INTRODUCTION

The School of Mathematical Sciences in Sunway University is recognised as a respectable institution in the country that produces high quality graduates.

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 Industrial Statistics programme equips students with the fundamental, advanced and specialised mathematical and statistical knowledge, which is key to producing a dynamic, in-demand, and skilled workforce for almost every industry.

ACCREDITED BY:

The School of Mathematical Sciences in Sunway University is one of the top 150 universities in the world under 50 years old.

SUNWAY UNIVERSITY is owned and governed by the Jeffrey Cheah Foundation. The University is ranked among the top 750 universities in the world according to the QS World University Rankings 2021 and ranks #172 in the QS Asia Rankings 2021. It has a 5-Star institutional rating in the QS Stars University Rankings in its latest assessment, demonstrating excellence in the individual categories of “Teaching”, “Employability”, “Facilities”, “Inclusiveness” and “Social Responsibility”.

The University also enjoys the 5-Star “Excellent” rating in the National SETARA quality assessment, a rating that has been consistently maintained since 2009. All these accolades bear testament to Sunway’s resolve in ensuring high quality teaching, research and service excellence.

PATHWAY TO:

BSc (Hons) in Actuarial Studies is 1st Actuarial Science programme in Malaysia to obtain maximum six IFoA exemptions.

CONVOCATION CEREMONY AT SUNWAY RESORT HOTEL & SPA.

HOMECOMING PARTY FOR STUDENTS TO MEET AND SHARE THEIR ACHIEVEMENTS TOGETHER.

ACTUARIAL PRACTICE COURSE (APC) CONDUCTED BY IN-HOUSE ACTUARY, MRS SOPHIA CH’NG, FELLOW OF THE INSTITUTE & FACULTY OF ACTUARIES (UK).

ASSEMBLY ACTUARIAL CONFERENCE ORGANISED BY SUNWAY ACTUARIAL & FINANCIAL EXCELLENCE (SAFE) STUDENT SOCIETY.

CONTACT:

SUNWAY UNIVERSITY

SUNWAY UNIVERSITY UNIVERSITIES

No. 5, Jalan Universiti, Bandar Sunway, 47500 Selangor Darul Ehsan, Malaysia.
university.sunway.edu.my
info@sunway.edu.my
+6 (03) 7491 8622

SUNWAY UNIVERSITY

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DISTINCTIVE SUNWAY EXPERIENCE

STUDENT ACHIEVEMENTS

OUR ACADEMIC LEADERS

With 20 academic staff, of which 14 have doctoral degrees, the School of Mathematical Sciences’ interest and expertise are in the areas of Mathematical Modelling, Applied Probability and Statistics, Algebra & Combinatorics, and Risk Management. The School is also supported by an excellent team of administrative staff.

DEAN
- Professor Ho Chee Kit

ASSOCIATE DEAN
- Professor Teo Kok Lay

ASSOCIATE PROFESSOR
- Associate Professor Dr Leow Soo Kar
- Associate Professor Dr Yeong Wai Chung

SENIOR LECTURERS
- Dr Cheong Huey Tyng
- Dr Jane Teh Kimm Lii
- Dr Joshua Tan Juat Huan
- Dr Khoo Wooi Chen
- Dr Ng Swee Hoon
- Dr Tan Yean Nee

LECTURERS
- Dr Ang Siew Ling
- Dr Chan Che Yan Ting
- Dr Goh Chee Peng
- Dr Lai Kee Huong
- Dr Lee Chui Meng
- Dr Phoon Wee Liang
- Dr Sim Kai An
- Dr Tan Yean Nee
- Dr Tan Yean Nee

ENTRY REQUIREMENTS

PROGRAMME ENTRY REQUIREMENTS

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>ENTRY REQUIREMENTS</th>
<th>ENGLISH REQUIREMENTS</th>
<th>SPECIFIC REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc (Hons) in Actuarial Studies</td>
<td>STPM Average C+ or CGPA 2.33 (Minimum 2 principals)</td>
<td>IELTS or equivalent 6.0</td>
<td>Credit in Mathematics at SPM or equivalent</td>
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<tr>
<td></td>
<td>A-Level Minimum 12 points (Minimum Grade D in at least 2 subjects)</td>
<td>MUET Band 4</td>
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<tr>
<td></td>
<td>Australian Matriculation ATAR 60</td>
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<td></td>
<td>Canadian International Matriculation Programme 60%</td>
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<td></td>
<td>MUFY 60%</td>
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<tr>
<td></td>
<td>Sunway Foundation in Arts CGPA 2.00</td>
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<tr>
<td></td>
<td>Sunway Foundation in Science &amp; Technology CGPA 2.00</td>
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<tr>
<td></td>
<td>UEC Maximum 26 points from 5 subjects (all Grade Bs)</td>
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<tr>
<td></td>
<td>IB Diploma Completed with minimum 25 points (excluding bonus points)</td>
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<tr>
<td></td>
<td>Sunway Diploma* CAVG 50% or CGPA 2.00</td>
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<tr>
<td></td>
<td>UEC English B3 or B+</td>
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<td></td>
<td>O-Level English Credit</td>
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<tr>
<td></td>
<td>Sunway Intensive English Programme (IEP) Pass Level 4 with minimum 60%</td>
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<tr>
<td></td>
<td>ESL/English Satisfactory level in Pre-University programmes, where the medium of instruction is English</td>
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<tr>
<td></td>
<td>Any other qualifications will be considered on a case-to-case basis</td>
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</tr>
</tbody>
</table>

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

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

INTAKES

• JANUARY • APRIL • AUGUST

DURATION

3 YEARS

Case Study Challenge – Life Insurance category

Champion
(1st standing from the left) Tan Chee Aun, Ong Wen lyn, Chuah Ee Wen, Chia Wee Yng and Chee Jia Min.

Runner-up
(2nd runner-up)

1st standing from the left: Tan Tzy Yng, Leong Kean Hung, Tan Yaw Shuenn and Sia Jia En (1st standing from the left).
BSC (HONS) IN ACTUARIAL STUDIES

PROGRAMME INTRODUCTION

BSc (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 professional designations such as Fellow of the Society of Actuaries (SOA) USA, Institute and Faculty of Actuaries (IFoA) UK, Casualty Actuarial Society (CAS) USA and Canadian Institute of Actuaries (CICA). The 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 60% (or equivalent grade) in the designated subjects offered in the programme.

PROGRAMME STRUCTURE - SUBJECTS

 Electives (choose 3)

Year 1

- Advanced Calculus
- Calculus
- English for Business
- Introduction to Probability
- Introductory Economics
- Linear Algebra & Applications
- Principles of Business Finance
- Principles of Financial Accounting
- Programming Principles
- Theory of Interest

Year 2

- Communication Skills
- Derivative Securities I
- Derivative Securities II
- Financial Management
- Introduction to Statistics
- Life Contingencies I
- Life Contingencies II
- Mathematical Methods
- Risk Theory

Year 3

- Community Project
- Internship
- Life Insurance & Takaful
- Risk-based Capital Modelling for Non-life Insurers
- Simulation & Credibility Theory
- Time Series & Forecasting

ADDITIONAL MORE COMPULSORY GENERAL STUDIES SUBJECTS

For Local students:

- Islamic & Asian Civilisations
- Ethnic Relations
- Bahasa Kebangsaan A (applicable to Melayu)

For International students:

- Malay Language for Communication 2
- Malaysian Studies 3

SOA Examination Preparatory Workshop

Get a head start with our preparatory courses for SOA’s preliminary exams & beyond.

PARTNER UNIVERSITIES

UNIVERSITY

TEACHER OPTION: 1+2

Students must achieve a minimum overall average of 65% in the 1st year of study*, and Pre-U results stated below or equivalent:

- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
- CIMP - 80%
- ATAR 88
- MUYF 65%

English:

- IELTS 6.5

+AUD 37,500 per year

Students must achieve a minimum overall average of 80% in the 1st year of study* and Pre-U results stated below or equivalent:

- A Level - AAA
- ATAR 96 or equivalent

English:

- IELTS 7.0

+GBP 17,000 per year

Students must achieve a minimum overall average of 65% in the 1st year of study* and Pre-U results stated below or equivalent:

- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
- CIMP - 80%
- ATAR 88
- MUYF 65%

English:

- IELTS 6.5

+GBP 15,600 per year

Students must achieve a minimum overall average of 65% in the 1st year of study* and Pre-U results stated below or equivalent:

- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
- CIMP - 80%
- ATAR 88
- MUYF 65%

English:

- IELTS 6.5

+GBP 15,700 per year

*Please consult with programme leader on the subjects.

THE SUNWAY ADVANTAGE

LSE SUMMER SCHOOL (3 WEEKS)

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

ACTUARIAL PRACTICE COURSE

This 3-month course is designed to prepare actuarial students of Sunway University to be employment-ready, and incorporates the feedback from the industry practitioners in the course design. This course covers several topics with practical assignments, including long-term reserve, long-term pricing and IFRS 17.

IN-HOUSE ACTUARY

Together with academic staff, our in-house actuary ensures 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.

DISTINCTIVE SUNWAY EXPERIENCE

• Chief executive officer
• Chief actuary in casualty insurance/health/life/property
• Chief executive officer
• Chief financial officer
• Financial risk manager

CAREER PROSPECTS

MATHEMATICAL SCIENCES

Academics

Sophia Ch’ng
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 Yeo
Founder of Nicholas Actuarial Solutions, with clients across the ASEAN region. Lectures on Actuarial Statistics and Mathematics subjects.

JPT/DB/PPU/2014/A2/M/08/12/36/FA1/31/07/22

MATHEMATICAL SCIENCES

SUNWAY UNIVERSITY

DISTINCTIVE SUNWAY EXPERIENCE

Institute and Faculty of Actuaries (IFoA) UK

Our programme is accredited by the Institute and Faculty of Actuaries (IFoA), UK. Students in our programme are eligible for exemptions from the IFoA professional exams for papers CS1, CS2, CM1, CM2, CB1 and CB2.

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 60% (or equivalent grade) in the designated subjects offered in the programme.

Electives (choose 3)

- Advanced Actuarial Mathematics and Finance
- Advanced Actuarial Statistics
- Design of Experiments
- Discrete Mathematics
- Financial Risk Management
- Multivariate Analysis
- Research Project
- Risk-Based Capital Modelling for Non-life Insurers
- Stochastic Processes
- Time Series & Forecasting

ADDITIONAL MORE COMPULSORY GENERAL STUDIES SUBJECTS

For Local students:

- Islamic & Asian Civilisations
- Ethnic Relations
- Bahasa Kebangsaan A (applicable to Melayu)

For International students:

- Malay Language for Communication 2
- Malaysian Studies 3

SOA Examination Preparatory Workshop

Get a head start with our preparatory courses for SOA’s preliminary exams & beyond.

PARTNER UNIVERSITIES

UNIVERSITY

TRANSFER OPTION: 1+2

Students must achieve a minimum overall average of 65% in the 1st year of study*, and Pre-U results stated below or equivalent:

- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
- CIMP - 80%
- ATAR 88
- MUYF 65%

English:

- IELTS 6.5

+AUD 37,500 per year

Students must achieve a minimum overall average of 80% in the 1st year of study* and Pre-U results stated below or equivalent:

- A Level - AAA
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- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
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English:

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- A Level/STPM - ABB (A in Mathematics)
- UEC - 4A
- CIMP - 80%
- ATAR 88
- MUYF 65%

English:

- IELTS 6.5

+GBP 15,700 per year

*Please consult with programme leader on the subjects.
PATHWAYS

THE INSTITUTE OF ACTUARIES AUSTRALIA
https://www.actuaries.asn.au

FIAA

Further Professional Course + Practical Experience Requirement

Part III

Part II

Part I

Macquarie University (1+2)

University of East Anglia University of Kent (1+2)

THE INSTITUTE AND FACULTY OF ACTUARIES (IFOA)
https://www.actuaries.org.uk

FIA

Specialist Advanced

Specialist Principles

• CP3 Communications Practice
  • CP2 Modelling Practice
  • CP1 Actuarial Practice
  • CB3 Business Management
  • *CB2 Business Economics
  • *CB1 Business Finance

• *CM2 Financial Engineering and Loss Reserving
  • *CM1 Actuarial Mathematics
  • *CS2 Risk Modelling and Survival Analysis
  • *CS1 Actuarial Statistics

THE SOCIETY OF ACTUARIES (SOA)
https://www.soa.org

FSA / FCAS / FCIA

Further Professional Exams

Seminar
Associateship Professionalism Course
  • e-Learning Fundamentals of Actuarial Practice
  • Project Predictive Analysis

Statistics for Risk Modelling
Short-Term Actuarial Mathematics
Long-Term Actuarial Mathematics
Investment and Financial Markets
Financial Mathematics
Probability
  • *VEE Economics
  • *VEE Accounting and Finance
  • *VEE Mathematical Statistics

MSc IN ACTUARIAL SCIENCE (offered in Sunway University)

PhD IN MATHEMATICAL SCIENCES

offered in Sunway University

SUNWAY UNIVERSITY BSc (HONS) IN ACTUARIAL STUDIES (3 years)

TRANSFER OPTIONS

PROFESSIONAL ACTUARY PATHWAY

ACADEMIA PATHWAY

*Exemption

MATHEMATICAL SCIENCES

SUNWAY UNIVERSITY
BSC (HONS) IN INDUSTRIAL STATISTICS

PROGRAMME INTRODUCTION
Sunway University BSc (Hons) in Industrial Statistics is a home-grown 3-year degree programme designed to equip students with the fundamental, advanced and specialisation mathematics and statistics knowledge; key to producing a dynamic, in-demand, and skilled workforce for almost every industry.

DISTINCTIVE SUNWAY EXPERIENCE
The BSc (Hons) in Industrial Statistics Programme helps prepare students to sit and pass the following exams leading to the globally recognised SAS Certified Data Scientist qualification:

• Exam 1: SAS Big Data Preparation, Statistics and Visual Exploration
• Exam 2: SAS Big Data Programming and Loading
• Exam 3: Predictive Modelling
• Exam 4: Advanced Predictive Modelling
• Exam 5: Text Analytics, Time Series, Experimentation and Optimization

To produce industry-ready graduates and enhance our students’ employability, professional exam preparatory courses and workshops such as R, SAS, Excel, and Python are being conducted.

PROGRAMME STRUCTURE - Subjects

Year 1

- Advanced Calculus
- Calculus
- Elementary Statistics
- English for Mathematical Sciences
- Fundamentals of Big Data and Knowledge Discovery
- Introduction to Operations Research
- Introduction to Probability
- Linear Algebra & Applications
- Programming Principles

Year 2

- Communication Skills
- Community Project
- Computer-Intensive Statistical Methods
- Design of Experiments
- Mathematical Methods
- Mathematical Statistics I
- Mathematical Statistics II
- Quality Control and Survey Sampling
- Regression Analysis
- Stochastic Processes

Year 3

- Big Data Technologies
- Internship
- Machine Learning Techniques for Data Mining
- Multivariate Analysis
- Social and Professional Responsibilities
- Time Series & Forecasting

Electives (choose 4)

- Advanced Data Analytics
- Analysis of Panel Data
- Applied Nonparametric Statistics
- Bayesian Forecasting
- Categorical Data Analysis
- Regression Analysis for Spatial Data
- Research Project
- Risk Theory
- Survival Analysis

ADDITIONAL MOHE COMPELLARY GENERAL STUDIES SUBJECTS

For Local students:

- Islamic & Asian Civilisations
- Ethnic Relations
- Community Service
- Bahasa Kebangsaan A (applicable to students who did not sit for SPM or did not obtain a Credit in SPM Bahasa Melayu)

For International students:

- Malay Language for Communication 2
- Malaysian Studies 3

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

UNIVERSITY | TRANSFER OPTION: 2+1 | TUITION FEE
--- | --- | ---
University of Essex | + | ≈GBP 17,700 per year

Students must achieve a minimum CGPA of 3.0 and above

English:

- Credit in SPM 1119
- IELTS – 6.5

ESSEX GLOBAL PARTNERS’ SCHOLARSHIP

Undergraduate scholarship for Sunway University students

- £2,000 maximum for entry into the second year of study
- £1,500 maximum for entry into the third year of study

Please refer to the University of Essex’s website: www.essex.ac.uk for more information.
BRINGING YOU FURTHER

INTERNSHIP COMPANIES AND COMPANIES OUR GRADUATES WENT TO

**Accounting**
- Deloitte Corporate Advisory Services Sdn Bhd
- Ernst & Young Advisory Services Sdn Bhd
- PricewaterhouseCoopers (PwC)
- Public Bank Berhad

**Banking**
- Bank Negara Malaysia
- CIMB Bank Berhad
- Hong Leong Bank
- Malayan Banking Berhad
- OCBC Bank (Malaysia) Berhad

**Consulting**
- Actuarial Partners Consulting Sdn Bhd
- JPWill Consulting Partners
- NMG Consulting

**Financial Management**
- Affin Hwang Asset Management Berhad
- Assurance
  - AIA Berhad
  - Allianz General Insurance Company (Malaysia) Berhad
  - Allianz Life Insurance Company (Malaysia) Berhad
  - AmMetLIFE Insurance Berhad
  - AXA Affin Life Insurance Berhad
  - Etiqa General Insurance Berhad
  - Great Eastern Life Assurance Berhad
  - Hannover Re Malaysian Branch
  - Hong Leong Assurance Berhad
  - Longtai Insurance Berhad
  - Malaysian Life Reinsurance Group Berhad
  - MCTI Insurance Berhad
  - MSIG Insurance Berhad
  - Overseas Assurance Corporation (Malaysia) Berhad
  - Prudential Assurance Malaysia Berhad
  - Prudential BSN Takaful Berhad
  - QBE Insurance (Malaysia) Berhad
  - Sun Life Malaysia Assurance Berhad
  - Tokio Marine Life Insurance Malaysia Berhad
  - Tune Insurance Malaysia Berhad
  - Zurich Life Insurance Malaysia Berhad

**Furniture Retail**
- SSF Sdn Bhd

**Industrial Product & Service**
- PETRONAS
- Sunway Trading and Manufacturing

**Insurance**
- AIA Berhad
- Allianz General Insurance Company (Malaysia) Berhad
- Allianz Life Insurance Company (Malaysia) Berhad
- AmMetlife Insurance Berhad
- AXA Affin Life Insurance Berhad
- Etiqa General Insurance Berhad
- Great Eastern Life Assurance (Malaysia) Berhad
- Hannover Re Malaysian Branch
- Hong Leong Assurance Berhad
- Longtai Insurance Berhad
- Malaysian Life Reinsurance Group Berhad
- MCTI Insurance Berhad
- MSIG Insurance Berhad
- Overseas Assurance Corporation (Malaysia) Berhad
- Prudential Assurance Malaysia Berhad
- Prudential BSN Takaful Berhad
- QBE Insurance (Malaysia) Berhad
- Sun Life Malaysia Assurance Berhad
- Tokio Marine Life Insurance Malaysia Berhad
- Tune Insurance Malaysia Berhad
- Zurich Life Insurance Malaysia Berhad

**WHERE ARE OUR GRADUATES NOW?**

**LIM YOU SHENG**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Takaful Malaysia Sdn Bhd
- Position: Actuarial Executive

**CRYSTAL TEE HUI YEE**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Ernst & Young
- Position: Consulting Associate

**CARMEN CHOONG WAI LUM**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Great Eastern Life Assurance
- Position: Bancassurance Product & Transformation Associate

**FOO HUI SHEE**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: AXA Group Operations
- Position: Senior Actuarial Modeler

**AHMED THANZEEM**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Dhivehi Insurance Company Private Limited
- Position: Assistant Manager - Underwriting & Customer Service

**ZULAIKHA ASYIQIN BINTI ABDUL SAMAD**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Takaful Ikhlas Family Berhad
- Position: Executive - Actuarial Pricing & Product Development

**JUSTIN LIM CHEN THENG**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Nicholas Actuarial Solutions
- Position: Actuarial Analyst

**FOO HUI SZE**
BSC (HONS) IN ACTUARIAL STUDIES
- Company: Prudential Assurance Malaysia Berhad
- Position: Actuarial Professional
As part of our nation building ambitions, Sunway University has travelled the world seeking out the finest educational opportunities, bringing them closer to you.

**LIVE**

Whilst most universities have a campus, only Sunway University has a city. Experience a world-class education right here at Sunway City, poised to become Malaysia’s first fully integrated 5G-enabled smart city.

**LEARN**

International collaborations with the world’s most renowned institutions offer Malaysians world-class education at local prices, avoiding the expensive cost of overseas travel and unfavourable exchange rates.

**LEAD**

Currently pioneering research with the University of Cambridge to collaborate on ways to combat the Covid-19 pandemic in the Jeffrey Cheah Biomedical Centre at the University of Cambridge.

**LEGACY**

Located at Sunway City, Malaysia, Sunway University joins New York & Paris as one of the three United Nations Sustainable Development Solutions Network (SDSN) Centres in the world to coordinate continent-wide sustainable initiatives.

**One University, A World of Opportunities.**