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1 Centre for English Language and Communication

1.1 Centre's Commitment
1.2 <u>Key Contact Information</u>

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: $\underline{\text{http://www.nus.edu.sg/celc}}$

Title & Name	Designation/Responsibility	Telephone (6516- XXXX)	Email (XXXX@nullnus.edu. sg)
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Ms Happy GOH	Associate Director Course Coordinator, FoE embedded courses	6095	elcgohkp
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Dr CAO Feng	Course Coordinator, ES5002	66015012	elccf
Ms Sarah CHONG	Course Coordinator, ENV1202	66013919	elcchon
Dr Misty COOK & Ms LEE Kit Mun	Course Coordinators, ES2331 & EG1111/EG1112	3876 66011466	elcmsw elclkm
Dr FONG Yoke Sim	Course Coordinator, ES5101	8879	elcfys
Mr Patrick GALLO	Course Coordinator, ES1601	1942	elcgpb
Dr Natalie HUDSON &Ms Christalla HAVADJIA	Course Coordinators, FAS1102	660149926081	elcnh elcchc
Ms Susan LEE	Course Coordinator, ES2007D	66013920	elclmss
Dr LEE Ming Cherk	Course Coordinator, ES1102	6085	elclmc
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Ms Laetitia MONBEC & Mr Christopher James BEDWELL	Course Coordinators, ES1103	386866012487	elclm elccjb
Dr Nadya Shaznay PATEL	Course Coordinator,	6106	elcnsp
& Mr TANG Kum Khuan	ES1531/GEK1549/GET1021	6080	elctkk
Mrs Chitra SABAPATHY	Course Coordinator, IS3103	3866	elccs
Dr Sirinut SAWATDEENARUNAT	Course Coordinator, ES1541/SP1541	66014991	elcss
Mr Richard SEOW	Course Coordinator, EM1001, EM1002, 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
Dr Jessie TENG	Course Coordinator, GET1034	3727	elctengj
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Ms Edna KOH	Manager	66011340	elcknle
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Title & Name	Designation/Responsibility	Telephone (6516- XXXX)	Email (XXXX@nullnus.edu. sg)
Ms BOO Chiu Suen	Assistant Manager	66011683	elcbcs
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2 Institute of Systems Science

- 2.1 Institute's Commitment
- 2.2 Key Contact Information
- 2.3 Programmes Offered
 - 2.3.1 Master of Technology in Enterprise Business Analytics [MTECH EBAC]
 - 2.3.2 Master of Technology in IT Leadership [MTECH ITL]
 - 2.3.3 Master of Technology in Knowledge Engineering [MTECH KE]
 - 2.3.4 Master of Technology in Software Engineering [MTECH SE]
 - 2.3.5 Graduate Diploma in Systems Analysis [GDIPSA]
- 2.4 Programme Requirements
 - 2.4.1 Master of Technology
 - 2.4.2 Graduate Diploma in Systems Analysis
- 2.5 Financial Assistance and Awards

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.

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

TITLE & NAME	DESIGNATION/RESPONSIBILITY	TELEPHONE	EMAIL (XXXX@NULLNUS.EDU.SG)
Dr LEONG Mun Kew	Deputy Director & Chief, Graduate Programme	6601 1235	isslmk
Dr Esther TAN	Chief, GDip Systems Analysis Programme / Head, Graduate Administration	6516 2515	isstane
Ms Jessie HOO	Manager, Graduate Studies	6516 6769	isshooy
Ms TAN Li Rong	Executive, Graduate Programme	6516 2516	isstlr
Ms Jaime TAN	Assistant Manager, Systems Analysis Programme	6516 7829	isstmcj
Ms Jocelyn TAY	Executive, Graduate Studies	6601 3161	issjtjh
Ms Doris WONG	Course Administrator (Graduate Studies)	6516 1654	isswpc
Mr Kenny CHOW	Executive, Graduate Programme	6516 6153	isskccy
Ms Levilyn CHUA	Executive, Graduate Programme	6516 5037	issclwl

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 IT Leadership [MTECH ITL]
- 2.3.3 Master of Technology in Knowledge Engineering [MTECH KE]
- 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 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

2.3.3 Master of Technology in Knowledge Engineering [MTECH KE]

Overview

The MTech KE programme emphasises concepts, techniques and methods of Intelligent Systems, and their application to the development of data analytics applications. The programme will equip you with the essential knowledge and practical experience to become a knowledge engineering and data analytics specialist, and lead the development of intelligent systems to provide effective and optimal business solutions for your organisation.

Learning outcomes:

Apply Intelligent Systems concepts, techniques and methods to solve typical business problems
Lead the development of Intelligent Systems using existing tools and techniques, including 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

2.3.4 Master of Technology in Software Engineering [MTECH SE]

Overview

The MTech SE programme emphasises the understanding and exploitation of software technologies, methodologies and management techniques. It focuses on the practical and systematic construction of software solutions, using innovation techniques.

The programme will equip you with the essential knowledge and practical experience to design, build and manage the delivery of robust computing solutions for your organisation and customers.

Learning Outcomes:

Become technically-oriented software project managers capable of successfully delivering projects that meet international quality standards and apply major software technologies and methodologies Become management-aware software architects capable of architecting and designing systems that exploit major contemporary software platforms, technologies and methodologies, and leading development work in a managed quality-oriented environment

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 42 batches of students, this programme is going into its 45th 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 2.4.2 Graduate Diploma in Systems Analysis

2.4.1 Master of Technology

Course Objective

The Master of Technology (MTech) programme offers degrees in Software Engineering, Knowledge Engineering, Enterprise Business Analytics and IT Leadership. 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 programme, candidates will be required to meet the following criteria:

- 1. Possess an undergraduate degree, preferably in Science or Engineering and a grade point average of at least B
- 2. Preferably have 2 years relevant working experience.

MTech SE:

- Preferably have 2 years relevant working experience as an IT professional in software development or maintenance (e.g. programmer, designer, software project manager).
- Please note that 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 KE:

- Preferably have 2 years relevant working experience as an IT professional (e.g. software developer, business analyst) or as a domain expert working in an area where Knowledge Engineering can be applied.
- Please note that candidates with highly relevant IT degrees, with consistently good academic records, and good practical computing knowledge gained either through course work, course projects or professional IT certifications may be granted a work experience waiver.

MTech EBAC:

• Preferably have 2 years relevant working experience. IT, engineering and scientific professionals would

make ideal candidates. However, those with work experience as domain experts, working in an environment where they can apply Business Analytics, would also be acceptable candidates.

• Please note that 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 ITL:

- Possess the **equivalent** of a good NUS undergraduate honours degree preferably in IT, Science, Engineering or a related discipline.
- Possess 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 in software development, maintenance, system management, etc.
- Complete and upload two application essay questions given in the MTechForm (other info).
 - 3. Have passed an entrance test administered by ISS.
- Certain candidates who possess highly relevant Honours/Masters/PhD degrees may be granted entrance test waiver after assessing their application.
- ISS may, at its discretion, accept GRE general test in lieu of ISS entrance test in genuine cases (eg: a candidate lives in a country where ISS does not administer entrance tests or candidate had valid reasons that prevented him/her from attending the ISS entrance test when it was administered.)
 - 4. Have received a favourable assessment at an admissions interview conducted by ISS.
 - 5. Have a high proficiency in the English language (spoken and written). International applicants who graduated from universities where English is not the medium of instruction may be asked to take TOEFL/IELTS.
- TOEFL : Paper-based test (580)

: Computer-based test (237)

: Internet-based test (85)]

• IELTS: Result of 6.0

Note: Institution code of NUS-ISS for TOEFL is 2432

Period of Candidature

MTech SE/KE/EBAC:

This masters programme extends over a minimum period of two and half years, and a maximum of five years of part-time study. The programme is also available on a full-time basis over a minimum period of one and half years.

MTech ITL:

This masters programme extends over a minimum period of two years, and a maximum of four years of part-time study. The programme is also available on a full-time basis over a minimum period of one year.

Student Commitment

Candidates must successfully complete the following course components to be awarded the degree:

MTech SE/KE/EBAC:

- 1. Core courses. Each candidate is required to pass four compulsory core courses (all conducted by ISS) in their area of specialisation (either SE,KE or EBAC).
- 2. Basic electives. Each candidate is required to pass eight basic elective courses (all conducted by ISS). There is no restriction on the specialisation from which these electives can be selected e.g. SE candidates can take KE electives and vice versa.
- 3. Advanced electives. Each candidate is required to pass three advanced elective courses, conducted by ISS, FoE or SOC. There is no restriction on the specialisation from which these electives can be selected, but candidates are typically limited to a maximum of one advanced elective conducted by ISS.
- 4. Project. Each candidate is required to pass a team-based application development project in their area of specialisation (either SE, KE or EBAC).

The Core and Basic Elective units require candidates to attend 20 full-day (Mon - Fri) classes (maximum of 5 full days per semester) and 60 Saturday classes (9:00am - 5:00pm).

In addition, the project will require approximately 40 days of the candidates' own time.

For advanced elective units offered by the Faculty of Engineering or the School of Computing, candidates are required to attend 2-3 hours of lecture per week every semester. Each semester is about 12-13 weeks in duration (excluding exams).

MTech ITL:

To become MTech ITL graduates, candidates will be required to pass the 11 course modules. In addition, graduates will be required to meet the following criteria:

- 1. In no two consecutive semesters have a CAP of less than 2.5.
- 2. In no three consecutive semesters have a CAP of less than 3.0.
- 3. Achieve a minimum CAP of 3.0 after completing the entire programme.

Examinations

MTech SE/KE/EBAC:

A candidate is evaluated through a combination of coursework, project work and examinations. Candidates are required to complete a three hour examination for each core or elective course. Candidates failing a core course will be asked to withdraw. Candidates must achieve a minimum average grade across all examinations to be awarded the degree. Candidates who do not fulfil the minimum requirements of the degree will be considered for the award of the postgraduate diploma.

MTech ITL:

The performance of each MTech ITL candidate will be assessed by a combination of continuous assessment assignments, class participation and mid-term assessments for all the coursework modules taken, and by assessing the output produced by the candidate for the capstone project module.

Exemptions

MTech SE/KE/EBAC:

Candidates may be granted exemptions for the examinations of up to four basic electives, provided they have at least the equivalent of an NUS/NTU 2nd Upper Class Honours degree, and have passed the same or similar subjects.

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 (Knowledge Engineering) 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.