

# Creating our Digital Future

Join SMU School of  
Computing and Information  
Systems (SCIS)



**UNDERGRADUATE**

# MESSAGE FROM THE DEAN

Technology is shaping the world in an unprecedented way. At the School of Computing and Information Systems (SCIS), we are committed to equipping our students with the essential computing knowledge needed to navigate the changes in digital landscape. Our goal is to empower students to innovate solutions that create value for business and society.

We offer four undergraduate degree programmes (Information Systems, Computer Science, Software Engineering and Computing & Law) that target different job roles demanded by employers. Our curriculum is reviewed regularly to ensure that the skills of our students remain relevant in the rapidly changing digital age.

SCIS partners with industry to bring in real-world use cases and projects under the SMU-X initiative. This experiential learning approach prepares you to be job-ready after graduation. Our seminar-style

interactive learning environment will ensure that you are a confident communicator and team player who will thrive in the workplace.

We have eminent scholars and experienced industry practitioners among our faculty. You will be taught by a team of dedicated and internationally renowned faculty who have made their mark in specialisations such as Cybersecurity, Artificial Intelligence, Software Engineering and Data Science. If you are passionate about research, you can embark on a guided research programme. Flourishing under the guidance of a dedicated team of teaching faculty and with a hands-on learning approach, our graduates are well equipped to face the challenges of the complex working world.

I am confident that you will find a programme that aligns to your passion & interest. Join us and equip yourself to create our digital future!

**Professor Pang Hwee Hwa**  
Dean, School of Computing and Information Systems



## 5 REASONS TO JOIN SMU SCIS



**HIGH GRADUATE EMPLOYABILITY**



**WORLD-CLASS COMPUTER SCIENTISTS & INDUSTRY PRACTITIONERS**



**FLEXIBLE LEARNING PATHWAYS**



**EXPERIENTIAL LEARNING & GLOBAL EXPOSURE**



**HIGHLY COLLABORATIVE CULTURE**

**OUR SCIS STUDENTS ARE INDUSTRY-READY**



**7 in 10**  
SCIS Graduates secured employment before graduating



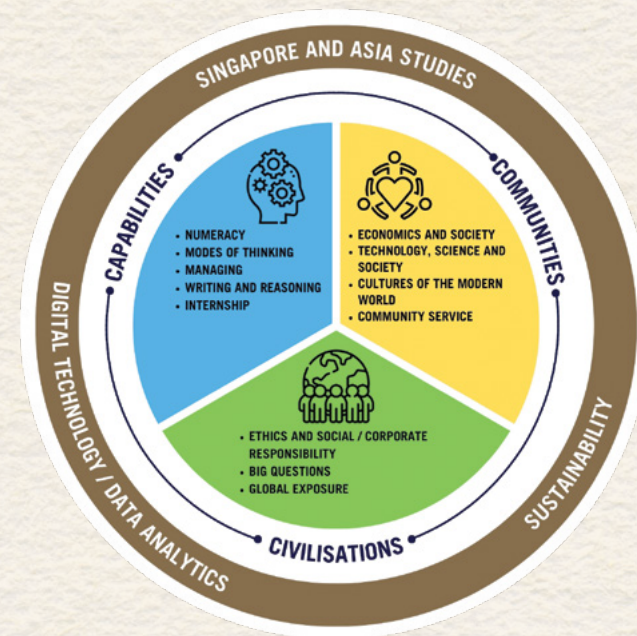
**95.1%**  
Overall employment rate

\* Pending GES 2023

# WHAT WILL BE COVERED IN MY SMU EDUCATION?

**A ROBUST SMU CORE CURRICULUM THAT DEVELOPS GLOBAL CITIZENS**

The SMU Core Curriculum is a menu of carefully selected course units (CUs) to initiate undergraduates into their journey to become holistic SMU graduates. The Core Curriculum also serves as a means for students across all disciplines to bond through a common intellectual experience. It stands on three pillars of learning, or inter-related paths of development: Capabilities, Communities and Civilisations.



**CAPABILITIES**

Develop specific competencies and skills necessary to dexterously operate in an increasingly complex, digitised and data-driven working environment.

Students will also complete an internship, either locally or overseas.



**COMMUNITIES**

Promote understanding of the economic, technological, and cultural systems and dynamics that structure our interactions with communities.

Students will also complete a community service project, either locally or overseas.



**CIVILISATIONS**

Engage in critical dialogue and problem solving through immersion in perennial debates that cut across time and space.

Students will complete a Global Exposure Experience.

**Additional Graduation Requirements - Digital Technology/Data Analytics (D/D), Sustainability, and Singapore and Asia Studies**

Students can meet each graduation requirement by enrolling in specific courses, or, in select Schools, through programme or major core courses where the relevant content has already been integrated to meet the graduation requirement.

## SCIS UNDERGRADUATE DEGREES AT A GLANCE

Our undergraduate degree programmes train students to become IT professionals who innovate solutions that create value for business and society. The four programmes offered aim to equip students with skills and competencies essential for different job roles demanded by employers.

**INFORMATION SYSTEMS (IS)**

Technology for digital transformation

**COMPUTER SCIENCE (CS)**

Computing theories and applications

**SOFTWARE ENGINEERING (SE)**

Software engineering skills via on-the-job training

**COMPUTING AND LAW (C&L)**

Legal knowledge and technical know-how

# ABOUT BSc (INFORMATION SYSTEMS): INFORMATION SYSTEMS MAJOR

**NURTURING IT PROFESSIONALS FOR DIGITAL BUSINESS TRANSFORMATION**

The Information Systems major equips you with the capabilities to develop innovative IT solutions that create value for business and society. It gives you the flexibility to acquire either deep technical skills or a healthy balance of technical and business skills. The programme offers four tracks that students can specialise in: Business Analytics, Financial Technology, Product Development and Smart-City Management and Technology.

SMU CORE CURRICULUM	12 Course Units
+	
INFORMATION SYSTEMS (IS) CORE	12 Course Units
+	
IS TRACKS AND ELECTIVES	6 Course Units
+	
FREE ELECTIVES	6 Course Units

## INFORMATION SYSTEMS CORE COURSES

### TECHNOLOGY SOLUTIONING

- Computing Fundamentals **1 CU**
- Business Process Analysis and Solutioning **1 CU**
- Enterprise Solution Management **1 CU**
- Software Project Management **1 CU**
- Digital Business - Technology and Transformation **1 CU**

### SOFTWARE DESIGN AND DEVELOPMENT

- Algorithms and Programming **1 CU**
- Data Management **1 CU**
- Interaction Design and Prototyping **1 CU**
- Web Application Development I **1 CU**
- Web Application Development II **1 CU**
- Enterprise Solution Development **1 CU**

### INFORMATION SYSTEMS PROJECT EXPERIENCE **1 CU**

You will be applying the know-how learnt from courses into industry sponsored projects. You will get to tackle issues such as problem definition, change management, and stakeholder management working in a team to build prototypes

## INFORMATION SYSTEMS TRACK COURSES



- Sample Track Courses**
- Analytics Foundation
  - Big Data Architecture
  - Data Mining & Business Analytics
  - Social Analytics and Applications



- Sample Track Courses**
- Digital Banking Enterprise Architecture
  - Blockchain Applications in Financial Services
  - Digital Payments & Innovation
  - Retail Banking & Mobile Technology



- Sample Track Courses**  
*(Course listing subject to change)*
- Cloud Management and Engineering
  - Enterprise Business Solutions
  - Managing Customer Relations with Analytics: Asian Insights
  - Object Oriented Programming



- Sample Track Courses**
- AI Governance
  - Analytics Applications for Smart Living
  - Geographic Information Systems for Urban Planning
  - Smart-City Operations Research

## EXPERIENTIAL LEARNING: SMU-X PROJECT

“SMU offers a learning environment that extends beyond traditional classrooms, providing diverse opportunities for students to delve into their interests—for example, being involved in the various clubs that SMU offers. What sets SMU SCIS apart is the opportunity to gain real-world experiences through SMU-X projects where we collaborate with industry partners to craft solutions based on real-world requirements. I think having the opportunity to work on SMU-X projects was one of the main factors that prepared me for post-graduation as this hands-on approach not only honed my skills but also provided invaluable insights into building robust systems.”



**KARISSE KHOO JING WEN**  
Software Engineer at Ascenda  
BSc (Information Systems) Alumna,  
Graduating Class of 2021

## INDICATIVE GRADE PROFILES

3H2/1H1 of Content-based Subjects for GCE A-Level Applicants:

10th Percentile	90th Percentile
BBB/C	AAA/A

GPA's for Polytechnic Applicants:

10th Percentile	90th Percentile
3.71	3.94

Students from the Virtual Reality for Business (IS462) module crafted an immersive game that blends historical insights with engaging gameplay. Working with the SMU-X project sponsor and virtual artist, Priya Diya, the students created an innovative Virtual Reality (VR) game that enables users to discover



the history and transformation of Singapore's Fort Canning Park from its lush, pre-urbanised state to its significant role in World War II. Users will be captivated through this VR experience to explore the different eras in an interactive journey that educates and entertains.

## Examples of Job Roles

- Business Analyst | Data Engineer | Enterprise Architect | Financial System Analyst | Product Developer | Software Engineer | Sustainable Solutions Developer | User Experience Designer**



# ABOUT BSc (COMPUTER SCIENCE): IT SOLUTION DEVELOPMENT MAJOR

**NURTURING PROFESSIONALS FOR TECHNOLOGICAL INNOVATION**

The Computer Science degree equips you with technical skills to build computing products and solutions to thrive in the marketplaces and society. This requires an understanding of the interplay between computing theory and practice and the essential links between them, as well as fundamental business innovation and IT solution development and management skills.

<b>SMU CORE CURRICULUM</b>	6 Course Units
+	
<b>COMPUTER SCIENCE (CS) CORE</b>	17 Course Units
+	
<b>CS TRACKS AND ELECTIVES</b>	7 Course Units
+	
<b>FREE ELECTIVES</b>	6 Course Units

## COMPUTER SCIENCE CORE COURSES

### SOFTWARE DEVELOPMENT

Programming Fundamentals I	1 CU
Programming Fundamentals II	1 CU
Collaborative Software Development	1 CU

### SOLUTION MANAGEMENT

Software Product Management	1 CU
IT Solution Architecture	1 CU
IT Solution Lifecycle Management	1 CU

### INFORMATION MANAGEMENT

Data Management	1 CU
Interaction Design and Prototyping	1 CU

### COMPUTER SYSTEMS AND ARCHITECTURE

Operating System Concepts with Android	1 CU
Interconnection of Cyber-Physical Systems	1 CU
Computer Hardware and Embedded Systems	1 CU

### DISCRETE STRUCTURES AND ALGORITHMS

Linear Algebra for Computing Applications	1 CU
Statistical Thinking for Data Science	1 CU
Mathematical Foundations of Computing	1 CU
Data Structures and Algorithms	1 CU
Design and Analysis of Algorithms	1 CU

### COMPUTER SCIENCE PROJECT EXPERIENCE

## COMPUTER SCIENCE TRACK COURSES



### ARTIFICIAL INTELLIGENCE

#### Sample Track Courses

- Introduction to Artificial Intelligence
- Agent-based Modeling and Simulation
- Heuristic Search and Optimisation
- Natural Language Communication



### CYBERSECURITY

#### Sample Track Courses

- Foundations of Cybersecurity
- Cyber Threat Intelligence
- Data Security and Privacy
- Software and Systems Security



### CYBER-PHYSICAL SYSTEMS

#### Sample Track Courses

- Foundations of Cyber-Physical Systems
- Computer Graphics and Virtual Reality
- Geospatial Analytics and Applications
- Mobile & Pervasive Computing and Applications

## EXPERIENTIAL LEARNING: URESEARCH PROGRAMME

### ByteDance

ByteDance is the developer of the video-sharing social networking services and apps TikTok and Douyin, the Chinese-specific counterpart to TikTok. It also develops the news and information platform Toutiao ("Headlines").

Dinner with the backend engineers

As part of the backend team, I build features based on the new requirements given by my product managers. At the same time, I am also responsible for taking up on-call tasks where I will need to identify and resolve bugs.

### KEY HIGHLIGHTS

Given the experience to build and work in a big microservice architecture which consisted of RPC (Remote Procedure Call) services, FaaS (Function as a Service), message queues and Cronjobs.

I had the opportunity to plan and create a testing pipeline in the pre-production environment, which queries from the same database as the production environment as shown in the diagram. This creation allowed my team to be able to only deploy the services they want to and yet be able to see if the whole flow is successful.

### SKILLS GAINED

- Golang
- ElasticSearch
- Writing IDLs (for RPC calls)
- In-house tech (ByteCloud, kiteX)
- Software design
- Unit & integration testing

## INDICATIVE GRADE PROFILES

3H2/1H1 of Content-based Subjects for GCE A-Level Applicants:

10th Percentile	90th Percentile
AAB/A	AAA/A

GPAs for Polytechnic Applicants:

10th Percentile	90th Percentile
3.81	3.97

"SMU SCIS gave me an engaging space to learn from my professors and peers. With helpful teaching faculty and meaningful programmes such as UResearch, I was given ample opportunities to learn from my professors in a safe space. The seminar-style classes encouraged active participation during lessons, making learning engaging and meaningful. Most importantly, the application-based learning style allowed me to apply the knowledge I learnt on fun projects, preparing me for the working world."



### TAY HUAN LIN

Software Engineer, Google  
BSc (Computer Science) Alumnus,  
Graduating Class of 2023

## Examples of Job Roles

AI Solution Architect | Chatbot Engineer |  
Cybersecurity Operations Engineer | IoT Solution  
Architect | Machine Learning Developer |  
Product Manager | Software Developer |  
VR-AR Systems Engineer

# ABOUT BSc (SOFTWARE ENGINEERING): SOFTWARE ENGINEERING MAJOR

## NURTURING TOMORROW'S SOFTWARE ENGINEERS

The BSc (Software Engineering) degree prepares students to become highly-qualified software engineers using a curriculum that is co-developed and co-taught with our industry partners.

It features a rigorous 52-week apprenticeship where you get to work in development teams under the mentorship of professional software engineers.

SCIS collaborates closely with our industry partners to equip you with technical, teamwork and communication skills to take on software engineering roles. Besides mentorship, career talks and guest lectures, our industry partners will also co-develop and co-teach the curriculum to ensure that you are familiar with current trends and best practices in software engineering.

SMU CORE CURRICULUM	12 Course Units
+	
SOFTWARE ENGINEERING (SE) CORE	12 Course Units
+	
APPRENTICESHIP	6 Course Units
+	
FREE ELECTIVES	6 Course Units

## SOFTWARE ENGINEERING CORE COURSES

### SOFTWARE DEVELOPMENT

Algorithms and Programming	1 CU
Programming Fundamentals II	1 CU
Web Application Development I	1 CU
Web Application Development II	1 CU
Collaborative Software Development	1 CU
Advanced Programming & Design	1 CU

### COMPUTING FOUNDATIONS

Operating Systems and Networking	1 CU
Foundations of Cybersecurity	1 CU
Data Management	1 CU

### SOLUTION MANAGEMENT

IT Software Architecture	1 CU
Enterprise Solution Development	1 CU
Enterprise Solution Management	1 CU

## APPRENTICESHIP

### 52-WEEK FULL-TIME APPRENTICESHIP 6 CU

Get a head start in your career by embarking on an apprenticeship which is strongly supported by both academia & industry. Strengthen and broaden your technical and soft skills while solving real-world problems. The apprenticeship can be completed at 1 or 2 different companies.

## INDICATIVE GRADE PROFILES

3H2/1H1 of Content-based Subjects for GCE A-Level Applicants

10th Percentile	90th Percentile
BBB/C	AAA/B

GPA's for Polytechnic Applicants:

10th Percentile	90th Percentile
3.71	3.94

## EXPERIENTIAL LEARNING: APPRENTICESHIP

### OUR ANCHOR PARTNERS



"NCS is excited to be one of the lead industry partners for the inaugural SCIS BSc (Software Engineering) Degree. A career in IT is about solving problems and not just coding. So, Software Engineers who can bring together strong technical abilities with real-life industry and creative problem-solving experience will be much valued. NCS's industry experts will co-develop and co-teach the curriculum. NCS Dojo, our learning organisation, will provide mentor-apprentice learning opportunities and rich on-the-job experiences when students spend their apprenticeships with us."



**GERARD KOH**  
Vice President,  
People & Culture at NCS Group

## NCS SCHOLARSHIP AVAILABLE TO FULL-TIME BSc (SOFTWARE ENGINEERING) STUDENTS

Established in 2022, the NCS Scholarship aims to motivate outstanding undergraduates at the University to achieve academic excellence and to inspire the younger generation in advancing their career in the technology and services industry.

### Examples of Job Roles

Full-stack Software Developer | Software Engineer | Web Developer |  
Software Quality Engineer | DevOps Engineer | Software Architect | IT Consultant

# ABOUT BSc COMPUTING & LAW DEGREE

**NURTURING PROFESSIONALS FOR DIGITAL LAW & GOVERNANCE**

The Computing and Law degree equips you with skillsets in operating IT and business innovations within a legal framework, and employing IT in legal practice. Beyond a solid foundation in computing and law, you will specialise in advanced technology tracks to become future-ready for business and public sectors, consulting and finance sectors, as well as the legal sector.

SMU CORE CURRICULUM **7 Course Units**

+

COMPUTING & LAW (C&L) CORE **18 Course Units**

+

COMPUTING & LAW ELECTIVES **8 Course Units**

+

FREE ELECTIVES **3 Course Units**

## COMPUTING & LAW CORE COURSES

### COMPUTING CORE COURSES

Statistical Thinking for Data Science	<b>1 CU</b>
Algorithms and Programming	<b>1 CU</b>
Data Management	<b>1 CU</b>
Interaction Design and Prototyping	<b>1 CU</b>
Web Application Development I	<b>1 CU</b>
Digital Business - Technology & Transformation	<b>1 CU</b>

Business Process Analysis & Solutioning

**1 CU**

Software Product Management

**1 CU**

### LAW CORE COURSES

Contract Law 1

**1 CU**

Contract Law 2

**1 CU**

Law of Torts

**1.5 CU**

Criminal Law

**1.25 CU**

Corporate Law

**1.5 CU**

Intellectual Property Law

**1 CU**

Privacy and Data Protection Law

**1 CU**

The Singapore Legal System and Legal Analysis Skills

**0.75 CU**

COMPUTING & LAW PROJECT EXPERIENCE

**1 CU**

## INDICATIVE GRADE PROFILES

3H2/1H1 of Content-based Subjects for GCE A-Level Applicants:

10th Percentile

90th Percentile

ABB/A

AAA/A

GPA's for Polytechnic Applicants:

10th Percentile

90th Percentile

No indicative GPA as sample size is small

## EXPERIENTIAL LEARNING: FINAL YEAR PROJECT

"The practice of law is changing and to give the kind of service that we want to deliver to our clients, we need to bridge the gap between law and technology. For our largest deals, we are already using these multi-disciplinary teams that comprise of lawyers, technologists and legal project managers. There is a need to understand issues that have both technological implications and legal ramifications."



**SOPHIE MATHUR**  
Partner at LinkLaters

### AI-powered Legal Intelligence

IS438 – Team Bright Starlets

Koh Rui Xin  
Nafisa Sheriffa  
Wong Wing Sze  
Tong My Linh  
Sylvia Goh



A group of Computing and Law students concluded a project with Clifford Chance to develop a solution to automate regulatory alerters for the finance industry.

The students developed a solution that leverages web scraping, Robotic Process Automation (RPA) and Generative AI, to automatically track, identify, summarise, and compile regulatory updates into a single email digest.

"This project experience allowed me to draw upon both my Computing and Law knowledge. Not only did we get to build an end-to-end solution where we had to do web scraping, model training, and designing and building the backend and frontend architecture, we also had to determine which kinds of legislative news are most important for legal professionals, and factor in the legal implications of our solution. We also acquired the crucial experience of working with various stakeholders, including some from overseas. It was overall a very enriching and valuable learning experience."

**KOH RUI XIN**

(Featured third from left)

### Examples of Job Roles

#### Business & Public Sectors:

Digital Transformation Consultant |  
Technology Innovator |  
Regulatory & Policy Advisor

#### Consulting & Finance Sectors:

Technology Strategist | Compliance and  
IT Auditor | Risk Management Analyst

#### Legal Sector:

Technology Strategist | Compliance and  
IT Auditor | Risk Management Analyst

#### Lawyers, Legal Advisors Practicing Technology Law:

Only applicable to BSc  
(Computing & Law) with a Fast-  
Track to Juris Doctor programme  
offered by SMU Yong Pung How  
School of Law



## UNDERGRADUATE GUIDED RESEARCH OPPORTUNITIES

Undergraduate students are offered opportunity to experience academic research. In a specially designed UResearch programme, students discover their interest in research, while also preparing themselves for graduate studies. The programme allows students to apply their knowledge in real-world settings.

### JOURNALS AND CONFERENCES WHERE OUR STUDENTS HAVE PUBLISHED PAPER AS CO-AUTHORS DURING THEIR UNDERGRADUATE RESEARCH PROGRAMME

#### *Multi-Lingual Multi-Partite Product Title Matching,*

by Huan-Lin Tay (CS student), Wei-Jie Tay (CS student), and Hady W. Lauw,

ACM Web Conference (TheWebConf'23), Apr 2023.

#### *Training language models to summarize narratives improves brain alignment,*

by Khai Loong Aw (CS student), Mariya Toneva,

ICLR 2023.

#### *Mining Competitively-Priced Bundle Configurations,*

by Ezekiel Ong Young (CS student) and Hady W. Lauw, IEEE Conference on Big Data (BigData'22), poster paper, Dec 2022.

#### *Towards Aligning Slides and Video Snippets: Mitigating Sequence and Content Mismatches,*

by Ziyuan Liu (IS student) and Hady W. Lauw,

International Conference on Artificial Intelligence in Education 2022 (AIED'22), July 2022.

#### *Detecting False Alarms from Automatic Static Analysis Tools: How Far are We?*

by Hong Jin Kang, Khai Loong Aw (CS Student) and David Lo,

ICSE 2022: 698-709.

#### *Searching for the X-Factor: Exploring Corpus Subjectivity for Word Embeddings,*

by Maksim Tkachenko, Chong Cher Chia (IS student), and Hady W. Lauw, Annual Meeting of the Association for Computational Linguistics (ACL'18), Jul 2018.

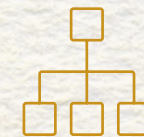
## WHAT PATHWAYS CAN I TAKE IN SCIS?

**BROADEN YOUR KNOWLEDGE WITH DOUBLE DEGREES AND SECOND MAJORS**

Prospective students with outstanding academic results may choose to apply for direct entry into double degree programmes. Students enrolled in single degree SCIS programme with exceptional results can opt to do a double degree programme.

Alternatively, students can choose to do a second major from any of the schools within SMU. SMU guarantees all undergraduates to take their second major of choice.

### SECOND MAJORS OFFERED BY SCIS



**IT Solution Management**



**Computing Studies (for BSc IS, BSc SE, BSc C&L students only)**  
Artificial Intelligence or Cybersecurity or Cyber-Physical Systems Track



**Technology for Business Solutions (for BSc CS, BSc SE, BSc C&L students only)**

Business Analytics or Financial Technology or Product Development or Smart-City Management and Technology Track

### INTEGRATED POSTGRADUATE PROGRAMMES

Integrated Postgraduate Programmes allow promising undergraduates at our school to pursue a Bachelor's and a Master's degree within a shorter period of time. We offer the following fast-tracks for SCIS undergraduate programmes:

#### SMU-Carnegie Mellon Masters Programme\*

OPTIONS INCLUDE:  
Master of Computational Data Science  
Master of Science in Information Technology

#### SMU-University College London (UCL)

MSc Urban Spatial Science  
MSc Connected Environments  
MRes Urban Spatial Science

#### SMU-Master of IT in Business (MITB)

TRACKS INCLUDE:  
Analytics  
Artificial Intelligence  
Digital Transformation  
Financial Technology and Analytics

#### SMU-Master of Science in Computing (MSc Computing)

TRACKS INCLUDE:  
Cybersecurity  
Data Science & Engineering  
Software & Cyber-Physical Systems

\*pending renewal

# HEAR FROM OUR STUDENTS AND ALUMNI

"Studying the Computing and Law degree has been an enlightening journey, bridging the realms of law and technology. I've had the privilege to engage with diverse projects that challenged my skills and expanded my horizons. SMU's rich landscape of opportunities has also allowed me to explore my interests and make a meaningful impact in both fields."



**NICOLE SEAH LI MIN**

BSc (Computing & Law) Student,  
Year 4

"As someone with no prior programming experience before coming to university, it was daunting given that many of my peers already had relevant experiences. However, SMU's nurturing faculty and seminar-style lessons helped me to learn effectively, not only honing valuable technical skills but also piquing my interest to further explore the complexities of software engineering. The exposure to industry through SMU-X courses and workshops organized by industry partners has allowed me to apply the skills I've learnt to solve real-world challenges."



**TAN KAI XUAN**

BSc (Software Engineering) Student,  
Year 2

"Every industry is driven by tech today: finance, logistics, transport and even life sciences. With a BSc from SCIS, we are able to enter the workforce with skills and toolkits that are instrumental in driving innovation, efficiency and collaboration. Being able to lead through these lenses is truly a game changer."



**FENGRU LIN**

TurtleTree Labs CEO  
BSc (Information Systems) Alumna,  
Graduating Class of 2011

"SMU's interactive pedagogy and engaging faculty provided opportunities to delve deeper into my interest areas. The faculty's guidance allowed me to explore exciting research topics, particularly in enhancing the capabilities of commercially available wearable devices for convenient health monitoring. I cherished the opportunity to co-author a paper and contribute to the global scientific community while fulfilling 3-course units towards my undergraduate requirements."



**MATTHEW HO YIWEN**

BSc (Computer Science) Student, Year 3

"The SCIS curriculum not only hones our technical capabilities, but also cultivates a versatile skill set enabling us to create substantial business value by leveraging technology. The school encourages teamwork through courses that are project-based, where students collaborate to tackle technical challenges and devise fitting solutions. This dynamic learning approach has not only strengthened my technical foundation but also honed my problem-solving intuitions, preparing me well for the demands of the industry."



**BRYAN TAN JIA JUN**

BSc (Information Systems) Student, Year 3

# THE SCHOLARSHIPS SCIS PROVIDE

MANY PRESTIGIOUS SCHOLARSHIPS THAT  
ACKNOWLEDGE YOUR ABILITY AND TENACITY

SMU SCIS places strong emphasis on a **holistic educational approach** for all its students where **social and ethical responsibilities** are as important as **academic excellence**.

Learn more



Open for  
application for  
both freshmen  
and seniors!

SMU Global Impact Scholarship Programme  
Lee Kong Chian Scholars' Programme  
SMU Merit Scholarship Programme  
SMU SCIS Achievements Scholarship  
SMU SCIS Aspirations Scholarship  
ASEAN Undergraduate Scholarship

Ng Kai Wa Scholarship  
SMU Steven Miller Scholarship  
Alvin Poh Endowed Scholarship  
GMC Scholarship  
SAS Institute Scholarship  
Red Hat Scholarship

SMU provided multiple platforms and avenues to develop myself holistically and enjoy an immersive global exposure! I embarked on the Pembroke College Summer Programme experience (organised by Cambridge University) where I enjoyed 8 weeks of overseas study, while getting to travel around United Kingdom! I have just returned from my Technopreneurship Study Mission trip to Tokyo, where we explored the start-up and technopreneur scene and witnessed how technology became an enabler to optimise processes and revolutionise different industries!"



**CHEAH KING YEH**

BSc(Computer Science) Student, Year 4  
Lee Kong Chian Scholarship Programme







# “WHAT MAKES AN SMU EDUCATION VITAL, EXCEPTIONAL AND BREATHTAKING?”


WE LET YOU INTEGRATE LEARNING ACROSS DISCIPLINES SO YOU WILL BE PREPARED FOR A COMPLEX, GLOBALISED WORLD

Because that’s what you need for a promising future with many different and exciting career paths. That’s why we are always improving our transformational undergraduate programme. That’s what it takes to transform you into a dynamic, confident and accomplished individual for a changing global economy!

EVERY SMU STUDENT WILL EXPERIENCE:

 FLEXIBLE AND INTER-DISCIPLINARY SMU CORE CURRICULUM

 DEDICATED AND CARING PROFESSORS WHO ARE WORLD-CLASS SCIENTISTS

 COMMUNITY SERVICE (LOCAL OR OVERSEAS)

 EXCEPTIONAL CAREER SUPPORT

 MULTIPLE INTERNSHIP ADVANTAGE (LOCAL OR OVERSEAS)

 VIBRANT STUDENT LIFE



GUARANTEED GLOBAL EXPERIENCE

  
**100%** SMALL CLASS SIZES

 TWO MAJORS GUARANTEED

## NEWEST OFFERINGS



### COLLEGE OF INTEGRATIVE STUDIES

FIRST and ONLY Individualised Major in Singapore!

BACHELOR OF INTEGRATIVE STUDIES (INDIVIDUALISED MAJOR)



### SCHOOL OF ACCOUNTANCY

ACCOUNTING DATA AND ANALYTICS (2ND MAJOR)

FINANCIAL FORENSICS (2ND MAJOR)



### LEE KONG CHIAN SCHOOL OF BUSINESS

DIGITAL BUSINESS (2ND MAJOR)

COMMUNICATION MANAGEMENT WITH TRACK IN DATA, DESIGN, & COMMUNICATION



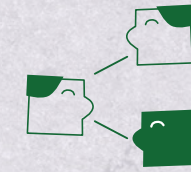
### SCHOOL OF ECONOMICS

DATA SCIENCE AND ANALYTICS (2ND MAJOR)



### SCHOOL OF COMPUTING AND INFORMATION SYSTEMS

BACHELOR OF SCIENCE (SOFTWARE ENGINEERING)

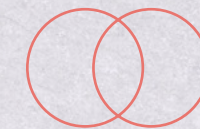


### SCHOOL OF SOCIAL SCIENCES

SUSTAINABLE SOCIETIES (2ND MAJOR)

“WILL I HAVE A GOOD SELECTION OF COURSES TO CHOOSE FROM?”

YOU'LL BE SPOILT FOR CHOICE WITH **500+** MAJOR AND DOUBLE MAJOR COMBINATIONS



OVER 500 DOUBLE MAJOR AND DOUBLE DEGREE COMBINATIONS



GUARANTEED 2ND MAJOR

### SCHOOL OF ACCOUNTANCY

- Accounting
- Accounting Data and Analytics (to be taken as a 2nd major)
- Financial Forensics (to be taken as a 2nd major)

### LEE KONG CHIAN SCHOOL OF BUSINESS

- Communication Management
- Communication Management with track in Data, Design, & Communication
- Finance
- Finance with track in Finance Analytics
- Finance with track in Real Estate
- Finance with track in Wealth Management
- Finance with track in International Trading
- Finance with track in Banking
- Finance with Private Banking Work-Study Degree
- Innovation & Entrepreneurship
- Marketing
- Marketing with track in Marketing Analytics
- Operations Management
- Operations Management with track in Operations Analytics
- Operations Management with track in Maritime Business & Operations
- Organisational Behaviour & Human Resources
- Quantitative Finance
- Strategic Management
- Digital Business (to be taken as a 2nd major)
- Sustainability Management (to be taken as a 2nd major)

### SCHOOL OF COMPUTING AND INFORMATION SYSTEMS

#### BSc (INFORMATION SYSTEMS) DEGREE INFORMATION SYSTEMS MAJOR:

Students can take 1 to 2 tracks from:

- Business Analytics
- Financial Technology
- Product Development
- Smart-City Management and Technology

#### BSc (COMPUTER SCIENCE) DEGREE IT SOLUTION DEVELOPMENT MAJOR:

Students can take 1 to 2 tracks from:

- Artificial Intelligence
- Cybersecurity
- Cyber-Physical Systems

#### BSc (COMPUTING & LAW) DEGREE

#### BSc (SOFTWARE ENGINEERING) DEGREE

### SECOND MAJORS

For BSc (Information Systems), BSc (Computer Science), BSc (Computing & Law) and BSc (Software Engineering) students only:

- IT Solution Management

For BSc (Information Systems), BSc (Computing & Law) and BSc (Software Engineering) students only:

- Computing Studies with specialisation in one of the following:
  - Artificial Intelligence
  - Cybersecurity
  - Cyber-Physical Systems

For BSc (Computer Science), BSc (Computing & Law) and BSc (Software Engineering) students only:

- Technology for Business Solutions with specialisation in one of the following:
  - Business Analytics
  - Financial Technology
  - Product Development
  - Smart-City Management and Technology

For students from other schools within SMU:

- Technology for Business

### SCHOOL OF ECONOMICS

- Economics
- Economics with track in Quantitative Economics
- Economics with track in Real Estate
- Actuarial Science (to be taken as a 2nd major)
- Actuarial Science with Industry Integration Track (to be taken as a 2nd major)
- Health Economics & Management (to be taken as a 2nd major)
- Data Science and Analytics (to be taken as a 2nd major)

### YONG PUNG HOW SCHOOL OF LAW

- Law
- Legal Studies (2nd major for non-Law students)

### SCHOOL OF SOCIAL SCIENCES

- Politics, Law and Economics (to be taken as a 1st major only)
- Political Science
- Psychology
- Sociology
- Global Asia (to be taken as a 2nd major)
- Public Policy and Public Management (to be taken as a 2nd major)
- Sustainable Societies (to be taken as a 2nd major)

### COLLEGE OF INTEGRATIVE STUDIES

- Deferred Declaration of Degree
- Individualised Major
- Individualised Second Major



SINGAPORE MANAGEMENT  
UNIVERSITY

## **School of Computing and Information Systems**

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For more information on our curriculum,  
please visit our website:  
**<https://computing.smu.edu.sg/undergraduate>**