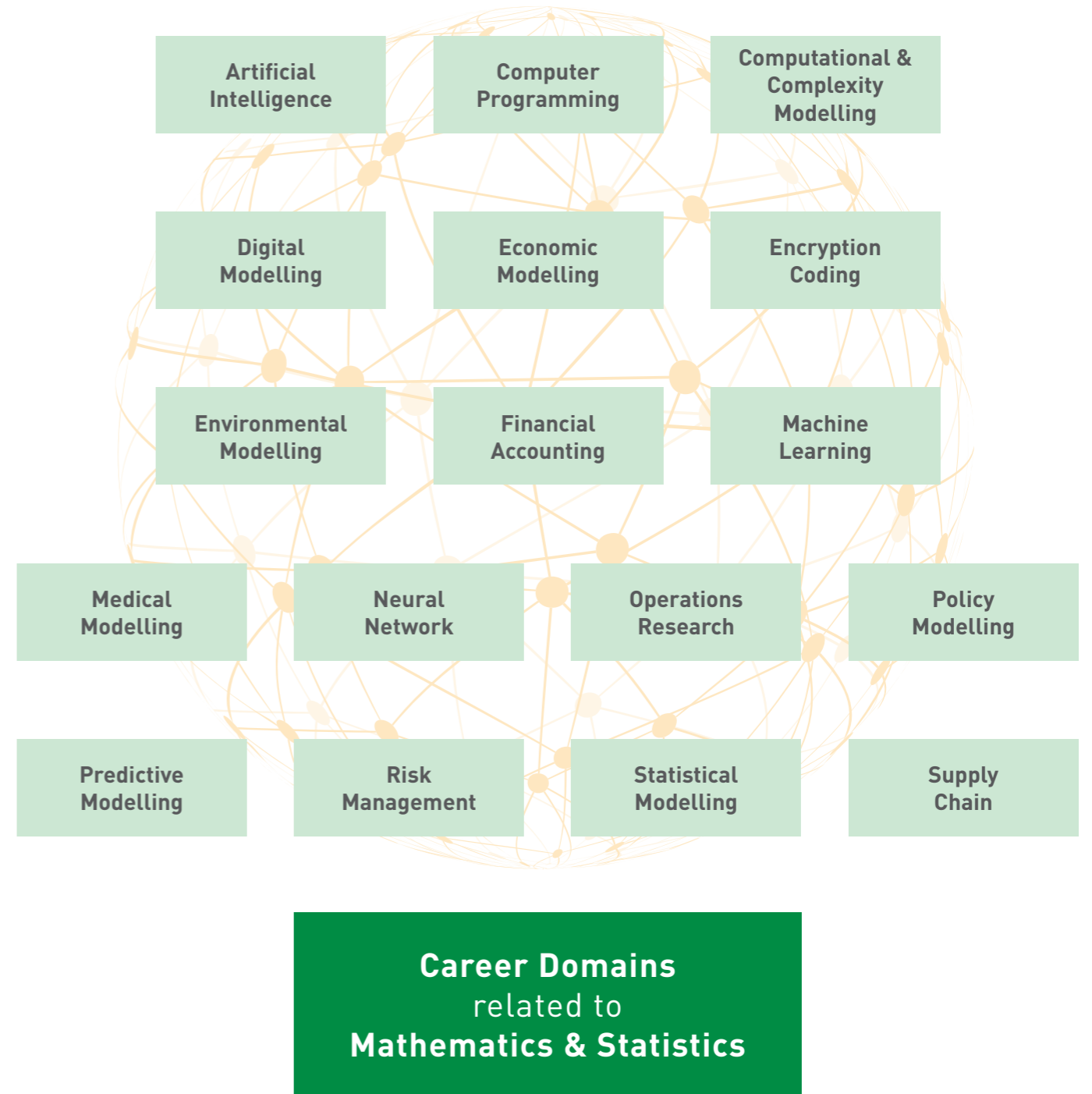
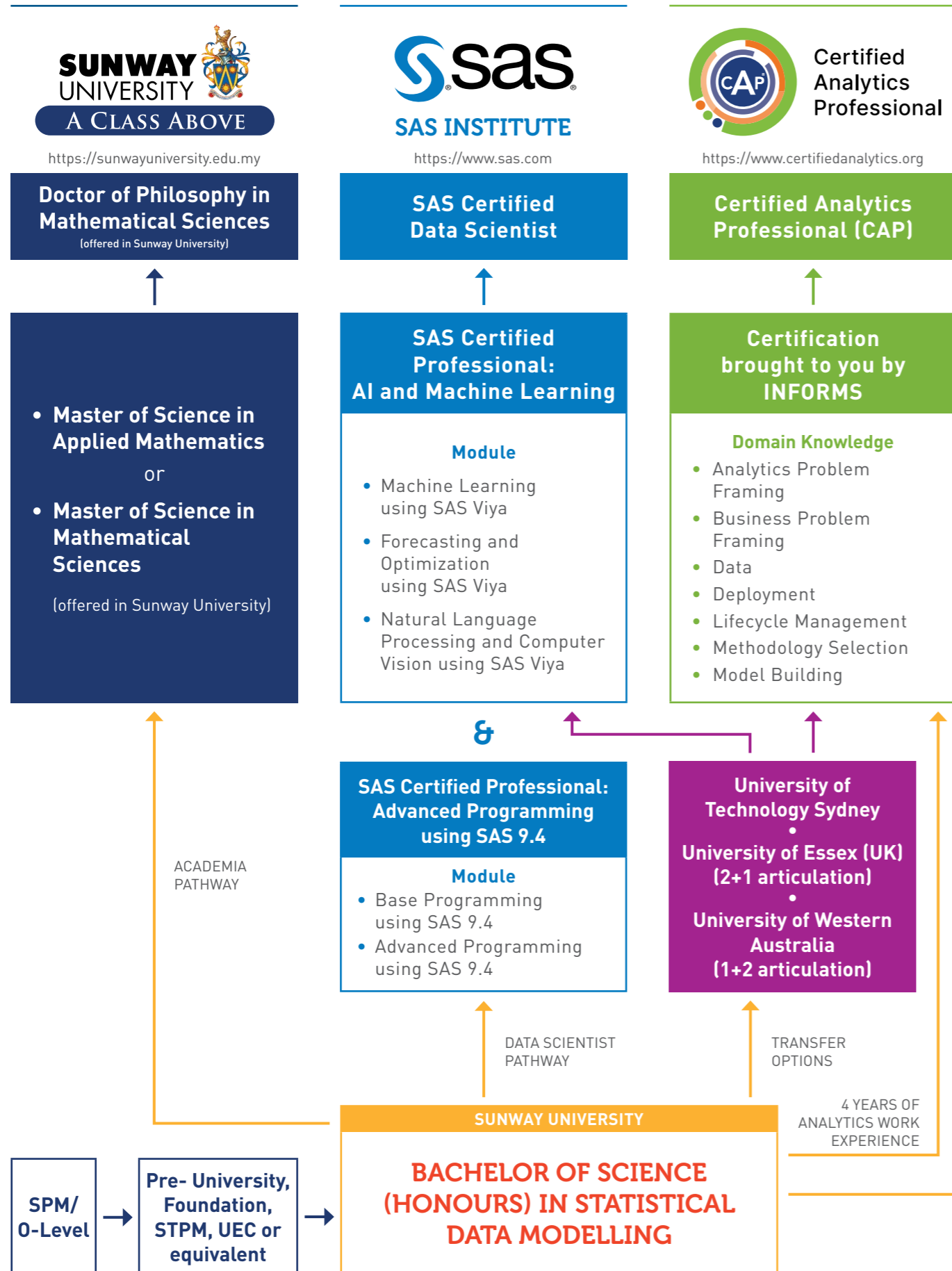
UNIVERSITY	TRANSFER OPTION: 2+1 ARTICULATION
UNIVERSITY OF TECHNOLOGY SYDNEY <b>Entering</b> <ul style="list-style-type: none"> <li>■ Bachelor of Mathematical Sciences (Statistics and Data Science major)</li> <li>■ Bachelor of Mathematical Sciences (Pure and Applied Mathematics major)</li> <li>■ Bachelor of Science (Mathematics major)</li> </ul>	Students must have successfully completed 2 years in Sunway University before transferring.
University of Essex <b>Entering</b> <ul style="list-style-type: none"> <li>■ BSc Data Science and Analytics</li> </ul>	Students must achieve a minimum CGPA of 3.0 and above English: • Credit in SPM 1119 • IELTS – 6.5
UNIVERSITY	TRANSFER OPTION: 1+2 ARTICULATION
THE UNIVERSITY OF WESTERN AUSTRALIA <b>Entering</b> <ul style="list-style-type: none"> <li>■ Bachelor of Science (Mathematics major)</li> <li>■ Bachelor of Science (Data Science major)</li> <li>■ Bachelor of Science (Statistics major)</li> <li>■ Bachelor of Science (Mathematics and Data Science major)</li> <li>■ Bachelor of Science (Mathematics and Statistics major)</li> <li>■ Bachelor of Science (Data Science and Statistics major)</li> <li>■ Bachelor of Mathematics (Mathematics)</li> </ul>	Students must have completed first year with GPA at least 2.7/4.0

## ESSEX GLOBAL PARTNERS' SCHOLARSHIP

Undergraduate scholarship for Sunway University students  
 • £1,500 maximum for entry into the third year of study

Please refer to the University of Essex's website: [www.essex.ac.uk](http://www.essex.ac.uk) for more information.

# PATHWAYS for Bachelor of Science (Honours) in Statistical Data Modelling



References:  
<https://career.guru99.com/jobs-for-math-majors>  
<https://www.indeed.com/career-advice/finding-a-job/math-jobs-and-salaries>  
<https://ai-jobs.net/list/mathematics-related-jobs/>

# WHERE ARE OUR GRADUATES NOW?



**Ahmed Thanzeem**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Dhivehi Insurance Company Private Limited (Maldives)  
**Position** : Manager, Technical



**Chong Zhao Cheng**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : Ipsos Malaysia  
**Position** : Data Scientist



**Joelyn Quek**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : GAMUDA Berhad  
**Position** : ESG Research & Data Analyst



**Lim You Sheng**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : FWD Technology and Innovation Malaysia (FWD TIM)  
**Position** : Senior Actuarial Analyst



**Arissa Elena Amir Izwan**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : Generali Malaysia  
**Position** : Portfolio Management & Analytics



**Eric Teo**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Bank Negara Malaysia  
**Position** : Insurance Supervisor



**Kan Wai Han**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Ipsos Sdn Bhd  
**Position** : Senior Project Executive



**Lim Ze Min**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : OKX  
**Position** : Fraud and Risk Specialist



**Arshad Malik**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Lembaga Tabung Haji  
**Position** : Assistant Manager, Performance & Quantitative Analysis



**Evan Suhadhi**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : EY Indonesia  
**Position** : Financial Service Risk Management Senior Consultant



**Kaylee Rusike**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Insurance & Pensions Commission ZW, Zimbabwe  
**Position** : Principal Actuarial Analyst



**Loh Wan Chin**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Allianz Malaysia  
**Position** : Senior Pricing System Developer



**Bryan Ng**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : Public Bank Berhad  
**Position** : Assistant Manager



**Foo Hui Shee**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : HSBC Hong Kong  
**Position** : Assistant Actuarial Manager



**Khoos Shi Teng**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : OKX  
**Position** : Data Analyst



**Mohummud Riffai Purdasy**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Deloitte  
**Position** : Corporate Finance Manager



**Chiam Li Li**  
Bachelor of Science (Honours)  
in Industrial Statistics  
*Now known as Bachelor of Science (Hons)  
in Statistical Data Modelling*

**Company** : Rainforest  
**Position** : Data Ops Analyst



**Gabriel Ng**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Cover Genius (UK)  
**Position** : Associate



**Lim Keh How**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Great Eastern, Singapore  
**Position** : Actuarial Internal Auditor



**Ng Qian Yun**  
Bachelor of Science (Hons)  
in Actuarial Studies

**Company** : Shopee Malaysia  
**Position** : Senior Associate, Business Intelligence (Data Analytics)

## WHERE ARE OUR GRADUATES NOW? (cont.)



**Nik Mohamad Khalid**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : FWD Technology and  
 Innovation Malaysia  
 (FWD TIM)  
**Position** : Senior Analyst,  
 Group Actuarial



**Tan Min Li**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Actomate  
**Position** : Associate Actuary



**Tan Lynn Wei**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : AFFIN Group  
**Position** : Assistant Manager,  
 Group Operational  
 Risk Management



**Nur' Aliah Syamimi  
 Muhammad Szali**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Accenture  
**Position** : Underwriting New Associate



**Sritesh Naidu Punniya  
 Seelan**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Actuarial Partners Consulting  
**Position** : Actuarial Analyst



**Tanushia Paransothy**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : RAC WA, Australia  
**Position** : Senior Risk &  
 Compliance Advisor



**Supriya A/P Sivabalan**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Bank Negara Malaysia  
**Position** : Associate Analyst



**Tay Choon Ming**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : KPMG Singapore  
**Position** : Senior Associate,  
 Actuarial  
 (General Insurance)



**Tan Jia Jia**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : KPMG China  
**Position** : Manager



**Thepan Ganesh**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Firstplanit  
**Position** : Data & Sustainability  
 Analyst



**Tan Ji Yan**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : AIA Malaysia  
**Position** : Product & Pricing  
 Analyst



**Zulaikha Asyiqin binti  
 Abdul Samad**  
 Bachelor of Science (Hons)  
 in Actuarial Studies  
**Company** : Prudential BSN Takaful  
 Berhad  
**Position** : Assistant Manager

# BRINGING YOU FURTHER

## PARTNER COMPANIES FOR INTERNSHIPS AND GRADUATE EMPLOYMENT DESTINATIONS

### Insurance Companies

- AIA Berhad
- ALG Malaysia Insurance Berhad
- Allianz General Insurance Company (Malaysia) Berhad
- Allianz Life Insurance Company (Malaysia) Berhad
- AmGeneral Insurance Berhad
- AmMetLife Insurance Berhad
- Berjaya Sampo Insurance Berhad
- Chubb Insurance Malaysia Berhad
- Etiqa General Insurance Berhad
- FWD Insurance Berhad
- FWD Takaful Berhad
- Generali Insurance Malaysia Berhad
- Great Eastern General Insurance (Malaysia) Berhad
- Great Eastern Life Assurance (Malaysia) Berhad
- Hannover Rueck SE Malaysian Branch
- Hong Leong Assurance Berhad
- Lonpac Insurance Berhad
- Malaysian Life Reinsurance Group Berhad
- Manulife Malaysia
- MCIS Insurance Berhad
- MSIG Insurance (Malaysia) Berhad
- Prudential Assurance Malaysia Berhad
- Prudential BSN Takaful Berhad
- QBE Insurance (Malaysia) Berhad
- Reinsurance Group of America
- Sun Life Malaysia Assurance Berhad

- Takaful Ikhlas Family Berhad
- Tokio Marine Life Insurance Malaysia Berhad
- Tune Insurance Malaysia Berhad
- Zurich Life Insurance Malaysia Berhad

### Audit Firms

- Deloitte
- Ernst & Young
- KPMG
- PricewaterhouseCoopers (PwC)

### Banks

- AmBank (M) Berhad
- Bank Negara Malaysia
- CIMB Bank Berhad
- Hong Leong Bank Berhad
- Kenanga Investment Bank Berhad
- Malayan Banking Berhad
- OCBC Bank (Malaysia) Berhad
- Public Bank Berhad

### Consulting Firms

- Accenture
- Actuarial Partners Consulting Sdn Bhd

- Actomate
- Baker Hughes Services Malaysia Sdn Bhd
- E-Outsource Asia Sdn Bhd
- Ipsos Malaysia
- JPWall Consulting Partners
- Milliman
- NMG Financial Services Consulting

### Product & Services

- ELMLAB Sdn Bhd
- PETRONAS
- Shopee Malaysia
- Unilever Malaysia Holding Sdn Bhd



**Sunway University**  
 Tops Talentbank's Graduate  
 Employability Ranking for  
 Fourth Consecutive Year  
 2022, 2023, 2024 & 2025



### Opportunities in Sunway Group

The Sunway Group is one of Southeast Asia's leading conglomerates with 13 business divisions across more than 50 locations worldwide and a 16,000-strong employee base. The 13 business divisions are:

- Building Materials
- Construction
- Digital
- Education
- Healthcare
- Hospitality
- Investment & Financial Services
- Leisure
- Malls
- Quarry
- Real Estate
- REIT & Other Real Estate Funds
- Trading & Manufacturing



**SUNWAY**  
UNIVERSITY



A CLASS ABOVE

MALAYSIA'S

#1

IN GRADUATE  
EMPLOYABILITY  
2025

For the 4<sup>th</sup> consecutive year, Sunway University has been recognised  
as Malaysia's No. 1 in Graduate Employability.\*

We are immensely proud of the accomplishments of our graduates who have gone on to make  
a huge positive impact to the success of major Malaysian companies and  
indeed some of the world's leading organisations.

SUNWAY UNIVERSITY GRADUATES

*Truly A Class Above*

\*Talentbank GE Index 2025

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