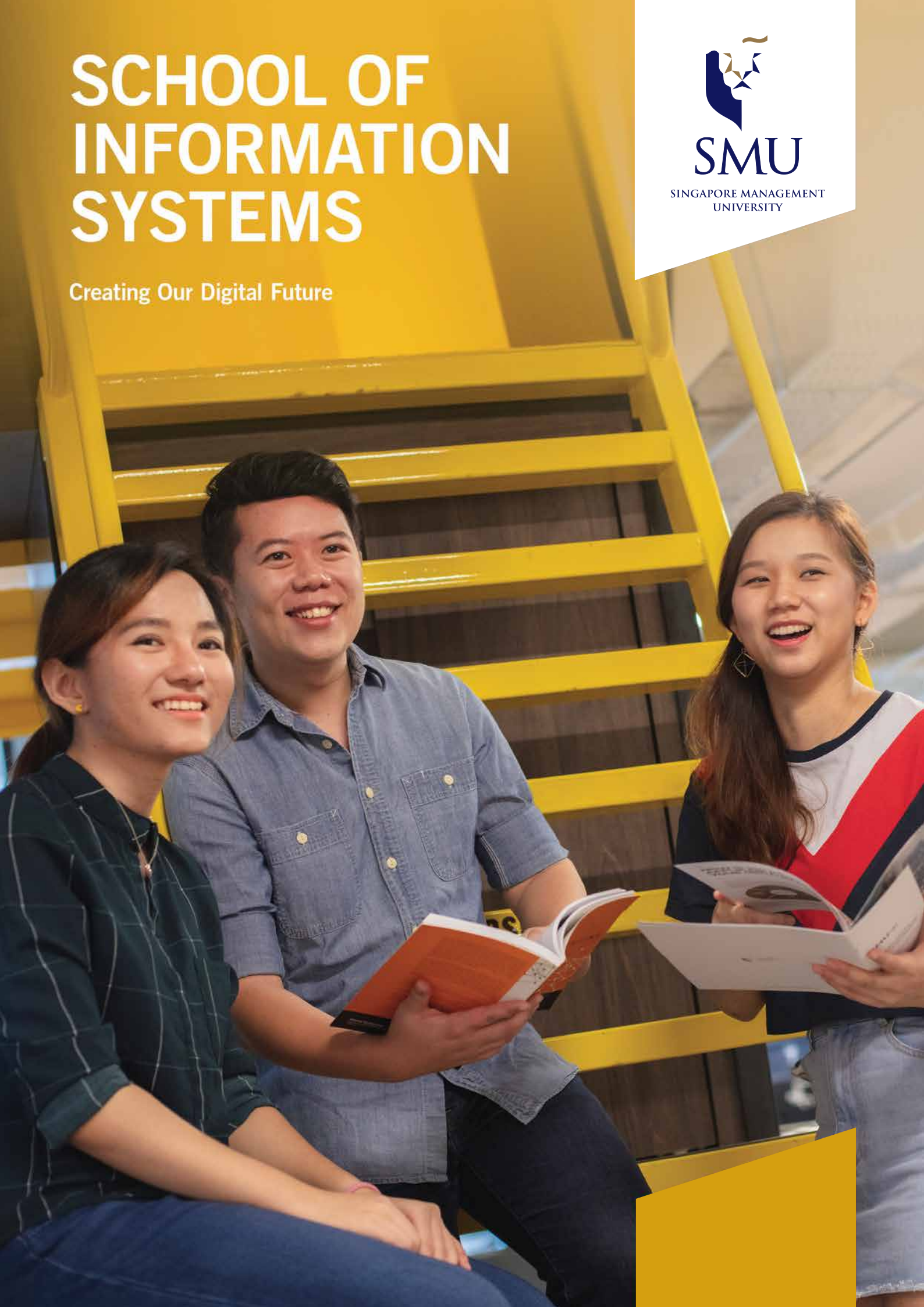
SCHOOL OF INFORMATION SYSTEMS

Creating Our Digital Future



SMU
SINGAPORE MANAGEMENT UNIVERSITY

DEAN'S MESSAGE

Companies and public agencies are employing digital technology to transform their business models and processes. At the School of Information Systems (SIS), we seek to create computing knowledge for this digital transformation, and to apply the knowledge in training IT professionals who innovate solutions that create value to business and society.

We offer four undergraduate computing programmes that target different job roles demanded by employers. A common thread through these programmes is our emphasis on designing and building solutions for realistic scenarios, and partnering industry to impart relevant skills to our students.

Our BSc (Information Systems) Information Systems major teaches students to identify emerging technologies and market trends, exploit opportunities to digitally transform an organisation, and develop applications that harmonise with the overall IT infrastructure.

Our BSc (Information Systems) Smart-City Management and Technology major is a unique interdisciplinary programme that trains professionals in blending social, economic, business, environmental and technology concerns to develop smart city solutions.

Our BSc (Computer Science) degree emphasises strong technical skills in translating scientific principles to usable computing technologies and solutions, as well as the management skills needed to navigate complex software development and system deployment concerns.

Professor Pang Hwee Hwa
Dean,
School of Information Systems

From 2020, we are partnering the SMU School of Law to offer a BSc (Computing & Law) degree. This degree equips students with the skillsets to protect technology innovation, comply with pertinent legal and regulatory requirements, as well as manage the technology and business risks posed by innovation.

I am confident that you will find the programmes as exciting as our students and employers do.

Join Computing @ SMU. Equip yourself to create our digital future.

5 REASONS TO JOIN THE SMU SCHOOL OF INFORMATION SYSTEMS

FUTURE-READY CAREER SKILLS

Be highly sought after in the job market. Our graduates, with their strong technology, business and people skills, receive multiple job offers before graduation.

WORLD-CLASS FACULTY, LARGE-SCALE RESEARCH

Shape and explore the future of the world in our large-scale technology initiatives supported by substantial R&D grants from the industry and government.

HIGHLY COLLABORATIVE LEARNING CULTURE

Enjoy a strong sense of belonging in our school, created through our culture of 'learning-to-learn' and peer support.

ALIGNMENT WITH NATIONAL INITIATIVES

Take advantage of our close linkages with national agencies and leading industry players for national initiatives such as the *Digital Government Blueprint, Smart Nation, Artificial Intelligence, Consumer & Social Insights, Cybersecurity & Data Privacy, and Financial Services Technology*.

FAST-TRACK PROGRAMMES

Fast-track your learning and career with our integrated postgraduate programmes that allow you to pursue an SIS Bachelor's and an integrated Master's degree within a shorter period of time.

OUR STUDENTS ARE INDUSTRY-READY

$4,014
Gross average starting salary for SIS graduates*

69%
SIS graduates received offers before graduating

52%
With up to 2 to 6 job offers upon graduation

** 2017 cohort of SIS graduates recorded a significant increase in the mean monthly salary over the 2016 cohort ($3,897).*
Source: Graduate Employment Survey 2017.

HEAR FROM OUR INDUSTRY PARTNERS

"In my role as Director of Data Science at Microsoft, I see an increasing demand for IT professionals who are adept at fundamental computer science principles, while also being attuned to industry trends. I am excited that the BSc (Computer Science) programme by SMU strives for a balance between technical rigor and business orientation. The awareness of product management as cultivated in the program will also provide a foundation for graduates to fill roles that are in high demand such as Product or Program Manager. In addition, students exposed to software engineering practices combined with artificial intelligence courses will be well prepared for the essential function that data science-related roles will play over the coming years."

Dr. Graham Williams
Director of Data Science,
Microsoft Asia Pacific, Singapore

"To those who want to improve how things are done in this world, to those who want to create new digital business models where existing laws do not apply, a solid grounding in computing and law is crucial to your success."

Ng Kai Wa
Chairman, CEO & Co-founder
Innomedia Pte Ltd

ALUMNUS TESTIMONIAL

"The SIS journey is challenging but you will realise that the interdisciplinary curriculum coupled with rigourous coursework would put you in good stead to excel in your career in the years to come. You will learn to forge ahead with courage and with zeal, to break what seem to be big problems into bite-sized challenges to work on, just as you would in programming.

The close-knit community in which we call the SIS family will mould you into a valuable team player as well as a competent leader where you will thrive in your endeavours in spite of insurmountable odds. Your tenacity to overcome obstacles will instill in you the never-say-die attitude – to learn from adversity, to inspire others to exceed expectations, and to champion those who are committed to excellence."

Ngoh Jun Dat,
Lead, Innovation & Development,
Executive Chairman Office, YCH Group
Class of 2016

NURTURING PROFESSIONALS FOR **DIGITAL BUSINESS TRANSFORMATION**

Scan for More Details

BSc (INFORMATION SYSTEMS): INFORMATION SYSTEMS MAJOR

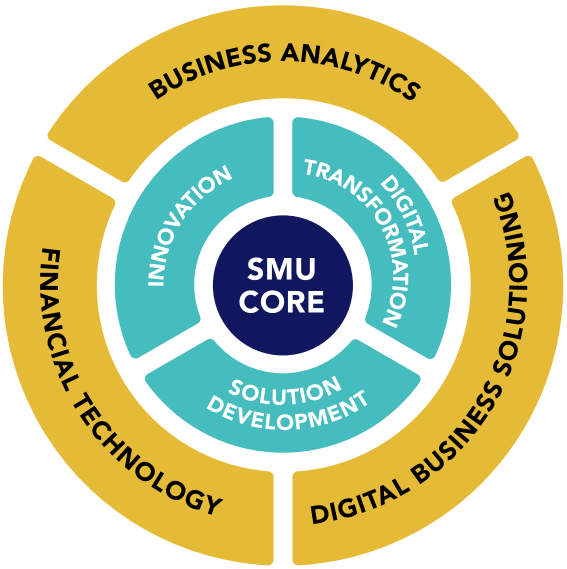
The Information Systems (IS) major equips you with the capabilities to create value for business and society by developing innovative IT solutions. It gives you the flexibility to acquire either deep technical skills or a healthy balance of technical and business skills.

The core curriculum for IS major focuses on the following learning outcomes:

Innovation
Innovating through the exploitation of possibilities offered by emerging technologies and market trends, while synthesising knowledge across domains.

Digital Transformation
Identifying opportunities to digitally transform businesses and society.

Solution Development
Building applications by harnessing computing and information technologies.



INFORMATION SYSTEMS TRACKS

BUSINESS ANALYTICS

There is an increasing use of data analytics to discover organisational issues and to drive strategies in digital transformation. This has created a rising demand for our graduates who understand how to use data analytics to solve real world problems. This track aims to provide students with the concepts, methods and best practices of data analytics through working on real world use cases and practicum.

EXAMPLES OF JOB ROLES
Business Analyst | Business Development Consultant | Business and Product Strategist

DIGITAL BUSINESS SOLUTIONING

Technological disruption is challenging the future of business process designs and models. This has compelled organisations to take advantage of new technologies to innovate and seamlessly integrate the physical and digital world. This has created new job roles and opportunities. The Digital Business Solutioning track enables students to engineer IT solutions to enhance operational excellence, integrate information-processes-people and drive innovation.

EXAMPLES OF JOB ROLES
Digital Business Integration Analyst | Enterprise Architect | Revenue Assurance Manager

FINANCIAL TECHNOLOGY

Singapore is one of the top 5 financial centres in the world, and financial technology professionals are in high demand in the traditional banking sector and in non-bank alternative FinTech companies. This track covers the foundations of enterprise architecture in banking and the functional domain areas such as retail and corporate banking, digital payments and innovations, and financial markets.

EXAMPLES OF JOB ROLES
Account Technology Strategist | Financial Application Developer | Systems Analyst

CURRICULUM FOR ACADEMIC YEAR 2019-20 – INFORMATION SYSTEMS MAJOR

INFORMATION SYSTEMS MAJOR CORE

Information Systems Core Courses*	11 CU
Information Systems Project Experience	1 CU

INFORMATION SYSTEMS MAJOR ELECTIVES

Track Courses	4 CU
Information Systems Electives	2 CU

FREE ELECTIVES

Any SMU Courses	6 CU

UNIVERSITY CORE

Capabilities	6 CU
└ Inclusive of Internship *Minimum 10 Consecutive Weeks*	
Communities	4 CU
└ Inclusive of Community Service *Minimum 80 Hours*	
Civilisations	2 CU

Graduation Requirements

The following needs to be fulfilled prior to graduation:

- Singapore Studies
- Asia Studies
- Global Exposure

TOTAL	36 Credit Units (CU)

*INFORMATION SYSTEMS CORE COURSES

SOFTWARE DEVELOPMENT AND MANAGEMENT

- Introduction to Programming
- Web Application Development I
- Web Application Development II
- Software Project Management

INFORMATION MANAGEMENT

- Data Management
- Interaction Design and Prototyping

BUSINESS SOLUTIONING AND MANAGEMENT

- Information Systems and Innovation
- Business Processes Analysis and Solutioning
- Enterprise Solution Management
- Enterprise Solution Development
- Digital Business Technology and Transformation

INFORMATION SYSTEMS PROJECT EXPERIENCE

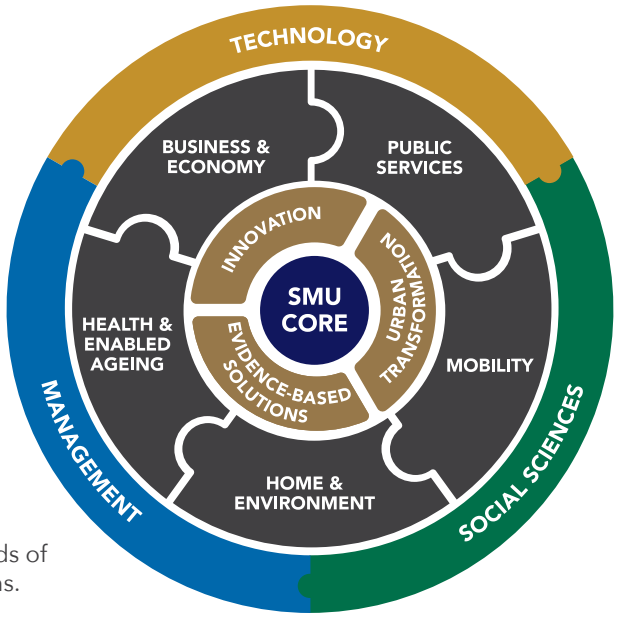
NURTURING PROFESSIONALS FOR **SMART LIVING**

Scan for More Details

BSc (INFORMATION SYSTEMS): SMART-CITY MANAGEMENT & TECHNOLOGY MAJOR

Smart cities are emerging across the world, requiring not just technology, but the ability to synthesise solutions while considering multiple dimensions such as societal, economic, business and environmental issues.

The Smart-City Management & Technology (SMT) major equips students with analytical, interdisciplinary critical thinking and technological skills to seize career opportunities in designing and managing smart city innovative solutions for the urbanisation challenges of today's global economy. To achieve this, students acquire the breadth and application of interdisciplinary knowledge across technology, social sciences and management disciplines.



The core curriculum for SMT major focuses on the following learning outcomes:

Innovation
Identify opportunities to create value by addressing the needs of public, private and social sectors through innovative solutions.

Urban Transformation
Innovate transformative digital solutions for addressing multi-dimensional challenges across social, economics, business and environment in an urbanised context.

Evidence-Based Solutions
Apply appropriate data analytics and technology techniques for problem identification and model development of the evidence-based solutions.

5 KEY SMART CITY DOMAINS

BUSINESS & ECONOMY	HEALTH & ENABLED AGEING	HOME & ENVIRONMENT	MOBILITY	PUBLIC SERVICES
Financial Technology	Ageing-in-Place With Technology	Data Driven Urban Planning	Dynamic Crowd Management	Public Safety
Sharing Economy	Collaborative Care System	Intelligent Sustainable Solutions	Urban & Transportation Solutions	Urban Community & Liveability
Smart Retail	Preventive Healthcare	Smart Building	Sustainable Logistics	Social Sensing

Examples of job roles
Data Scientist | Digital Product Manager | Health Informatics Officer | IoT Solution Architect | Project Management Associate | Smart Systems Analyst | Smart City Partnership Strategist | Sustainable Solutions Designer | Technopreneur | Urban Planner

CURRICULUM FOR ACADEMIC YEAR 2019-20 – SMART-CITY MANAGEMENT & TECHNOLOGY MAJOR

SMART-CITY MANAGEMENT & TECHNOLOGY MAJOR CORE

Smart City Interdisciplinary Core Courses*	11 CU
Smart City Project Experience	1 CU

SMART-CITY MANAGEMENT & TECHNOLOGY MAJOR ELECTIVES

Information Systems Electives	6 CU

INFORMATION SYSTEMS MAJOR CORE

Specialisations: ● Technology / ● Social Sciences / ● Management	6 CU

UNIVERSITY CORE

Capabilities └ Inclusive of Internship *Minimum 10 Consecutive Weeks*	6 CU
Communities └ Inclusive of Community Service *Minimum 80 Hours*	4 CU
Civilisations	2 CU

Graduation Requirements

The following needs to be fulfilled prior to graduation:

- Singapore Studies
- Asia Studies
- Global Exposure

TOTAL	36 Credit Units (CU)

*SMART CITY INTERDISCIPLINARY CORE COURSES

ANALYTICS WITH INTERDISCIPLINARY APPLICATION

Analytics Foundation	● ● ●
Analytics Applications for Smart Living	● ●
Data Management	●
Geospatial Analytics for Urban Planning	● ● ●

TECHNOLOGY WITH INTERDISCIPLINARY APPLICATION

Interaction Design and Prototyping	● ●
Programming for Smart City Solutions	● ●
Smart City Systems and Management	● ● ●
Foundations of Cybersecurity	● ●

SOCIAL SCIENCE + INFORMATION SYSTEMS MANAGEMNT

Information Systems and Innovation	● ● ●
Sustainable Digital Cities	● ●
Introduction to Public Policy	● ●

SMART CITY PROJECT EXPERIENCE

NURTURING PROFESSIONALS FOR **TECHNOLOGICAL INNOVATION**

Scan for More Details

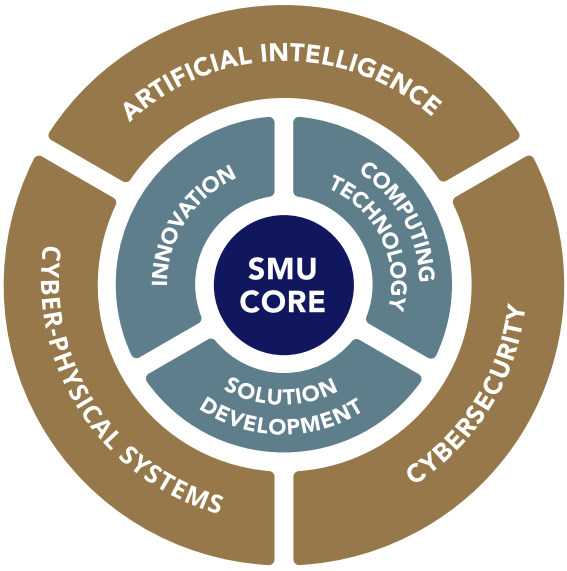
BSc (COMPUTER SCIENCE): IT SOLUTION DEVELOPMENT MAJOR *NEW!*

BSc (Computer Science) degree equips students 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.

The core curriculum for Computer Science degree focuses on the following learning outcomes:

Innovation
Identify opportunities to create value by addressing the needs of business and society.

Computing Technology
Provide foundational knowledge that IT professionals require via these course groupings: Software Development, Discrete Structures and Algorithms, Computer Systems and Architecture, Information Management.



Solution Development
Train students in developing integrated solutions for complex real-world business landscape via the Solution Management course grouping, as well as experiential learning such as Computer Science Project Experience or Work Study Scheme.

COMPUTER SCIENCE TRACKS

ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) models aim to augment or substitute human intelligence by building systems that think for themselves and improve over time. This track equips students with core concepts and practical know-how to build innovative AI applications that impact business and society.

EXAMPLES OF JOB ROLES
Chatbot Engineer | Data and AI Solution Architect | Machine Learning Developer

CYBERSECURITY

With the explosion of cyberspace threats, cybersecurity professionals are in high demand world-wide by both the public and private sectors. The Cybersecurity track equips students with cybersecurity theory and practice, covering aspects of security fundamentals in some areas like network, data and software.

EXAMPLES OF JOB ROLES
Cybersecurity Operations Engineer | Fraud Analyst | Infrastructure Technical Analyst

CYBER-PHYSICAL SYSTEMS

Cyber-Physical Systems (CPS) are typically made up of embedded devices that are able to sense the physical environment, communicate with each other, as well as control physical processes. CPS are widely used in several application domains of smart cities – such as in transportation networks, smart grid systems, smart homes/buildings, healthcare, and manufacturing. This track aims to equip students with core concepts and practical knowledge on designing and implementing CPS for the society. These include topics such as distributed systems, Internet of Things (IoT), and pervasive computing.

EXAMPLES OF JOB ROLES
Consultant - Digital Stategy, Industry 4.0 | IoT Solution Architect | VR-AR Systems Engineer

CURRICULUM FOR ACADEMIC YEAR 2019-20 – IT SOLUTION DEVELOPMENT MAJOR

COMPUTER SCIENCE MAJOR CORE

Computer Science Core Courses*	16 CU
Computer Science Project Experience	2 CU

COMPUTER SCIENCE MAJOR ELECTIVES

Track Courses	4 CU
Computer Science Electives	2 CU

FREE ELECTIVES

Any SMU Courses	6 CU

UNIVERSITY CORE

Capabilities 2 CU
- Inclusive of [1]Internship
  Minimum 10 Consecutive Weeks

Communities 2 CU
- Inclusive of Community Service
  Minimum 80 Hours

Civilisations 2 CU

Graduation Requirements

The following needs to be fulfilled prior to graduation:

- Singapore Studies
- Asia Studies
- Global Exposure

TOTAL **36 Credit Units (CU)**

[1] *The internship can be extended to 6 months (Work Study Scheme) with exemption for Computer Science Project Experience.*

*COMPUTER SCIENCE CORE COURSES

SOFTWARE DEVELOPMENT
- Programming Fundamentals I
- Programming Fundamentals II
- Collaborative Software Development

SOLUTION MANAGEMENT
- Software Product Management
- IT Solution Architecture
- IT Solution Lifecycle Management

INFORMATION MANAGEMENT
- Data Management
- Interaction Design and Prototyping

COMPUTER SYSTEMS AND ARCHITECTURE
- Operating System Concepts with Android
- Interconnection of Cyber-Physical Systems
- Computer Hardware and Embedded Systems

DISCRETE STRUCTURES AND ALGORITHMS
- Linear Algebra for Computing Applications
- Statistical Thinking for Data Science
- Mathematical Foundations of Computing
- Data Structures and Algorithms
- Design and Analysis of Algorithms

COMPUTER SCIENCE PROJECT EXPERIENCE

SECOND MAJOR IN IT SOLUTION MANAGEMENT

Unique to the BSc (Computer Science) degree programme, students will 'earn' a second major in IT Solution Management with the completion of the following courses:

COMPUTER SCIENCE CORE COURSES
- IT Solution Architecture
- IT Solution Lifecycle Management
- Software Product Management

COMPUTER SCIENCE ELECTIVES
- Technology Innovation
- Intellectual Property Law or Privacy and Data Protection Law

FREE ELECTIVES
- Financial Accounting
- Marketing
- Second Major Elective

NURTURING PROFESSIONALS FOR **DIGITAL LAW AND GOVERNANCE**

Scan for More Details

BSc (COMPUTING & LAW) DEGREE

**** LAUNCHING IN 2020***

As Information Technology (IT) goes beyond automating backroom functions to transforming business models and processes, innovators need to consider:

1. How will their innovations be protected within the legal framework where they operate?
2. How do they ensure that their business operations comply with pertinent legal, regulatory and contractual requirements?
3. How do they address legal questions, as well as manage the technology and business risks posed by the innovations?

The BSc (Computing & Law) degree produces IT and legal professionals who are adept at bridging technology and law. It will equip students with skillsets in IT and business innovation, operating IT and business innovations within a legal framework, and employing IT in legal practice. Beyond a solid foundation in Computing and Law, students 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.

Innovation
Develop new business models, processes and solutions enabled by IT.

Digital Transformation
Synergise technology and law in operationalising digital innovations as business concerns.

IT in Legal Practice
Apply Artificial Intelligence, analytics, automation tools etc. to legal tasks and processes.

With a BSc (Computing & Law) degree, graduates can look forward to careers in the following sectors:

BUSINESS & PUBLIC SECTORS
- Digital Transformation
- Technology Innovation
- Regulatory & Policy

CONSULTING & FINANCE SECTORS
- Advisory
- IT Audit and Compliance
- Risk Management

LEGAL SECTOR
- Legal Knowledge Engineer
- Legal Tech / Project Manager
- Legal Technologist
- Lawyers, Legal Advisors Practicing Technology Law
  [Only applicable to BSc (Computing & Law) with a Fast-Track to Juris Doctor – subject to students meeting the eligibility criteria for enrolment in the Juris Doctor programme offered by SMU School of Law]

** The new Computing and Law degree programme will be offered from Academic Year 2020-21 onwards. Singapore citizens and Singapore permanent residents serving Singapore National Service and enrolling into university in AY2020 or AY2021 are eligible to apply in the on-going admissions exercise.*

CURRICULUM FOR ACADEMIC YEAR 2020-21

COMPUTING & LAW CORE

Computing Core Courses	7 CU
Law Core Courses	9 CU
Computing & Law Project Experience	1 CU

COMPUTING & LAW ELECTIVES

Computing Electives	7 CU
Law Electives	2 CU

FREE ELECTIVES

Any SMU Courses	3 CU

UNIVERSITY CORE

Capabilities └ Inclusive of Internship *Minimum 10 Consecutive Weeks*	3 CU
Communities └ Inclusive of Community Service *Minimum 80 Hours*	2 CU
Civilisations	2 CU

Graduation Requirements

The following needs to be fulfilled prior to graduation:

- Singapore Studies
- Asia Studies
- Global Exposure

TOTAL	36 Credit Units (CU)

COMPUTING & LAW COURSES

COMPUTING CORE COURSES

INFORMATION MANAGEMENT

Statistical Thinking for Data Science	1 CU
Introduction to Programming	1 CU
Data Management	1 CU

BUSINESS TRANSFORMATION & MANAGEMENT

Information Systems & Innovation	1 CU
Digital Business Technology and Transformation	1 CU
Business Process Analysis and Solutioning	1 CU
Software Product Management	1 CU

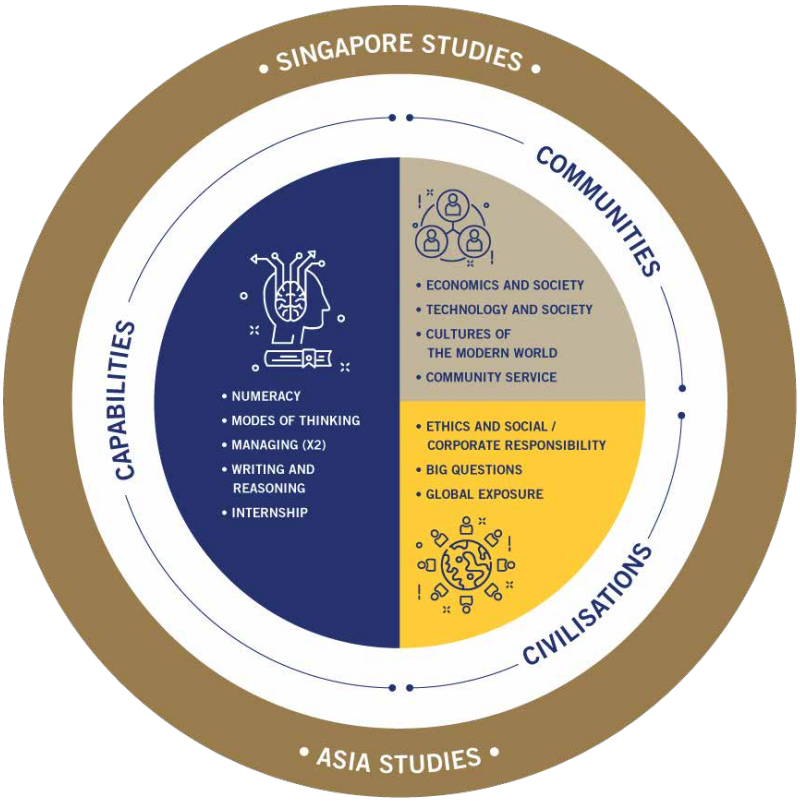
LAW CORE COURSES

Law of Contract I	1 CU
Law of Contract II	1 CU
Law of Torts	1.5 CU
Criminal Law	1.5 CU
Corporate Law	1 CU
Intellectual Property Law	1 CU
Data Protection Law	1 CU
Regulation of Technology	1 CU

COMPUTING & LAW PROJECT EXPERIENCE 1 CU

THE SMU CORE CURRICULUM

The SMU Core Curriculum is a menu of twelve 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

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

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

Communities

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

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

Civilisations

Students will complete a Global Exposure Experience.

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

- Happiness & Suffering
- Wealth & Poverty
- War & Peace
- Global & Local

BEING ENGAGED IN LEARNING AND THE GLOBAL COMMUNITY

The vibrant student life at SMU offers a myriad of opportunities for students to develop both leadership and team player qualities. Students can accumulate real-world experiences from being actively involved in student activities, entrepreneurial pursuits, taking on prestigious competitions, and more.

LOCAL & OVERSEAS INTERNSHIPS

Broaden your perspectives and apply your skills and knowledge to real-world business operations.

OVERSEAS STUDY MISSION

Visit top companies around the world and network with industry leaders for future career opportunities.

PROJECT & RESEARCH EXPERIENCE

Engage with industry leaders and gain valuable hands-on experiences to tackle real-world challenges.

SMU-X

Stay ahead of innovative pedagogy by pushing the boundaries and venturing into new ways of bridging theory and practice.

COMMUNITY SERVICE

Gain exposure to diverse social, political and economic environments as you do your part to advance a humanitarian cause.

VERSATILE PATHWAYS

The cross disciplinary natures of the SIS undergraduate programmes provide our graduates with a competitive edge in gaining admission into a wide range of top postgraduate programmes.

BSc (INFORMATION SYSTEMS)

First Major in **Information Systems**

Second Major Options:
- **Computing Studies** (Artificial Intelligence, Cybersecurity or Cyber-Physical Systems Track)
- **IT Solution Management**
- **Offered by Other Schools Within SMU**

BSc (INFORMATION SYSTEMS)

First Major in **Smart-City Management & Technology**

Second Major Options:
- **Computing Studies** (Artificial Intelligence, Cybersecurity or Cyber-Physical Systems Track)
- **IT Solution Management**
- **Technology for Business Solutions** (Business Analytics, Digital Business Solutioning or Financial Technology Track)
- **Offered by Other Schools Within SMU**

BSc (COMPUTER SCIENCE)

First Major in **IT Solution Development**

Second Major Options:
- **IT Solution Management**
- **Technology for Business Solutions** (Business Analytics, Digital Business Solutioning or Financial Technology Track)
- **Offered by Other Schools Within SMU**

INTEGRATED POSTGRADUATE PROGRAMMES

SMU-Carnegie Mellon Masters Programme
Options include:
- Master of Computational Data Science
- Master of Science in Information Technology

The Info-communications Media Development Authority (IMDA)'s National Infocomm Scholarship (NIS) is available for qualified applicants with excellent academic achievements.

SMU-University College London (UCL)
Outstanding BSc (IS): SMT Students are invited to apply:
- MSc Smart Cities & Urban Analytics

SMU-Master of IT in Business (MITB)*
Tracks include:
- Analytics
- Artificial Intelligence
- Financial Technology and Analytics

SMU-Master of Science in Computing (MScomputing)*
Tracks include:
- Cybersecurity
- Data Science & Engineering
- Software & Cyber-Physical Systems

*SIS Scholarships are available for qualified applicants with excellent academic achievements.

SCHOLARSHIPS

Whether it is in academics, leadership or commitment to your community, SMU has a range of pretigious scholarships that acknowledge your ability and tenacity.

EXAMPLES OF SCHOLARSHIPS FOR PROSPECTIVE STUDENTS

- SMU Global Impact Scholarship Programme
- SMU Merit Scholarship Programme
- Lee Kong Chian Scholars' Programme
- SIS Achievements Scholarship
- SIS Aspirations Scholarship
- SMU-School of Information Systems Scholarship
- SMU Steven Miller Scholarship
- Science & Technology Undergraduate Scholarship
- Ng Kai Wa Scholarship
- ASEAN Undergraduate Scholarship
- Li Ka Shing Endowed Scholarship
- Tahir Scholarship
- Tanoto Scholarship

Scan for more details:

INDICATIVE GRADE PROFILES

Grade Profiles of the 10th and 90th percentiles of Singapore – Cambridge GCE A-Level Applicants offered places at SMU in 2018 University Admissions Exercise

INDICATIVE GRADE PROFILE 3H2/1H1 CONTENT-BASED SUBJECTS	
10th Percentile BBC/B	90th Percentile AAA/A

Polytechnic GPAs of the 10th and 90th percentiles of Polytechnic Applicants offered places at SMU in 2018 University Admissions Exercise

INDICATIVE GRADE PROFILE GPA	
10th Percentile 3.52	90th Percentile 3.92

Information is correct as of 5 December 2018

RESEARCH HIGHLIGHTS

SIS faculty are pursuing first-rate, innovative academic research and publication while engaging in new initiatives that are problem-driven and relevant to national, regional and global needs.

COMMUNITY PARTICIPATION THROUGH MOBILE CROWDSOURCING

Powered by mobile crowdsourcing technology, *HelpBuddy* recommends activities to its users based on their preferences, task history and the anticipated proximity of their commuting paths to an activity's location. Through this app, public agencies can also help facilitate the execution of community-centric activities, and keep citizens aware of civic improvements resulting from community feedback.

FEATURES OF THE APP INCLUDE:

- Energy-efficient movement profiling
- Personalised task recommendations
- Flexible creation of activities (Images, Text, Multiple-choices)
- Server portal: Admin & Analytics

TYPE OF TASKS ASSOCIATED WITH MUNICIPAL AGENCIES:

Singapore Land Authority (SLA)
CHECKING OF STATE LAND FOR COMMUNITY USE

National Parks Board (NParks)
TREES IN BLOOM

Animal Welfare Groups / Agri-Food and Veterinary Authority of Singapore (AVA)
FINDING LOST DOGS

Ministry of Culture, Community and Youth (MCCY) / SGCares
VOLUNTEER MEDICAL ESCORT

Ministry of Culture, Community and Youth (MCCY) / SGCares
SHARING OF ITEMS

National Heritage Board (NHB)
MEMORIES OF HERITAGE SITES

National Heritage Board (NHB)
MEMORIES OF DAIRY FARM

Housing and Development Board (HDB)
CHECKING OF ELECTRONIC PARKING SYSTEM (EPS) GANTRY

National Environment Agency (NEA)
CHECKING OF GRAVITRAPS

HelpBuddy

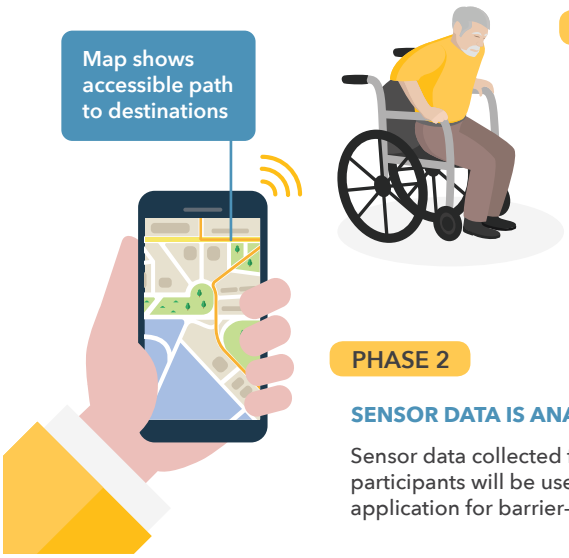
This project is jointly developed by SMU, Centre of Applied Smart-Nation Analytics (CASA) and the Municipal Services Office (MSO), through the Translational Research and Development of Application to Smart Nation (TRANS) initiative supported by the National Research Foundation of the Prime Minister's Office (NRF), and is owned and operated by the Ministry of National Development (MND).

Archan Misra
Professor of Information Systems
Associate Dean (Research)

Thivya Kandappu
Visiting Assistant Professor of Information Systems

SMART MOBILITY ACCESSIBILITY FOR BARRIER-FREE ACCESS

In light of the greying population in Singapore, the Smart Mobility & Accessibility for Barrier-free Access (SmartBFA) project builds on the emphasis to allow people with disabilities and other barrier-free access users to live, work and play in Singapore in an inclusive, fair and dignified manner.



PHASE 1

SENSORS ARE INSTALLED ON WHEELCHAIRS

Devices will be retrofitted on wheelchairs, to passively collect data on path accessibility (e.g. bumps, obstacles, slopes).

PHASE 2

SENSOR DATA IS ANALYSED

Sensor data collected from wheelchair participants will be used to create a map application for barrier-free access in Singapore.

SmartBFA

This project is in collaboration with Trampolene Limited, a non-profit organisation which develops technological solutions for the social sector.

Tan Hwee Pink
Associate Professor of Information Systems (Practice)
Academic Director, SMU-TCS iCity Lab

Tan Hwee Xian
Assistant Professor of Information Systems (Practice)

RESEARCH & PROJECT AREAS

We organise our academic research and our applied project work into the five core research competencies and four integrative research domains shown below. Many of our faculty do work that spans several of the sub-areas within each of these main areas.

Core Research Competencies

Data Science & Engineering	Cybersecurity	Information Systems & Management	Intelligent Systems & Optimization	Software & Cyber-Physical Systems
Knowledge Discovery & Data Mining	Data Security & Privacy	Economics of Information Systems & Technology	Autonomous Agents & Multiagent Systems	Mobile & Wearable Systems & Testbeds
Machine Learning & Deep Learning	Mobile Platform & Application Security	Social Media Marketing & Digital Strategies	Behavioral Modeling & Reinforcement Learning	Cyber-Physical & IoT Systems
Visual Computing & Multimedia Analytics	IoT Security & Privacy	Platforms, Networks and Markets	Game Theory & Mechanism Design	Interactive & Wearable Computing Interfaces
Spatial & Context-Aware Data Management	Computer & Software Security	Cloud Computing & Information Security Management	Heuristic Search & Optimization	Physical Sensing & Analytics
Recommender Systems & Preference Analysis	Cloud Computing Security	IT & Supply Chain Management	Planning & Scheduling	Software Mining, Testing & Analysis
Natural Language Processing & Text Mining	Human Behaviour-Based Security	Financial Information Systems & Disruptive Technology	Operations Analytics	Empirical Software Engineering
Crowdsourcing & Human Computation	Security Policy & Management	Digital Innovation Management & Entrepreneurship	Simulation & Decision Support in Transportation & Logistics	Edge & Cloud-Assisted Computing

Integrative Research Domains

Learning & Pedagogy	Urban Systems & Operations	Active Citizenry & Communities	Safety & Security
Learning & Curriculum Analytics	Crowd Management	Community Crowdsourcing & Crowdtasking	Optimisation of Security & Civil Resource Deployment
Practice & Game-Based Learning	Urban Mobility & Smart Commuting	Job & Skill Intelligence	Security of Digital Platforms & Devices
Blended Learning	Urban Logistics & Sustainability	Lifestyle & Wellness Intelligence	Privacy-Preserving Data Sharing & Analytics
Personalised Learning	Maritime Traffic Management	Urban & Social Analytics	Cybersecurity Regulations & Policies

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