

**EMBARK ON A ONE-YEAR  
TRANSFORMATIONAL JOURNEY**

**GEAR UP FOR A  
DIGITAL  
FUTURE**

**Graduate  
Diploma in  
Systems  
Analysis**

Available as  
**Stackable Graduate Certificate Programme in  
Digital Solutions Development**



# Graduate Diploma In Systems Analysis

With innovation turning every business into a digital business, what are some potential ways you envision technology to help in your line of work?

The GdipSA programme is specially designed to equip both IT and non-IT professionals with the digital skills to solve real-world problems. Imagine being able to code your own mobile apps to make your job easier!

## Programme Delivery

Students who embark on this one-year full-time programme will be exposed to lectures, workshops, laboratory sessions, projects and a five-month internship.

The numerous projects, which are part of the syllabus, aim to equip students with the necessary foundation to code, test, implement and troubleshoot IT solutions covering web and mobile platforms.

### Recognition:

- Top student is awarded the IBM Gold Medal & Book Prize
- ISS Book Prize
- Accenture Best Industrial Attachment Project

## Who Should Apply

- Non-IT graduates who are keen to carve a new career in the infocomm industry
- IT graduates looking to gain practical experiences
- Mid-career professionals who want to keep themselves relevant

## Admission Criteria

- Bachelor's 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.

\*Applicants whose native tongue and medium of university instruction is not in English should submit the TOEFL or IELTS score as evidence of their proficiency in English.

TOEFL	IELTS
<ul style="list-style-type: none"> <li>• Paper-based test (580)</li> <li>• Computer-based test (237)</li> <li>• Internet-based test (85)</li> </ul>	<ul style="list-style-type: none"> <li>• Result of 6.0</li> </ul>

## How to apply?

All applicants are required to apply for our graduate coursework programme.

Intake	Registration Start Date	Registration Closing Date
February	1 July	15 October
August	2 January	15 April

\*Applicants will be notified by email after the closing date on information regarding the aptitude test arrangement.

Visit [www.iss.nus.edu.sg/gdipsa](http://www.iss.nus.edu.sg/gdipsa) to apply.



## Info Sessions

Come and find out more about the Graduate Diploma in Systems Analysis programme at our info sessions.

Visit [www.iss.nus.edu.sg/InfoSession](http://www.iss.nus.edu.sg/InfoSession) for more details. We conduct in-country aptitude tests and interviews in selected countries.



Fundamental	Graduate Certificates (in any sequence)				Capstone Project & Internship <sup>^</sup>
Foundations 30 Days	Design 23 Days	Web Applications 16 Days	Mobile Applications 10 Days	Machine Learning Applications 10 Days	Project Work (1 month) & Internship (5 months)
<b>Develop digital solutions on the .NET platform</b>	<b>Design IT solutions in the business environment</b>	<b>Design web-based solutions Using JAVA as the development platform</b>	<b>Design mobile-based solutions using Android, HTML and CSS</b>	<b>Develop machine learning applications using Python</b>	<p>Get hands on experience in designing and building an integrated IT solution to address business needs from end to end. The project work also prepares you for the industrial attachment as you gain problem solving, project management, teamwork and leadership skills</p> <p>The five-month internship is a crucial component of the programme – students get attached to the IT department of companies ranging from banking and finance to healthcare, telco and government ministries. Translate the IT knowledge to business use cases and contribute to the digital transformation of your assigned internship company.</p>
<ul style="list-style-type: none"> <li>• Attain knowledge on basic programming and object oriented programming with C#</li> <li>• Attain knowledge on algorithm and data structure with C#</li> <li>• Build Web applications using ASP.NET, Core, Microservices and Entity Framework</li> </ul> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Software Developer or Programmer on the .NET platform</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to conduct user requirement through user experience design and agile practices</li> <li>• Analyse and design software solutions to solve business problem</li> <li>• Design software solutions which can support and integrate Business Intelligence</li> <li>• Design software architecture for IOT, Cloud Architecture, Microservices, Containerisation</li> <li>• Manage a project using agile practices and deliver the project as a product release</li> <li>• Adopt the CI/CD and DevOps methods</li> </ul> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Systems Analyst</li> <li>• Business Analyst</li> </ul>	<ul style="list-style-type: none"> <li>• Implement and test end-to-end enterprise grade full stack application using Java Platform</li> <li>• Develop reactive web design techniques, model-view-controller, stream based web-flux, flexible service layering, persistence, RESTful web services and messaging facilities using the latest Spring Framework</li> <li>• Build polyglot persistence layers using JPA repositories, Hibernate, and Spring Data Framework. Learn to access them via SQL, JQL and NoSQL</li> <li>• Use effective client side frameworks such as React.JS or Angular.JS to manage event architecture and user interfaces for edge devices</li> </ul> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Software Developer or Programmer on the JAVA platform</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and package Android application using Android Studio</li> <li>• Build dynamic and reusable user interface components.</li> <li>• Store application data in Android device</li> <li>• Use phone's camera to capture photos and videos, microphone to capture audio and Android multimedia library to playback audio (mp3) and video (mp4) files.</li> <li>• Build threads and communication with threads</li> <li>• Integrate Android application with server-side functionality for full stack development</li> </ul> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Software Developer or Programmer on Mobile Web and Android platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Data Analysis with Python, Numpy, Pandas, Matplotlib, Seaborn</li> <li>• Publish services as REST API with Python</li> <li>• Understand popular machine learning models such as k-nearest neighbors, logistic regression, k-means, naïve Bayes, artificial neural network and Time Series Modelling</li> <li>• Build and evaluate performance of machine learning models using Python</li> <li>• Techniques for Feature Engineering (using Pearson Correlation) and Dimensionality Reduction (using Principal Component Analysis).</li> <li>• Introduction and application of convolutional Neural Network</li> </ul> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Machine Learning Engineer</li> </ul>	<p><b>Legend</b></p> <p><sup>^</sup>NUS Matriculation</p> <p>Convert to an NUS matriculated student upon completion of all five certificates, Subject to NUS admission requirements</p> <p><b>Job Roles</b></p> <ul style="list-style-type: none"> <li>• Software Developer or Programmer on the .NET and Mobile Web platforms</li> <li>• System Analyst</li> <li>• Business Analyst</li> </ul>

## Stackable Certificate Programme in Digital Solutions Development

The NUS-ISS Stackable Certificate Programme in Digital Solutions Development is a series of stackable certificates that you can take while pursuing your career. These certificates start with the compulsory Foundations Certificate and then Design, Web Applications, Mobile Applications and Machine Learning Applications, in your preferred sequence and pace, thus having greater flexibility to plan your own learning journey.

These certificates will enable you to become a well-rounded IT professional. You can also complete your learning journey towards the NUS Graduate Diploma in Systems Analysis with a capstone project and a 5-month internship that will give you an edge in the industry.

Visit [www.iss.nus.edu.sg/stackable-programmes](http://www.iss.nus.edu.sg/stackable-programmes) to find out more.



### Expect:



Case Studies



Assignments, Test & Examinations



Projects



Role playing



Live Demo



Workshops

## Our alumni are going places

Upon attaining an unparalleled education at NUS-ISS, you will be part of an extraordinary alumni community of leaders and innovators. Being a part of a vibrant and engaged alumni community will further enhance the value of your qualification and enrich your professional network.

### You can find GDipSA alumni in global companies like:

- Accenture
- Citibank
- Oracle
- Inland Revenue Authority of Singapore
- James Walter Thompson
- KPMG
- Seagate
- Singapore General Hospital
- NCS
- GovTech
- Infineon

## Student Profile

### STUDENT BACKGROUND

Engineering	41%
Science	21%
Business	20%
Arts	15%
Healthcare*	3%

\* Includes Pharmacy, Nursing & Medicine

### PROJECT PLACEMENT

# 494

projects were completed in companies across diverse industries, helping to drive transformation through technology.

### EMPLOYMENT

# 90%

of our students were employed upon graduation.

## Other Graduate Programmes by NUS-ISS

### Master of Technology in Intelligent Systems

Available as **Stackable Graduate Certificate Programme in Artificial Intelligence**

### Master of Technology in Software Engineering

Available as **Stackable Graduate Certificate Programme in Smart Systems & Platform**

### Master of Technology in Enterprise Business Analytics

Available as **Stackable Graduate Certificate Programme in Data Science**

### Master of Technology in Digital Leadership

Available as **Professional Certificate Programme in Digital Leadership**

## About NUS-ISS

Established in 1981, NUS-ISS nurtures digital talent for the industry through graduate education, executive education programmes, consultancy, applied research, and career services. NUS-ISS guides individuals and organisations to bridge future opportunities through a unique portfolio of multiple learning pathways such as blended learning and stackable programmes, leading the way in shaping the next curve of digital excellence.

It offers a wide spectrum of programmes in critical industry disciplines, such as digital leadership, software development, data science, artificial intelligence, cybersecurity, product management, smart health and digital innovation.

To date, over **166,000** digital leaders & professionals, **8,060** corporate clients organisations and **7,600** graduate programmes alumni have benefitted from NUS-ISS' suite of services.

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