Teaching Institutions

1 Centre for English Language and Communication

1.1 Centre’s Commitment

The Centre for English Language Communication (CELC) was established in 1979. It plays a vital role in enhancing the English language and communication skills of both local and international undergraduate and graduate students at the National University of Singapore.

CELC’s mission is to empower its students to acquire effective English language and communication skills for their academic and professional lives through innovative teaching, promotion of independent learning and engagement in research related to ELT. To achieve this mission, its strategic goals are to:

- provide well designed and relevant programmes
- prepare students for the communication needs of the university and the workplace
- promote independent learning through the provision of self access learning environments
- adopt innovative teaching practices grounded in research
- design and administer effective language assessments
- enhance professional growth by keeping abreast of current developments in theory, research, pedagogy and Information Technology
- conduct classroom based research on the teaching of English and communication skills
- collaborate with departments and faculties across the university to meet students’ language and communication needs
- share expertise with ELT practitioners through publications, conferences and academic collaboration

For more information on CELC and the modules offered, please go to: http://www.nus.edu.sg/celc

1.2 Key Contact Information

For up-to-date information, please visit the Centre's website at: http://www.nus.edu.sg/celc

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Ms LEE Gek Ling	Associate Director Course Coordinator, ES2660	6107	elcleegl
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Ms Sarah CHONG	Course Coordinator, ENV1202	66013919	elcchon
Dr Misty COOK	Course Coordinator, ES2331	3876	elcmsw
Dr Misty COOK & Mr Patrick GALLO	Course Coordinators, EPP1 & EPP2	3876 1942	elcmsw elcgpb
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Ms Susan LEE	Course Coordinator, ES2007D	66013920	elclmss
Mr Daron LOO	Course Coordinator, ES5000	3874	elcdbl
Ms Laetitia MONBEC & Mr Christopher James BEDWELL	Course Coordinators, ES1103	3868 66012487	elclm elccjb
Dr Anuradha RAMANUJAN & Dr Jason BANTA	Program Coordinators, Ideas & Exposition modules	66011462 66011472	elcar elcjlb

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Ms Dara RICHARD	Course Coordinator, ES1601	1043	elcdlr
Mrs Chitra SABAPATHY	Course Coordinator, IS3103	3866	elccs
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Mr Richard SEOW	Course Coordinator, EM1201 and EM1202	3885	elcshsr
Ms Sylvia SIM	Course Coordinator,IS2101 and SDE/DBS embedded courses	66012505	elcsimsc
Dr James D. STEPHEN	Course Coordinator, SP2171	8876	elcjds
Dr Abdel Halim SYKES	Course Coordinator, PR4196	6084	elcabhs
Mr TANG Kum Khuan	Course Coordinator, ES1531/GEK1549/GET1021	6080	elctkk
Dr Jessie TENG	Course Coordinator, GET1034	3727	elctengj
Ms Anita TOH	Course Coordinator, CS2101	3884	elcatal
Ms Brenda YUEN	Course Coordinator, ES1000	13921	elcbypl
Dr ZHOU Ziqian & Ms Aileen LAM	Course Coordinator, FAS1101	6156 6083	elczz elclwa
Dr ZHU Shenfa	Course Coordinator, ES5001A	63872	elczs
Ms Regina SO	Associate Director (Administration)	7447	elcsor
Ms CHEOK Bee Khim	Manager	6955	elccbk
Ms KWONG Mew Yuen	Manager (IT)	1943	elckmy
Ms Edna KOH	Manager	66011340	elcknle
Ms BOO Chiu Suen	Assistant Manager	66017217	elcbooc

2 Institute of Systems Science

2.1 Institute's Commitment

The Institute of Systems Science, National University of Singapore (NUS-ISS) is committed to developing business and digital leaders and professionals for the future economy, through our Graduate & Executive Programmes.

Established in 1981, the Institute of Systems Science at the National University of Singapore (NUS-ISS) develops digital talent for the industry through graduate education, professional development programmes, consultancy, applied research and career services. NUS-ISS is widely recognized as a champion of the national Skills Future movement, enabling a digital economy that is always learning and always leading.

NUS-ISS has implemented a unique portfolio of multiple learning pathways, with a wide spectrum of programmes in critical industry disciplines such as software development, data science, artificial intelligence, cybersecurity, smart health, digital government and digital innovation.

NUS-ISS offers a myriad of pathways to help individuals around the world acquire new skills and knowledge. These holistic pathways enrich lives, grow careers and provide more opportunities for advancement in the industry. We help professionals and students stay relevant and competitive in an increasingly digitised world. With our range of immersive programmes, courses and services, we equip students with the necessary knowledge and relevant skills they need to embark on a lifelong journey of learning.

Our practice oriented graduate programmes create leaders and technology innovators looking to carve out a successful career in the Tech industry. Students learn from experienced lecturers with strong industry background and a record of applying their experience to solve real world problems. A hallmark of our programmes are the key internship and capstone project modules, which allow our students to learn as they deliver real outcomes in organisations in Singapore and overseas. We offer multiple graduate degrees strongly aligned to building the smart nation.

Please visit the NUS-ISS website at: http://www.iss.nus.edu.sg for more details.

2.2 Key Contact Information

For up-to-date information, please visit the Faculty's website at: http://www.iss.nus.edu.sg

Tittle & Name	Designation/Responsibility	Telephone	Email
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2.3 Programmes Offered

The Programme offers the following graduate degrees by coursework:

2.3.1 Master of Technology in Enterprise Business Analytics [MTECH EBAC]

2.3.2 Master of Technology in Intelligent Systems [MTECH IS]

2.3.3 Master of Technology in IT Leadership [MTECH ITL]

2.3.4 Master of Technology in Software Engineering [MTECH SE]

2.3.5 Graduate Diploma in Systems Analysis [GDIPSA]

2.3.1 Master of Technology in Enterprise Business Analytics [MTECH EBAC]

Overview

The MTech EBAC programme prepares students for specialist, expert and leadership roles in enterprise business analytics to create business value through strategic use of data, analytics, models and frontline tools.

By contributing to more effective utilisation and management of data analytics, you can help your enterprise to focus on big decisions so that they gain better predictive ability that can translate to higher profits. Helping enterprises to build better and more effective models will lead to improved outcomes such as more attractive pricing, higher levels of customer care, better market segmentation and highly-efficient inventory and supply chain management.

Graduates of the programme will be capable of undertaking tasks such as:

Discovering insights from data
Applying concepts and techniques to solve major business problems
Designing and customizing targeting marketing campaign
Analysing sales channels
Optimising the marketing mix of their organisations
Improving decision-making to increase returns on investments for their organisations
Predicting the future profitability of their organisations

Learning outcomes:

Help enterprises move towards a stronger emphasis on computer tools and statistical techniques to develop high-performance analytics capability
Translate massive and complex unstructured data into insights
Produce predictive models to solve a broad range of problems across various business functions and units
Contribute to the development of more effective business strategies and plans for sustainable growth and competitive advantage

Recognition:

Top student is awarded the IBM Medal and Book Prize
Best Project Prize

2.3.2 Master of Technology in Intelligent Systems [MTECH IS]

Overview

The MTech IS programme emphasises the concepts, techniques and methods of Artificial Intelligence, and their application to the development of Intelligent Systems applications. The programme provides you with the essential knowledge and practical experience needed to become an Artificial Intelligence and Intelligent Systems specialist, and prepares you to be able to lead the development of Intelligent Systems in providing effective and optimal business solutions for your organisation.

Learning outcomes:

- Apply Intelligent Systems concepts, techniques and methods to solve varied problems across multiple domains including: business, manufacturing, engineering, heathcare etc.
- Lead the development of Intelligent Systems using contemporary tools and techniques, including Artificial Intelligence, Machine Learning, Prediction, Forecasting, Classification, Clustering and Optimisation
- Design and customise algorithms to solve complex business problems and create strategic advantage

Recognition:

- Top student is awarded the SPH Medal and Prize
- Best Project Prize

2.3.3 Master of Technology in IT Leadership [MTECH ITL]

Overview

The MTech ITL programme will equip students with the critical knowledge, hard and soft skills to lead technology value realisation in any organisation. These include taking on more complex responsibilities in handling accompanying risks, challenges and uncertainties, and the operation of stable, mission-critical systems.

The curriculum has been created in consultation with foremost IT and business leaders, and will be jointly delivered by NUS alongside practising Chief Information Officers and IT leaders.

Learning outcomes:

Be strategic, agile and innovative
Be operationally sound and smart
Create business value and understand financial implications
Effectively communicate ideas and strategic business cases
Nurture effective relationships with business partners, users and other stakeholders

The programme is offered on:

Full-time basis: Minimum of one year to maximum of two years
Part-time basis: Minimum of two years to maximum of four years

2.3.4 Master of Technology in Software Engineering [MTECH SE]

Overview

The MTech SE programme emphasises the skills required for architecting scalable, secure and smart systems and platforms. The focus will also be exploitation of software technologies, methodologies and management techniques. It focuses on the practical and systematic construction of software systems, using innovative and state-of-the-art techniques. The programme will equip you with the essential knowledge and practical experience to architect, design, build and manage the delivery of robust software systems for your organisation and customers.

Learning Outcomes:

- Become software architects capable of architecting and designing systems that exploit major contemporary software platforms, technologies and methodologies
- Become software architects capable of architecting and designing smart and secure systems
- Become data architects equipped with data engineering skills to engineer big data from a variety of sources

Recognition:

- Top student is awarded the Accenture Medal and Prize
- Best Project Prize

2.3.5 Graduate Diploma in Systems Analysis [GDIPSA]

Overview

The GDipSA programme is best suited for non-IT graduates intending to craft a new career path in the IT industry. IT graduates who wish to advance their careers in their current field and recognise the need to equip themselves with the latest IT knowledge and skills to stay relevant may apply as well.

Having graduated 44 batches of students, this programme is going into its 47th intake. Many of our graduates are now prominent senior IT professionals, who have benefited from this programme.

Students who embark on this hands-on programme will be exposed to lectures, workshops, laboratory sessions, projects and a 5-month internship. We have designed numerous projects into the programme. The aim is to equip them with the necessary foundation to code, test, implement and troubleshoot IT solutions covering web and mobile platforms.

By the end of the programme, you will be equipped with sought-after technical skills and valuable soft skills.

Graduates of this programme may choose to upgrade your skills after gaining a few years of work experience in the IT industry. You will be fully eligible to take up a Master degree with NUS and universities. Our Master of Technology programmes, offered in full-time and part-time formats, are designed for working IT professionals and managers who wish to advance their knowledge and skills.

Technical learning outcomes:

Gather user requirements
Systematically analyse and design feasible IT solutions
Select the right technology
Code, test and implement proposed solutions
Trouble-shoot problems

Non-technical learning outcomes:

Problem solving
Project management
Teamwork
Leadership

2.4 Programme Requirements

2.4.1 Master of Technology

Course Objective

The Master of Technology (MTech) programme offers degrees in Enterprise Business Analytics, Intelligent Systems, IT Leadership and Software Engineering. Key elements of the MTech programme are the internship and capstone project modules. All students will undertake a team-based project or internship to acquire relevant real world experiences and gain further insights into the realities and challenges of the industry.

The MTech programme is designed to produce highly employable IT professionals and data scientists who will be comprehensively equipped with the knowledge and skills required by the local and regional industry. In addition to full-time study, they provide IT, science and engineering professionals the opportunity to upgrade their skills by studying part-time while pursuing their careers.

This programme will lead to the award of a Master's degree by the National University of Singapore.

Admission Requirements

To gain admission to the programmes, applicants must possess the following pre-requisites:

- Bachelor's degree preferably in Science or Engineering and a grade point average of at least B
- Proficiency in the English Language (Written and Spoken)*
- Have passed an entrance test (applicable only for EBAC/IS/SE)
  - NUS-ISS may, at its discretion, accept GRE general test in lieu of NUS-ISS entrance test in genuine cases e.g. a candidate lives in a country where NUS-ISS does not administer entrance tests or candidate had valid reasons that prevented him/her from attending the NUS-ISS entrance test when it was administered
- Have received a favourable assessment at admissions interview conducted by NUS-ISS

English Language Proficiency

- *Applicants who graduated from universities where English is not the medium of instruction should submit TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System) score as evidence of their proficiency in the English language.*

TOEFL	*Paper-based test (580)* *Computer-based test (237)* *Internet-based test (85)*
IELTS	*Result of 6.0*

- *Institution code of NUS-ISS for TOEFL is 2432*

- *TOEFL and IELTS are only valid for five years after the test and the validity should not expire before the beginning of the application period for the coursework programme.*

MTech EBAC:

- Preferably two years relevant working experience
  - IT, engineering and scientific professionals would make ideal candidates
  - Candidates with highly relevant degrees in Mathematics, Statistics, Econometrics, Management Science, Operational Research or similar, with consistently good academic records may be granted a work experience waiver

MTech IS:

- Preferably two years relevant working experience
  - As an IT professional, e.g. software developer, business analyst, or as a domain expert working in an arear where Knowledge Engineering can be applied
  - Candidates with highly relevant IT degrees, with consistently good academic records and good practical software development knowledge gained either through course work, course projects or professional IT certifications may be granted a work experience waiver

MTech ITL:

- Have an equivalent of a good NUS undergraduate honours degree preferably in IT, Science, Engineering or a related discipline
- Have the following relevant work experience or equivalent:
  - A minimum of 5 years of work experience in IT management or business management
  - Experience working in major leading IT roles, such as software development, maintenance, system management etc
  - Complete and upload two application essay questions given in the MTech Form

MTech SE:

- Preferably four years relevant working experience
  - As a software engineer e.g. programmer, designer, technical team lead
  - Candidates who have lesser than four years relevant experience with good practical software engineering knowledge gained either through course work, course projects or work experience may be considered. Have passed an entrance test administered by ISS.

Period of Candidature

MTech EBAC/IS/SE

The Master's Programmes are available in full-time, part-time and stackable formats. The duration for the full-time programme is 1 year, and for the part-time programme, 2 years. The programmes are also available via the stackable pathway.

MTech ITL:

The Master’s Programme is available in full-time and part-time. The duration for the full-time programme is 1 year, and for the part-time programme, 2 years.

Student Commitment

MTech EBAC/IS/SE

Candidates must complete and pass the mandatory certificate/s from the fundamental area, any 2 certificates from the specialist areas as well as complete a capstone project.

MTech ITL

Candidates must complete and pass 10 compulsory core courses as well as complete a capstone project.

Assessment/Examinations

MTech EBAC/IS/SE

Students are evaluated through a combination of course work, project work and examinations. All students are required to complete a three-hour examination for each fundamental and specialist module taken.

Students who fail a module will be asked to withdraw. A minimum average grade across all examinations and practice assessments must be achieved to be awarded the degree.

MTech ITL

All candidates will be assessed by a combination of continuous assessment assignments, class participation and mid-term assessments, as well as the output produced for the capstone project module.

A minimum average grade across all examinations and practice assessments must be achieved to be awarded the degree.

2.4.2 Graduate Diploma in Systems Analysis

Course Objective

The Graduate Diploma in Systems Analysis programme is designed for graduates who recognise the need to equip themselves with the latest IT knowledge and skills, and wish to advance their careers in their current field. It also provides an opportunity for non-IT graduates in crafting a new career path in the IT industry.

Admission Requirements

Applicants must possess the following pre-requisites:

- Bachelor degree from a recognised university
- Proficiency in the English Language (written and spoken)
- Some work experience preferred

All applicants are required to take an aptitude test. Shortlisted applicants will also need to attend an interview. Foreigners are welcome to apply.

Student Commitment

This is a full-time one-year programme consisting of two semesters and an industry attachment. Classes will be held from Mondays to Fridays, 9.00 am to 5.00 pm.

Examinations

To be awarded the graduate diploma, trainees must possess a satisfactory performance in continuous assessments, examinations, projects, industrial attachment and meet the minimum Cumulative Average Point (CAP) set by NUS.

2.5 Financial Assistance and Awards

The Accenture Gold Medal and Book Prize is awarded to the best student successfully completing the Master of Technology (Software Engineering) course. The SPH Gold Medal & Book Prize is awarded to the best student successfully completing the Master of Technology (Intelligent Systems) course.

The IBM Gold Medal & Prize is awarded to the best student in the Graduate Diploma in Systems Analysis course. The ISS Prize is awarded to the student who is second in the examination. The Accenture Prize is awarded to the best internship team in the course.