

**Singapore University
of Social Sciences**

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2020
Part-time Undergraduate Programmes

SCHOOL OF SCIENCE AND TECHNOLOGY



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SUSS
SINGAPORE UNIVERSITY
OF SOCIAL SCIENCES

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MAKE YOUR MARK FOR THE GREATER GOOD

At the Singapore University of Social Sciences, your degree won't just be a piece of paper you hang on your wall, but a tool to break down walls because as an Autonomous University committed to social impact, SUSS offers a curriculum that is practice-oriented with a unique perspective.

It is an education that isn't just committed to equipping you with the job-ready skills you need, but also to empower you to realise the change you want to see.

Your journey with us will give you everything you need to make the future you want happen.

So make your move to SUSS and make your mark for the greater good.

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NACHIAPPAN SARAVANAN
BEng Electronics

SCHOOL OF SCIENCE AND TECHNOLOGY

The School of Science and Technology (SST) provides students with a rigorous curriculum, industrial-relevant training and career-advancing degree programmes.

Over the past decade, SST has built up a wide industry network, both locally and internationally, to link its degree programmes' curricula with world-renowned companies and institutions of higher learning to produce a highly industry-relevant training and a rigorous education for our students. Learning first-hand from local and international academics and practitioners, and tapping on the business acumen of successful industry leaders, our students not only attain knowledge beyond the textbook but also expand their network and net worth through engagement with these esteemed teaching faculties. Our inclusive, immersive and in-employment education transforms SST graduates into professionals equipped with the relevant knowledge, employable skills and work experience.

The school is proud that many of its programmes offered, such as the Aerospace Systems, Facilities and Events Management, Building and Project Management, Electronics and the Human Factors in Safety, are accredited with renowned local and international accreditation bodies. Moreover, many SST programmes are also unique – they fill niches not occupied by other higher learning institutions to give our graduates a competitive edge in employment.

Our school leverages on technology to empower students with a flexible learning path, where they decide when and how they want to learn. Choose from a list of exciting undergraduate degree programmes and allow SUSS to help open the door of opportunities for you.

A Message from the Dean

“ Welcome to SST! I invite you to make the leap and expand your skills and knowledge at SST. I look forward to meeting you on campus.”

Professor
ATTALLAH SAMIR
Dean
School of Science
and Technology

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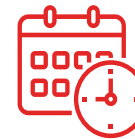
**GOOD REASONS
TO STUDY AT
Singapore University
of Social Sciences**



PRACTICE-ORIENTED
APPROACH



HIGH ACADEMIC
STANDARDS



FLEXIBLE
AND SELF-PACED
LEARNING



FOCUS ON
REAL-WORLD
LEARNING



INDUSTRY-
RELEVANT
CURRICULA



EXPERIENCED
FACULTY MEMBERS
AND INDUSTRY
EXPERTS



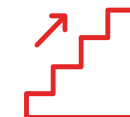
MORE THAN
70 DEGREE
PROGRAMMES
OVER 5 SCHOOLS



GOVERNMENT
TUITION GRANT OR
SUBSIDY FOR ELIGIBLE
STUDENTS



WELL-DESIGNED
ONLINE LEARNING
RESOURCES



LIFELONG
EDUCATIONAL
OPPORTUNITIES



BACHELOR OF BUILDING AND PROJECT MANAGEMENT



Programme Overview

This programme is a partnership between the Singapore University of Social Sciences and BCA Academy (BCAA). The programme equips students with a repertoire of specialist knowledge and skills for a productive management of construction projects. Students will be trained in a broad spectrum of competencies including interdisciplinary studies in building design and technology, construction management, international project management, cost management, contract administration, safety management and sustainability.

The programme has been accredited by the Royal Institution of Chartered Surveyors (RICS), UK and the Singapore Institute of Surveyors and Valuers (SISV). It is also recognised for the Quantity Surveying (QS) discipline by the Public Sector Panels of Consultants (PSPC).

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses and 10 cu of General Electives, which are courses offered under the General Studies Programme (course pre-requisites apply). All courses are 5 cu unless stated otherwise.

This programme has an Honours option. Students who achieve a CGPA of 3.5 and above upon completion of their basic degree may be invited to enrol in the Honours programme, which will be offered if the requisite number of students is met. Students who accept the invitation will need to complete another 40 cu of courses to achieve 170 cu in total and have to satisfy all university requirements in order to graduate with an Honours degree.



Whom is this for?

This programme is suitable for aspiring project managers or practicing professionals in the built environment sector.



Career Prospects

Graduates with a degree in Building and Project Management have a wide range of career opportunities. They will have the flexibility and proficiency to take up roles in areas such as Project Management, Construction Management, Facility Management, Cost Management/ Estimation/ Quantity Surveying, Procurement and Contract Administration etc.

The programme is recognised by professional institutions such as the Royal Institution of Chartered Surveyors (RICS), Society of Project Managers (SPM) and Singapore Institute of Surveyors and Valuers (SISV).

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 90 cu)

Level 1

- Interdisciplinary Studies in Construction
- Construction Law
- Construction IT and BIM
- Building Services
- Construction Technology
- Materials Technology
- Contract Administration

Level 2

- Construction Economics
- Construction Project Management
- Productivity Management
- Cost Management for Architectural Works¹
- Cost Management for C&S Works¹
- Procurement Management

Level 3

- Life-Cycle-Costing and Sustainable Design and Construction
- Project Development and Finance
- Project Scheduling and Control
- Cost Planning and Estimation
- Cost Management for M&E Works¹

Honours Compulsory Courses (Total 25 cu)

Level 4

- Professional Practices and Case Studies in Construction Project Management
- International Construction Project Management
- Advanced Construction Technology
- Capstone Building and Project Management Project (10 cu)

Honours Elective Courses (Choose 15 cu)

Level 3

- Geospatial Applications and Analysis
- Incident and Accident Investigation
- Environmental Management and Sustainable Development

Level 4

- Quality Management System
- Energy Efficiency in Buildings
- Indoor Environmental Quality
- Renewable Energy Systems

Explanatory Note:

1. Students can choose to replace these 3 courses with 3 courses on Construction Measurement.

BEng AEROSPACE SYSTEMS



Programme Overview

The Bachelor of Engineering Aerospace Systems programme (BEHAS) combines the knowledge of aerospace engineering, avionics systems and aviation management in a part-time teaching mode, thus allowing students to continue with their daytime work in the aerospace and aviation industry to acquire the practical experience, whilst at the same time being given the opportunity to upgrade their knowledge and skillset both in depth and breadth. The partnership with a world renowned aerospace academic institution, Cranfield University, together with local industry partners such as ST Engineering Aerospace and Republic of Singapore Air Force ensures that the curriculum stays relevant to the industry.

In the area of aerospace engineering, the curriculum is designed to emphasize the disciplines of materials, structures, propulsion, aerodynamics, flight dynamics, control, and manufacturing. In the area of avionics systems, the curriculum consists of a number of electrical and electronics engineering courses and further provides system courses to integrate the knowledge into aircraft system design, operation and maintenance. Finally, the area of aviation management covers various topics across maintenance, airport and airline management.

The programme is designed for practising professionals and graduates with diplomas or GCE 'A' Levels. The diploma holders are typically from the courses of Aeronautical Engineering, Mechanical Engineering, Aerospace Electronics, Electrical and Electronics Engineering, Mechatronics Engineering, Manufacturing Engineering, or Aviation Management.

This is a direct Honours programme. Students are required to complete a total of 170 credit units (cu) of courses, inclusive of 10 cu of SUSS core courses, in order to graduate. Graduating students who meet the eligibility criteria for an honours classification will be awarded an honours degree based on aggregate academic performance measured by the cumulative grade point average (CGPA) assessed throughout the degree programme. All courses are 5 cu unless stated otherwise.

The programme is accredited by the Engineering Accreditation Board (EAB), Institution of Engineers Singapore (IES). Through this accreditation, the BEHAS degree is recognised in Singapore and other countries in the Washington Accord.

Students in this programme are eligible to register for student membership with The Institution of Engineers, Singapore (IES). For more information, please visit www.ies.org.sg.



Whom is this for?

This programme is suitable for working adults in the aerospace and aviation sector, other manufacturing sectors, and Singapore Armed Forces, as well as students who are keen on enhancing their knowledge, skills and understanding of aerospace and aviation.



Career Prospects

Equipped with comprehensive knowledge and skills in aerospace engineering, avionics systems and aviation management, the BEHAS graduates are eminently qualified to work in aerospace maintenance, repair and overhaul (MRO) and manufacturing companies, airport and airline companies, aerospace startups, as well as the Singapore Armed Forces. Rigorous academic training in analytical, computational and system design skills also enables the graduates to find their career path in non-aerospace industries such as ground transportation, automotive, mechatronics, and software companies.

Compulsory Courses (Total 135 cu)

Level 1

- Aerospace Management
- Introduction to Aerospace Engineering
- Introduction to Engineering Materials and Aeromaterials
- Thermo-Fluid Mechanics
- Analogue Electronics Design
- Digital Electronics Design
- Intellectual Property and Patents
- Calculus I
- Human Factors and Systems Design
- Structured Programming
- Object Oriented Programming

Level 2

- Aerospace Propulsion
- Fundamentals of Corrosion and Fracture Mechanics
- Linear Systems Analysis and Design
- Fundamentals of Mathematical Methods and Mechanics
- Further Mathematical Methods and Mechanics
- Fundamentals of Mathematical Modelling

Level 3

- Aerospace Dynamics
- Aerostructures - Properties and Performance
- Aircraft Electrical, Instrument Systems/Servomechanisms and Electronics
- Avionics Systems Design
- Flight Dynamics and Control
- Digital Signal Processing
- A Primer on Aerospace and Aviation @ Cranfield – one week full-time course (10 cu)¹

Level 4

- Capstone Aerospace Engineering Project (10 cu)

Elective Courses (Choose 25 cu)

Level 3

- Radar System Applications²
- Strategic Asset, Property and Facilities Management
- Safety, Risk and Resilience Engineering²
- Overseas Experiential Learning (Shanghai/Hangzhou)

Level 4

- Robotics Mechanics and Control²
- Aerospace Vehicles Design^{1,2}
- Aircraft Engineering^{1,2}
- Airport Planning and Management¹
- Airport Transport Management¹
- Computer Systems Architecture, HCI and Graphical Interfaces²
- Degradation and Protection for Aerospace²
- Design and Manufacture of Composites²
- Flight Line and Hangar Management
- Aviation Finance
- Aviation Change Management
- Manufacturing Systems²
- Reliability-Centered Maintenance²
- Numerical Analysis²

Explanatory Notes:

¹ Courses from Cranfield University.

² Choose at least 3 courses (15 cu) from this group of elective courses.

Programme Offered in Collaboration with:





BEng ELECTRONICS



Programme Overview

The BEng Electronics programme provides technical depth and breadth to prepare graduates for a rewarding career in the electronics industry. It is structured to develop and train students with an in-depth knowledge of electronics, telecommunications, and IT.

Students have a choice for specialisation in areas such as VLSI design, analogue and digital control system design, telecommunication system design and multimedia systems.

This is a direct Honours programme. Students are required to complete a total of 170 credit units (cu) of courses, inclusive of 10 cu of SUSS core courses, in order to graduate. Graduating students who meet the eligibility criteria for an honours classification will be awarded an honours degree based on aggregate academic performance measured by the cumulative grade point average (CGPA) assessed throughout the degree programme. All courses are 5 cu unless stated otherwise.

This programme is accredited by the Engineering Accreditation Board (EAB), Institution of Engineers Singapore (IES). Through this accreditation, the BEng Electronics degree is recognised in Singapore and other countries in the Washington Accord.

Students in this programme are eligible to register for student membership with The Institution of Engineers, Singapore (IES). For more information, please visit www.ies.org.sg.



Whom is this for?

This programme equips graduates with a balanced and comprehensive range of knowledge and skills in electronics, telecommunications and IT, and is suitable for working adults in the electronics and related industries.



Career Prospects

Graduates from this programme should be able to work in industries such as electronics, telecommunication, semiconductor foundries and control plants, amongst others.

Compulsory Courses (Total 130 cu)

Level 1

- Analogue Electronics Design
- Digital Electronics Design
- Design of Logic Systems
- Intellectual Property and Patents
- Calculus I
- Calculus II
- Principles of Project Management
- Structured Programming
- Object Oriented Programming

Level 2

- Linear Systems Analysis and Design
- Filter Theory and Design
- Fundamentals of Mathematical Methods and Mechanics
- Further Mathematical Methods and Mechanics
- Numerical Methods and Advanced Calculus
- Fundamentals of Statistics and Probability
- Engineering Ethics
- Internet of Things (IoT)

Level 3

- Microprocessor Programming
- Computer Communications
- Digital Communications
- Digital Signal Processing
- Machine Learning
- Basic Mathematical Optimization
- Wireless Communication Systems

Level 4

- Capstone Electronics Project (10 cu)

Elective Courses (Choose 30 cu)

Level 1

- Human Factors and Systems Design

Level 2

- Engineering Economics and Analysis

Level 3

- Analogue Control System Design
- Digital Control System Design
- Electronic Materials
- Semiconductor Devices
- VLSI Design 1
- VLSI Design 2
- Radar System Applications
- RF and Microwave Design of Wireless Systems
- Computer Interactive Graphics
- Safety Management and Audit
- Environmental Management and Sustainable Development
- Virtual Reality and Augmented Reality
- Aircraft Electrical, Instrument Systems Servomechanisms and Electronics

Level 4

- Flight Line and Hangar Management
- Reliability-Centered Maintenance



BSc BIOMEDICAL ENGINEERING



Programme Overview

Combining engineering concepts with the world of life sciences to address biomedical engineering issues, this programme provides students with the knowledge and skills to identify, define and solve problems in biology and medicine, and build your capability to develop better medical devices and instruments to enhance the standard of healthcare.

In the BSc Biomedical Engineering programme, students will be trained in core biomedical engineering, and specialised biomedical engineering areas of rehabilitation engineering, bioinformatics, and medical electronics. This programme prepares students for employment in the medical device/electronics industry, hospitals, private health organisations, and positions involving direct contact with healthcare, rehabilitation, and human performance.

This is a direct Honours programme. Students are required to complete a total of 170 credit units (cu) of courses, inclusive of 10 cu of SUSS core courses and 10 cu of General Elective courses, which are courses offered under the General Studies Programme (course pre-requisites apply), in order to graduate. Graduating students who meet the eligibility criteria for an honours classification will be awarded an honours degree based on aggregate academic performance measured by the cumulative grade point average (CGPA) assessed throughout the degree programme. All courses are 5 cu unless stated otherwise.

Students in this programme are eligible to register for student membership with The Institution of Engineers, Singapore (IES). For more information, please visit www.ies.org.sg.



Whom is this for?

This programme is suitable for practicing professionals in the biomedical and healthcare sectors who wish to upgrade their academic qualifications from GCE 'A' Level or diploma to a degree.



Career Prospects

Graduates from this programme are suitable for employment in the medical device/electronics industry, hospitals, private research organisations, and positions involving direct contact with healthcare, rehabilitation, and human performance.

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Principles of Project Management
- Human Factors and Systems Design

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 90 cu)

Level 1

- Essentials of Bioelectronics
- Introduction to Chemistry and Biochemistry
- Anatomy and Physiology
- Physiology and Infectious Diseases

Level 2

- Biomedical Ethics
- Biomedical Informatics
- Fundamentals of Bioengineering
- Applied Biomechanics
- Biomaterials
- Clinical Trials
- Healthcare Standards and Regulations
- Statistical Methods and Inference

Level 3

- Biomedical Devices
- Rehabilitative and Assistive Engineering
- Biomedical Sensors and Measurements
- Biomedical Instrumentation and Systems

Level 4

- Capstone Biomedical Engineering Project (10 cu)

Elective Courses (Choose 40 cu)

Level 2

- Numerical Methods and Advanced Calculus
- Healthcare Administration
- Experimental Biomedical Laboratory Skills

Level 3

- Advanced Biomechanics and Modelling
- Advanced Biomaterials
- Cardiovascular Bioengineering
- Genomic Sequence Analysis
- Functional Genomics
- Advanced Biomedical Instrumentation
- Medical Imaging
- Visualisation and Image Analysis
- Computer Interactive Graphics
- Virtual Reality and Augmented Reality
- Advanced Experimental Biomedical Laboratory Proficiency
- Applications of AI in Healthcare
- Overseas Experiential Learning (Shanghai/Hangzhou)

BSc BIOMEDICAL ENGINEERING WITH PARAMEDICINE AND EMERGENCY RESPONSE

BSc BIOMEDICAL ENGINEERING WITH MINOR



Programme Overview

This programme incorporates the application of engineering techniques in biological sciences and medicine, together with specialised paramedicine and emergency management courses from the Justice Institute of British Columbia, Canada's leading public safety educator providing tertiary education in areas of justice and public safety. Students in this programme will also have the opportunity to spend time at JIBC's main campus and use the Institute's simulation and PRAXIS technology. With the Minor in Paramedicine and Emergency Response, graduates are armed with additional emergency health related knowledge and policy development skills. We expect our graduates from this degree programme to think, act and speak with confidence in any chosen emergency management related career.

This is a direct Honours programme. Students are required to complete a total of 170 credit units (cu) of courses, inclusive of 10 cu of SUSS core courses, in order to graduate. Graduating students who meet the eligibility criteria for an honours classification will be awarded an honours degree based on aggregate academic performance measured by the cumulative grade point average (CGPA) assessed throughout the degree programme. All courses are 5 cu unless stated otherwise.

Students in this programme are eligible to register for student membership with The Institution of Engineers, Singapore (IES). For more information, please visit www.ies.org.sg.

You may also pursue Biomedical Engineering as a single subject or in combination with a minor.

Please refer to the SUSS website for more details of the minor courses.



Whom is this for?

This programme is suitable for working adults who aspire to enter professions in the biomedical/health-related industries or emergency services and management sectors, as well as those who wish to upgrade their skills and knowledge in biomedical, healthcare and emergency management.



Career Prospects

Graduates from this programme are suitable for employment in the medical device/electronics industry, hospitals, research organisations, private emergency services and management industry, and positions involving direct contact with healthcare, rehabilitation, human life and performance.

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Principles of Project Management
- Human Factors and Systems Design

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Paramedicine and Emergency Response Courses (Choose 40 cu)*

Level 2

- Emergency Preparedness and Response Planning
- Human Resource Management

Level 3

- Crisis Communication
- Terrorism, CBRNE Incidents and Major Health Crisis¹
- Ethical Issues in Public Safety¹
- Policy Development and Implementation¹
- Leadership in Paramedicine^{1,2}
- Operational Leadership in Paramedicine^{1,2,3}
- Risk Assessment and Management

Compulsory Courses (Total 90 cu)

Level 1

- Essentials of Bioelectronics
- Introduction to Chemistry and Biochemistry
- Anatomy and Physiology
- Physiology and Infectious Diseases

Level 2

- Biomedical Ethics
- Biomedical Informatics
- Fundamentals of Bioengineering
- Applied Biomechanics
- Biomaterials
- Clinical Trials
- Healthcare Standards and Regulations
- Statistical Methods and Inference

Level 3

- Biomedical Devices
- Rehabilitative and Assistive Engineering
- Biomedical Sensors and Measurements
- Biomedical Instrumentation and Systems

Level 4

- Capstone Biomedical Engineering Project (10 cu)

Elective Courses (Choose 10 cu)

Level 2

- Numerical Methods and Advanced Calculus
- Healthcare Administration
- Experimental Biomedical Laboratory Skills

Level 3

- Advanced Biomechanics and Modelling
- Advanced Biomaterials
- Cardiovascular Bioengineering
- Genomic Sequence Analysis
- Functional Genomics
- Advanced Biomedical Instrumentation
- Medical Imaging
- Visualisation and Image Analysis
- Computer Interactive Graphics
- Virtual Reality and Augmented Reality
- Advanced Experimental Biomedical Laboratory Proficiency
- Applications of AI in Healthcare
- Overseas Experiential Learning (Shanghai/Hangzhou)

Explanatory Notes:

¹ Courses from Justice Institute of British Columbia.

² Students are to complete either one of the courses.

³ Compulsory for MINDEF / SAF / SCDF sponsored students.

⁴ Students reading BSc Biomedical Engineering with minor programme will take 40 cu of minor courses in place of the Paramedicine and Emergency Response courses.



BSc DIGITAL MEDIA

BSc DIGITAL MEDIA WITH MINOR



Programme Overview

This programme trains creative media technologists for the burgeoning multimedia industry. Its multi-disciplinary framework anchors students through foundational mastery in key knowledge areas, and then equips them with the requisite specialist know-how and skills in strategic areas of expertise, including electronic media systems, computing/IT, multimedia networks, as well as media communication.

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses and 10 cu of General Electives, which are courses offered under the General Studies Programme (course pre-requisites apply). All courses are 5 cu unless stated otherwise.

This programme has an Honours option. Students who achieve a CGPA of 3.5 and above upon completion of their basic degree may be invited to enrol in the Honours programme, which will be offered if the requisite number of students is met. Students who accept the invitation will need to complete another 40 cu of courses to achieve 170 cu in total and have to satisfy all university requirements in order to graduate with an Honours degree.

Students in this programme are automatically members of the Singapore Computer Society Student Chapter.

You may pursue Digital Media as a single subject or in combination with a minor in Military Studies. For BSc Digital Media with Military Studies, students are to complete 20 cu of SST core courses, 30 cu of Digital Media compulsory courses, 30 cu of Digital Media elective courses, 40 cu of minor courses (Military Studies), and 10 cu of SUSS core courses.

Please refer to the SUSS website for details of the minor course.



Whom is this for?

This programme is suitable for those who are looking to earn a qualification to work in the digital media industries, as well as working professionals who wish to upgrade their knowledge and skills in digital media technology.



Career Prospects

Graduates may work as digital media specialists, graphic artists, photographers, designers, audio and video producers, computer game designers, mobile phone app developers or even teach digital media topics in schools,

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 60 cu)

Level 1

- Fundamentals of Mathematics
- Digital Photography Technology
- Creative Design Fundamentals
- History of Media
- Structured Programming

Level 2

- Application of C++ in Multimedia
- Fundamentals of Graphics Design
- Advanced Graphics Design
- Audio Technology
- Video Technology
- Internet Technologies

Level 3

- Applications of Multimedia Networks

Elective Courses (Choose 30 cu)

Level 1

- Digital Photography Techniques

Level 3

- Audio and Video Production Techniques
- Android Application Development
- Interactive Digital Animation
- Computer Music Composition Techniques
- Advanced Audio Music Technology
- Computer Interactive Graphics
- Visual Effects Design
- Multi Camera Production Principles
- Television Studio Production
- Virtual Reality and Augmented Reality
- Game Design and Development
- Virtual Reality Filmmaking
- Online Channel Creation & Management
- iOS Application Development
- Overseas Experiential Learning (Shanghai/Hangzhou)

Honours Compulsory Course (Total 10 cu)

Level 4

- Capstone Multimedia Technology Project (10 cu)

Honours Elective Courses (Choose 30 cu)¹

Level 1

- Digital Photography Techniques

Level 3

- Audio and Video Production Techniques
- Android Application Development
- Interactive Digital Animation
- Computer Music Composition Techniques
- Advanced Audio Music Technology
- Computer Interactive Graphics
- Visual Effects Design
- Multi Camera Production Principles
- Television Studio Production
- Virtual Reality and Augmented Reality
- Game Design and Development
- Virtual Reality Filmmaking
- Online Channel Creation & Management
- iOS Application Development
- Overseas Experiential Learning (Shanghai/Hangzhou)

Explanatory Note:

¹ Students enrolled in the Honours programme are to complete an additional 30 cu of elective courses.



BSc FACILITIES AND EVENTS MANAGEMENT



Programme Overview

Singapore University of Social Sciences, together with BCA Academy and Singapore Polytechnic's School of Architecture and the Built Environment, have designed an innovative programme that integrates the fields of Facilities Management (FM) with Events Management (EM).

FM is a broad field of study and practice that requires engineering knowledge as an essential backdrop to management know-how. It covers competency areas like operations and management, real estate, human and environmental factors, planning, project management, leadership, finance, quality assessment, innovation, communication, and technology. On the other hand, EM is seemingly more management in practice. Apart from specialised knowledge in EM, some of the required management skills are similar to those in FM.

By having a programme that integrates facilities expertise with events management, students will be equipped with a firm foundation in leadership, planning, design, finance, communication and management skills together with the essential specialised EM and FM technology areas. This will ensure that they have flexible career options and have the knowledge in large-scale events management and green building management.

The programme is accredited by the International Facilities Management Association (IFMA) and the Royal Institution of Chartered Surveyors (RICS).

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses and 10 cu of General Electives, which are courses offered under the General Studies Programme (course pre-requisites apply). All courses are 5 cu unless stated otherwise.

This programme has an Honours option. Students who achieve a CGPA of 3.5 and above upon completion of their basic degree may be invited to enrol in the Honours programme, which will be offered if the requisite number of students is met. Students who accept the invitation will need to complete another 40 cu of courses to achieve 170 cu in total and have to satisfy all university requirements in order to graduate with an Honours degree.



Whom is this for?

This programme is recommended for aspiring facilities or events managers, or those who are keen to pursue a career in the facilities and events industries.



Career Prospects

The need for Facilities Managers: To achieve the Inter-Ministerial Committee for Sustainable Development's (IMCSD) target for 80% of buildings to be Green Mark certified by 2030, Singapore needs about 6,000 facilities management professionals within the next ten years. This undergraduate degree would help in meeting this demand by producing practitioners with the requisite knowledge, skill and competency to manage buildings effectively and optimise the use of resources (such as energy and water) in the operation of buildings.

The need for Events Managers: According to the Singapore Tourism Board, Singapore's MICE (Meetings, Incentives, Conventions & Exhibitions) sector is a key growth area of the tourism industry. This undergraduate degree would help in meeting this demand for events managers, and equipping them with the requisite knowledge, skill and competency to plan, create and manage unique and memorable events.

Graduates with a degree in Facilities and Events Management will be well-equipped to pursue successful careers in facilities or events/hospitality management.

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 90 cu)

Level 1

- Building Services
- Construction Technology
- Contract Administration
- Materials Technology
- Fire Safety Management

Level 2

- Event Planning, Creation and Management
- Procurement Management
- Venue and Space Management
- Security Services for the Built Environment

Level 3

- Building Diagnostics
- Energy Management and Audit
- Green Building Assessment Standards
- Logistics and Site Operations
- MICE Management
- Property Law
- Building Information Modelling for Facilities Management
- Operations & Maintenance of Building Services
- Strategic Asset, Property and Facilities Management

Honours Compulsory Course (Total 10 cu)

Level 4

- Capstone Project (10 cu)

Honours Elective Courses (Choose 30 cu)

Level 3

- Building and Events Regulations and Compliance
- Geospatial Applications and Analysis
- Services Marketing
- Safety Management and Audit
- Safety Standards, Legislation and Best Practices
- Overseas Experiential Learning (Shanghai/Hangzhou)
- Hospitality and Tourism Management

Level 4

- Energy Efficiency in Buildings
- F&B Management
- Indoor Environmental Quality
- Leisure and Attractions Management
- Quality Management Systems
- Renewable Energy Systems
- Special and Mega Events
- Software Applications in Events and Facilities Management (10 cu)

Programme Offered in Collaboration with:

BCA ACADEMY



BSc HUMAN FACTORS IN SAFETY

BSc HUMAN FACTORS IN SAFETY WITH MINOR



Programme Overview

Human Factors (also known as ergonomics) is concerned with how people interact with technology, and how their physical and operational environments affect them. It is the study of the capabilities and limitations of people applied to the design of systems, products and work environments to ensure that people are safe and healthy at work and are also able to perform effectively and efficiently.

This Human Factors in Safety programme covers key knowledge and skills in both the Human Factors discipline and Workplace Health and Safety. You will be equipped with knowledge on the variability of human characteristics (age, size, strength, sensory and cognitive ability, prior experience, expectations and goals, etc.) and the complexities of technologies and work processes, and organisational contexts. You will learn how to analyse and control Workplace, Safety and Health (WSH) hazards, understand various safety and risk management systems, perform and report on WSH audit and investigate workplace accidents. You will also be armed with knowledge on how to evaluate and design or redesign equipment, workplaces, environments and systems to improve safety, health, performance and satisfaction using human factors principles and methodology.

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses and 10 cu of General Elective courses, which are courses offered under the General Studies Programme (course pre-requisites apply). All courses are 5 cu unless stated otherwise.

You may pursue Human Factors in Safety as a single subject or in combination with a minor in Military Studies. For BSc Human Factors in Safety with Military Studies, students are to complete 80 cu of Human Factors in Safety compulsory courses, 40 cu of minor courses (Military Studies) and 10 cu of SUSS core courses. Please refer to the SUSS website for the list of Human Factors in Safety compulsory courses and for details of the minor course.

The BSc Human Factors in Safety programme is accredited by the Institution of Occupational Safety and Health (IOSH), UK and is recognised by Singapore Ministry of Manpower (MOM) for WSH Officer registration.



Whom is this for?

This programme is suitable for those looking to join the WSH workforce to play a role in raising the work safety standards in Singapore, as well as WSH professionals wanting to further upgrade their knowledge and skills in WSH and in Human Factors.

Those currently working in industries that require them to be involved in ensuring TOTAL WSH - Workers' Safety and Health - but have little or no human factors engineering or ergonomics knowledge, those who want to know how to apply HF principles to design products, systems and services to improve usability and user experience, and those who are simply interested to learn more about people - e.g., how we process information and make decisions, why we make mistakes or what motivates us, etc. - and looking for practical applications for such knowledge are also welcome.



Career Prospects

As Singapore aims to be one of the safest countries in the world to work in, this means that there is a growing need for Workplace, Safety and Health professionals in Singapore.

Mr. Gan Kim Yong, Acting Minister for Manpower, made the following statement at the BizSafe Convention, 2009, "Currently, we have only over 4,000 trained WSH Professionals. My Ministry has projected that we need to grow the size of the local pool of WSH professionals to 19,000-strong by 2018". Getting a degree in this discipline will give you the first step in moving into this profession.

SST Core Compulsory Courses (Total 5 cu)

Level 1

- Human Factors and Systems Design

Compulsory Courses (Total 85 cu)

Level 1

- Anatomy and Physiology
- Cognition and Information Processing¹
- Psychology for Human Factors¹

Level 2

- Behavioural Based Safety¹
- Emergency Preparedness and Response Planning
- Environmental Hazards and Toxicology¹
- Human Factors Methods
- Occupational Biomechanics¹
- Statistical Methods and Inference
- Workplace Evaluation and Design¹

Level 3

- Cognitive Systems Engineering¹
- Environmental Management and Sustainable Development¹
- Incident and Accident Investigation¹
- Risk Assessment and Management¹
- Safety Management and Audit¹
- Safety, Risk and Resilience Engineering¹
- Safety Standards, Legislations and Best Practices¹

Elective Courses (Choose 20 cu)

Level 1

- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Fatigue Management¹
- Human Factors in Defence and Security
- Overseas Experiential Learning (Shanghai/Hangzhou)
- Strategic Management of Technology
- Universal Design
- Innovative Safety Coaching and Leadership
- User Centred Design for Interactive Systems

Explanatory Note:

¹ Courses accredited by Ministry of Manpower as "structured activities" for Workplace Safety and Health officer to obtain SDUs for certificate renewal.

BSc INFORMATION AND COMMUNICATION TECHNOLOGY



Programme Overview

This programme covers the study of technology that handles information and enables communication. A key feature of the programme is the incorporation of industry certification and practitioner-oriented courses. Students are provided with a strong theoretical foundation in the various technologies related to the handling, processing, and communication of information. Graduates will be industry-ready and well prepared for a multitude of careers in the infocomm industry.

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses. All courses are 5 cu unless stated otherwise.

This programme has an Honours option. Students who achieve a CGPA of 3.5 and above upon completion of their basic degree may be invited to enrol in the Honours programme, which will be offered if the requisite number of students is met. Students who accept the invitation will need to complete another 40 cu of courses to achieve 170 cu in total and have to satisfy all university requirements in order to graduate with an Honours degree.

Students in this programme are automatically members of the Singapore Computer Society Student Chapter.



Whom is this for?

This programme is suitable for those who have a keen interest in areas related to Infocomm Technology and wish to pursue a career in ICT.



Career Prospects

Graduates would be prepared to embark on a technical career in areas such as:

- Software Development
- Systems Analysis
- System/Network Administration
- IT Project Management

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 70 cu)

Level 1

- Computer Architecture
- Structured Programming
- Object Oriented Programming

Level 2

- Data Programming
- Web Application Development
- Computer Networking
- Operating Systems
- Management Information Systems
- Enterprise Systems and Integrated Business Process

Level 3

- Application Analysis and Design
- Network Security
- Information Security Offence Defence and Incident Management
- Database Management Systems
- Cloud Computing: Business Case and Technical Models

Elective Courses (Choose 30 cu)¹

Level 2

- Huawei Certified ICT Associate (HCIA) - Routing & Switching (10 cu)
- Oracle Certified Associate (10 cu)
- Red Hat System Administration (10 cu)
- IT Service Management Fundamentals
- Business Analysis (10 cu)
- Data Structures and Algorithms I
- Data Structures and Algorithms II

Level 3

- IT Project Management (10 cu)
- Big Data Computing in the Cloud
- Information Security Challenges in Smart Computing
- Fundamentals of Concurrent Systems
- Concurrent Systems and Applications
- Overseas Experiential Learning (Shanghai/Hangzhou)
- Cryptography
- iOS Application Development
- Android Application Development

Honours Compulsory Course (Total 10 cu)

Level 4

- Capstone Project (10 cu)

Honours Elective Courses (Choose 30 cu)

Level 1

- Calculus I
- Calculus II

Level 2

- Internet of Things (IoT)
- Internet Technologies
- Linear Algebra
- Fundamentals of Statistics and Probability
- Statistical Methods and Inference
- Data Structures and Algorithms I
- Data Structures and Algorithms II

Level 3

- Microprocessor Programming
- Machine Learning
- Game Design and Development
- Virtual Reality and Augmented Reality
- Principles of Regression Analysis
- Applications of Regression Analysis
- Basic Statistical Methods in Experimental Design
- Advanced Statistical Methods in Experimental Design

Level 4

- Robotics Mechanics and Control

Explanatory Note:

¹ Up to 10 cu of Elective Courses can be replaced by 10 cu of General Electives, which are courses offered under the General Studies Programme (course pre-requisites apply).

BSc INFORMATION TECHNOLOGY AND BUSINESS (ERP)



Programme Overview

This unique programme incorporates technical IT and business-specific courses together with specialised Enterprise Resource Planning (ERP) courses from SAP, the world-wide leader of ERP software. The changing needs of today's challenging business environment provide a growing demand for graduates who are versatilists with sound business knowledge and strong IT technical skills to handle technology as well as manage functional processes.

The added specialisation in SAP's ERP software will ensure graduates are industry-ready and well-prepared for a multitude of careers in the infocomm industry and IT end-user organisations.

This is a direct Honours programme. Students are required to complete a total of 170 credit units (cu) of courses, inclusive of 10 cu of SUSS core courses, in order to graduate. Graduating students who meet the eligibility criteria for an honours classification will be awarded an honours degree based on aggregate academic performance measured by the cumulative grade point average (CGPA) assessed throughout the degree programme. All courses are 5 cu unless stated otherwise.

Students in this programme are automatically members of the Singapore Computer Society Student Chapter.



Whom is this for?

This programme is suitable for those who have an interest in both Business and ICT specialising in enterprise resource planning.



Career Prospects

Graduates would be prepared to take up positions such as:

- Business Analyst
- ERP Solution Consultant
- Systems Integrator

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

Compulsory Courses (Total 90 cu)

Level 1

- Organisational Behaviour
- Structured Programming
- Object Oriented Programming

Level 2

- Contract and Agency Law
- Data Programming
- Web Application Development
- Operating Systems
- Computer Networking
- Management Information Systems
- Enterprise Systems and Integrated Business Process
- Business Analysis (10 cu)
- Financial and Managerial Accounting
- Marketing Management

Level 3

- Application Analysis and Design
- Database Management Systems

Level 4

- Capstone ICT Project (10 cu)

SAP Module¹ (Total 30 cu)

Level 3

- SAP Financials-Financial Accounting (30 cu)
- SAP Financials-Management Accounting (30 cu)
- SAP Procurement (30 cu)
- SAP Order Fulfillment (30 cu)
- SAP Manufacturing (30 cu)

Elective Courses (Choose 20 cu)

Level 2

- Essentials of Financial Management
- Financial Accounting
- Managerial Accounting
- IT Service Management Fundamentals

Level 3

- Operations Management
- IT Project Management (10 cu)
- Cloud Computing: Business Case and Technical Models
- Big Data Computing in the Cloud
- Overseas Experiential Learning (Shanghai/Hangzhou)
- Machine Learning

Explanatory Note:

¹ The SAP Module can only be taken after the 1st semester.

BSc MATHEMATICS



Programme Overview

Students will learn to appreciate and understand the language of mathematics as well as learning logical and critical thinking skills that can be applied to formulate and solve real-life problems. The BSc Mathematics programme is suitable for those who intend to teach Mathematics, or to use mathematics in a professional way in fields such as IT, Engineering, Management Science, Finance, etc.

This programme prepares students with a firm foundation in mathematics with an emphasis on applied mathematics and statistics. Students will then have the opportunity to study topics in diverse areas such as analytics, cryptography, data science, financial mathematics and optimisation.

Students are required to complete a total of 130 credit units (cu) to graduate with a basic degree, inclusive of 10 cu of SUSS core courses. All courses are 5 cu unless stated otherwise.

This programme has an Honours option. Students who achieve a CGPA of 3.5 and above upon completion of their basic degree may be invited to enrol in the Honours programme, which will be offered if the requisite number of students is met. Students who accept the invitation will need to complete another 40 cu of courses to achieve 170 cu in total and have to satisfy all university requirements in order to graduate with an Honours degree.



Whom is this for?

This programme is suitable for those who wish to acquire mathematical content that develops a rich and fascinating skill set.

Mathematics can and is often studied for its own merit and so offers graduates a personal and fascinating insight into the very fabric of reasoning as well as imparting graduates strong analytical skills that can be exploited in many diverse areas such as teaching, research, finance, management, logistics, computing, and so on.



Career Prospects

A Singapore University of Social Sciences mathematics degree is the ideal first degree. It prepares you with strong quantitative/analytic and problem solving skills which are highly sought after in many diverse fields including finance, management, logistics, research, computing, IT and of course, teaching.

Compulsory Courses (Total 70 cu)

Level 1

- Fundamentals of Mathematics
- Calculus I
- Calculus II
- Principles of Project Management

Level 2

- Analysis I – Limits, Sequences and Series
- Analysis II – Power Series and Calculus
- Linear Algebra
- Advanced Linear Algebra
- Fundamentals of Mathematical Methods and Mechanics
- Fundamentals of Mathematical Modelling
- Further Mathematical Methods and Mechanics
- Numerical Methods and Advanced Calculus
- Fundamentals of Statistics and Probability
- Sustainable Society Through Innovative Technology

Elective Courses (Choose 50 cu) (at least 30 cu must be at Level 3)

Level 1

- Structured Programming
- Object Oriented Programming

Level 2

- Statistical Methods and Inference
- Principles of Financial Mathematics
- Foundations of Asset Pricing Models
- Data Structures and Algorithms I
- Data Structures and Algorithms II

Level 3

- Fundamentals of Complex Analysis¹
- Applied Complex Analysis¹
- Principles of Graph Theory
- Applications of Graph Theory
- Principles of Applied Probability
- Further Applied Probability
- Applied Regression Analysis I
- Applied Regression Analysis II
- Basic Mathematical Optimization
- Advanced Mathematical Optimization
- Coding Theory
- Cryptography
- Basic Statistical Methods in Experimental Design
- Advanced Statistical Methods in Experimental Design
- Overseas Experiential Learning (Shanghai/Hangzhou)

Honours Compulsory Courses (Total 20 cu)

Level 3

- Fundamentals of Complex Analysis¹
- Applied Complex Analysis¹
- Capstone Mathematics Project (10 cu)

Honours Elective Courses (Choose 20 cu)

Level 1

- Structured Programming
- Object Oriented Programming

Level 2

- Statistical Methods and Inference
- Principles of Financial Mathematics
- Foundations of Asset Pricing Models
- Data Structures and Algorithms I
- Data Structures and Algorithms II

Level 3

- Principles of Graph Theory
- Applications of Graph Theory
- Principles of Applied Probability
- Further Applied Probability
- Applied Regression Analysis I
- Applied Regression Analysis II
- Basic Mathematical Optimization
- Advanced Mathematical Optimization
- Coding Theory
- Cryptography
- Basic Statistical Methods in Experimental Design
- Advanced Statistical Methods in Experimental Design
- Overseas Experiential Learning (Shanghai/Hangzhou)

Explanatory Note:

¹These two courses are compulsory for the Honours programme. If you have taken one or both of these courses as electives in the basic degree programme, please choose another one or two electives from the elective basket to fulfil the additional 40 cu requirement of the Honours programme.

SCHOOL OF SCIENCE AND TECHNOLOGY CORE COMPULSORY COURSES



Programme Overview

The School of Science and Technology (SST) provides students with an empowered, profession-centric education that is rigorous and relevant through its various programmes, grounding them in specialised professional competency. To augment this and to enhance the marketability, employability and competency of our graduates, we offer the SST core, which consists of four modules. The SST core is intended to groom students into corporate leaders who are able to THINK, LEAD and EXECUTE in a way that is socially responsible, steering their organisations to navigate the ever-changing business environment with success. Our graduates, the next generation of corporate leaders in the fields of technology, will contribute to the triple-bottomline (TBL) considerations of PEOPLE, PLANET and PROFIT for our economy.

Principles of Project Management provides insights to help students LEAD and EXECUTE management projects to meet their industry/company needs.

Human Factors and Systems Design and Sustainable Society through Innovative Technology implement the PEOPLE and PLANET aspects of triple-bottomline (TBL).

Strategic Management of Technology applies systems and design thinking concepts to the analysis of strategic management issues. Students will gain a general management perspective on integrating technology and strategy, training them to strategise (THINK) while taking into account the TBL consideration of PROFIT. Taken together, the SST Core transforms SST's graduates into responsible corporate leaders for the global economy.

SST Core Compulsory Courses (Total 20 cu)

Level 1

- Human Factors and Systems Design
- Principles of Project Management

Level 2

- Sustainable Society Through Innovative Technology

Level 3

- Strategic Management of Technology

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MINOR COURSES

The SUSS School of Science and Technology offers the following minor courses:

- Algorithmic Development
- Digital Media
- Information Technology
- Military Studies (Only for SAF regulars)
- Mobile Application Development
- Paramedicine and Emergency Response (Only for BSc Biomedical Engineering major)

An SUSS student reading any programme with a minor option can choose to take any minor course offered by the University, subject to meeting specific requirements of his/her programme and the minor courses.

Please visit suss.edu.sg for the full list of minor courses available.

JOIN US

ADMISSION CRITERIA

1. Singapore Citizens, Singapore Permanent Residents or residents in Singapore
2. • GCE 'A' Level with two passes (prior to 2006) or two H2 passes (from 2006), or
 - Local Polytechnic Diploma, or
 - International Baccalaureate (IB) Diploma, or
 - NUS High School Diploma, or
 - Diploma from ITE or other diploma qualifications plus an acceptable SAT or ACT (with Writing) may be considered on a case-by-case basis
3. At least two years of full-time work experience, or currently employed on a full-time basis*
4. At least 21 years old

* Applicants who have fully completed National Service will be deemed to have fulfilled the work experience criterion.

Some programmes may have additional requirements. Please refer to the individual programme pages for details.

Shortlisted applicants may be required to undergo one or more interview(s) and/or take written admission or other evaluation tests as may be prescribed by SUSS from time to time. All applications are considered individually on merit, and the offer of admission will depend on the number of places available. Admission is solely at the discretion of the Singapore University of Social Sciences.

TUITION FEES

Our tuition fees are on par with those of other local universities. The amount of course fees you pay in each semester depends on the number of courses you take in that semester. The course fees cover all study materials, classes, tutor supervision, assignments and examinations. They do not include fees for textbooks and other additional items specified by SUSS from time to time.


SCHOLARSHIPS AND FINANCIAL AID

SUSS offers scholarships to outstanding students pursuing their undergraduate studies with the University in recognition of their excellent academic achievements, leadership qualities, special talents and contributions.

There are also various types of financial aid available to students who need financial assistance during the course of their study.

Please visit suss.edu.sg for more details on the admission criteria, tuition fees and other information.





EVENTS AND ACTIVITIES



CONVOCATION LUNCH & INDUSTRY NETWORKING
(14 OCTOBER 2017)



ART & PHOTOGRAPHY EXHIBITION
(04 MARCH 2017)



ART + DESIGN SHOWCASE @ SUSS
(10 MARCH 2018)



SINGAPORE INSTITUTE OF SURVEYORS AND VALUERS (SISV) -SUSS SIGNING OF SERVICE AGREEMENT (23 MARCH 2018)



MULTIMEDIA FILMMAKERS TALK
(19 AUGUST 2017)



CONTINUING EDUCATION AND TRAINING IN AEROSPACE (CETAS) CEREMONY
(13 JANUARY 2018)



SCHOOL OF SCIENCE & TECHNOLOGY BIANNUAL CAPSTONE PRESENTATION
(02 DECEMBER 2017)



HUMAN FACTORS & ERGONOMICS SOCIETY OF SINGAPORE (HFESS) SYMPOSIUM (29 -30 AUGUST 2017)



SCHOOL OF SCIENCE & TECHNOLOGY BIANNUAL NEW STUDENTS WELCOME TEA (02 DECEMBER 2017)

