

# ict

School of  
InfoComm  
Technology

- ▶ Common ICT Programme
- ▶ Cybersecurity & Digital Forensics
- ▶ Data Science
- ▶ Immersive Media
- ▶ Information Technology



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## Taking IT Higher

Unlock your digital future with the School of InfoComm Technology (ICT). Whether you're fighting cybercrime, transforming data into insights, designing immersive virtual experiences, or launching your own AI start-up, you'll be empowered to shape the IT solutions of tomorrow. Earn professional certifications, gain industry exposure, and participate in hackathons and masterclasses. Opening doors to the most sought-after careers, ICT equips you to reach higher.

# ict

# 4 Diplomas

## + 1 Common ICT Programme

### Common ICT Programme (N98)

Immerse in the world of infocomm technology with foundational modules from different disciplines in your first semester. At the end of the semester, you can choose one of these diploma programmes:

- Cybersecurity & Digital Forensics
- Data Science
- Immersive Media
- Information Technology

### Diploma in Cybersecurity & Digital Forensics (N94)

- Specialise in AI for Cybersecurity or Cloud Security
- Build a strong foundation in offensive and defensive cybersecurity skills through a curated and hands-on curriculum
- Boost your portfolio with in-demand industry certifications
- Gain a head start with internships of up to one year at renowned organisations

### Diploma in Data Science (N81)

- Specialise in Data Engineering or Generative AI
- Harness the power of data to make strategic business decisions
- Become a highly sought-after AI talent with a solid foundation in data analytics and machine learning
- Earn professional certifications from industry leaders such as Nvidia, Google, Alteryx and Singapore Computer Society

### Diploma in Immersive Media (N55)

- Gain technical and creative skills needed for immersive media
- Learn how to bridge design and technology with user experience and user interface (UX/UI) design
- Learn gamification concepts to develop enjoyable games or extended reality experiences (AR, VR & MR)

### Diploma in Information Technology (N54)

- Learn how to develop innovative IT solutions, and gain access to exciting learning pathways such as the OCBC-NP Technology Young Talent Programme
- Customise your curriculum by selecting 3 modules from 4 specialisation areas:
  - Artificial Intelligence
  - Cloud Computing
  - Enterprise Computing
  - Software Engineering

### NP-UNIVERSITY PATHWAY\* New

Start your uni studies ahead of your peers, thanks to the University Pathway Programmes with SMU and SUTD! Both pathways let you earn credits that count towards your future degree with either of two prestigious unis, all while studying at NP!



### DOUBLE MAJOR\* New

Be among the first poly students to pursue a Second Major in Business. Gain an edge with this dual qualification, which will unlock new opportunities for your career and further studies.

\*For selected students only

# Why Choose ICT



### In-Demand Skills For Next-Gen Careers

Graduate with certifications from industry leaders such as Amazon Web Services, Nvidia, and IBM. Gain valuable skills and stand out in the job market!



### Smart Learning Spaces

Our advanced playlabs offer hands-on experience with industry-leading tools for AI, cybersecurity, analytics, user experience design, and agile development. Get ready for a dynamic and tech-driven future by experimenting with cutting-edge technology.



### Real-World Learning

Become industry-ready through one-year internships and industry projects. Apply your skills by competing in local and overseas competitions, workshops, hackathons, and tech festivals. Hone practical skills and expand your professional network.

### Strong Industry Ties

Our strong links with renowned organisations offer exciting opportunities for learning and talent development.



# What Industry Says



“Technology has been a lifeline during the pandemic, keeping businesses open, students learning, social lives connected and essential services flowing; and it will continue to be the backbone of society as we pivot to the new digital reality. Standing at the forefront of today’s tech-driven reality, Dell Technologies is excited to partner with NP to nurture the next generation of young talents who will drive growth and improve lives via technology in our digital future.”

**Andy Sim**  
Vice-President and Managing Director, Dell Technologies (Singapore)



“As a leader in cybersecurity, we are proud to support the next generation of talent in Singapore by providing NP with industry expertise. Our experts impart valuable advice on the AI skills required for students to embark on successful careers in the future. As part of this partnership, students will learn to use AI to identify real-time threats, participate in discussions about industry developments, and better understand the role of a cybersecurity professional.”

**Germaine Tan**  
Vice-President of Cyber Risk Management, Darktrace



“As more companies accelerate their digital transformation efforts, the tech talent crunch has become a significant challenge. We deeply value the partnership with NP on this very meaningful Technology Young Talent Programme which will contribute significantly towards tackling this issue. Every internship under the programme is customised according to a student’s strengths and area of study – which is time consuming to do – but we feel that this is worthwhile in order to develop the right tech talent.”

**Praveen Raina**  
Head of Group Operations and Technology, OCBC Bank



## Pair Your Diploma with THAT SOMETHING XTRA

Take 1 or 2 Learning Units in an area that piques your interest. Or complete 3 Learning Units to get a Minor.

### WHY PLP?

#### Because you get to:

- ▶ Try out something interesting.
- ▶ Gain additional skills outside of your course.
- ▶ Graduate with Xtra qualifications: Diploma + Minor.
- ▶ Take charge of your own learning and enjoy the journey.

The choice is yours. Our **Personalised Learning Pathway (PLP)** lets you choose what you’d like to learn from 4 different pathways and more than 50 Learning Units (LUs).

Mix and match your LUs or take up 3 specific LUs to earn a Minor. Go on an overseas trip or attend a masterclass. Discover fun, freedom and fulfillment when you personalise your learning with PLP!

To check out the wide range of interesting LUs, visit [www.np.edu.sg/plp](http://www.np.edu.sg/plp) or scan the QR code here!



### Personalise Your Learning with 4 Exciting Pathways & 12 Minors



#### PROFESSIONAL SKILLS PATHWAY

- Minor In**
- ▶ Applied Psychology
  - ▶ Cybersecurity
  - ▶ Data Analytics & AI
  - ▶ Social Media Marketing
  - ▶ User Experience Design
  - ▶ Robotics & Innovation **New**



#### ENTREPRENEURSHIP PATHWAY

- Minor In**
- ▶ Entrepreneurship



#### GLOBAL READINESS PATHWAY

- Minor In**
- ▶ Foreign Languages
  - ▶ Global Readiness



#### SOCIAL LEADERSHIP PATHWAY

- Minor In**
- ▶ Sustainable Care **New**
  - ▶ Environmental Sustainability
  - ▶ Social Leadership

# N98

## Common ICT Programme



Get latest updates on course



› Gateway to one of four popular ICT diplomas:

- Cybersecurity & Digital Forensics
- Data Science
- Immersive Media
- Information Technology

› Customise your learning with a wide variety of electives offered in all ICT courses

› Through **foundational learning and exposure to industry trends**, our career & professional preparation modules will help you choose your career path

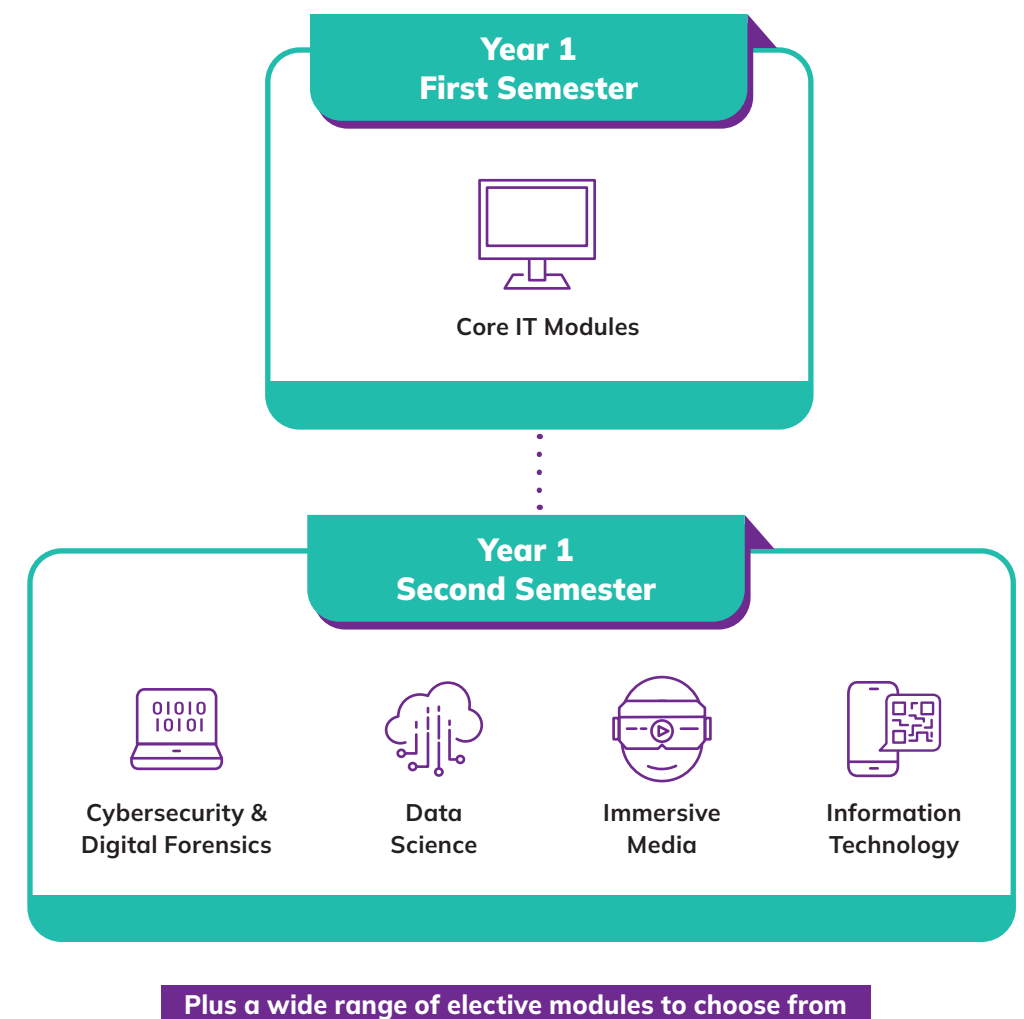
### WHAT THE COURSE IS ABOUT

Fascinated by infocomm technology (ICT), but still undecided about which course to pursue? The Common ICT Programme (CICTP) lets you explore different disciplines before selecting your learning pathway.

In your first semester, you will learn broad-based fundamentals such as programming and computing mathematics, along with discipline-specific skills in design principles, cybersecurity, and data science. These modules provide insight into various roles and career paths, helping you discover your interests and aptitude.

At the end of your semester, you can choose your preferred discipline:

- Cybersecurity & Digital Forensics
- Data Science
- Immersive Media
- Information Technology



## WHAT YOU WILL LEARN

### YEAR 1

- Computing Mathematics
- Cyber Security Fundamentals
- Design Principles
- Data Science Fundamentals
- Fundamentals for IT Professionals I
- Programming I
- Health & Wellness<sup>^</sup>
- Innovation Made Possible<sup>^</sup>
- Confident Communication: Find Your Voice (VOICE)<sup>^</sup>
- English Language Express<sup>^\*</sup>

You will select your preferred diploma towards the end of your first semester. Refer to the module listing in the respective diploma pages for more details:

- Cybersecurity & Digital Forensics (page 10)
- Data Science (page 15)
- Immersive Media (page 20)
- Information Technology (page 25)

### YEAR 2

- Modules under the ICT diploma you major in
- World Issues: A Singapore Perspective<sup>^</sup>

### YEAR 3

- Modules under the ICT diploma you major in
- Project ID: Connecting the Dots<sup>^</sup>



<sup>^</sup>Critical Core modules account for 13 credit units of the diploma curriculum. They include modules in communication, innovation and world issues, as well as an interdisciplinary project. By bringing students from diverse diplomas together, the interdisciplinary project fosters collaboration to explore and propose solutions for real-world problems. NP aims to develop students to be agile and self-directed learners, ready for the future workplace.

<sup>^\*</sup> For selected students only

To keep our curriculum current and robust, diploma modules are subject to change over the three years. Please visit our website for latest updates.

## CAREER

Refer to the Career section on the respective diploma pages.

## FURTHER STUDIES

Refer to the Further Studies section on the respective diploma pages.



“The Common ICT Programme is the perfect choice for those who may be uncertain about which specialisation to choose. The introductory modules offer valuable insights into various courses, enabling me to make an informed diploma choice after just one semester.”

**Wang Yongqing**  
Cybersecurity & Digital Forensics graduate,  
Class of 2024

## ENTRY REQUIREMENTS

### Aggregate Type ELR2B2-C

To be eligible for consideration, candidates must have the following GCE ‘O’ Level examination (or equivalent) results.

Subject	‘O’ level Grade
English Language	1-7
Additional Mathematics/Mathematics	1-6
Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type	1-6

Applicants must also fulfil the aggregate computation requirements for the ELR2B2-C Aggregate Type (English Language, 2 relevant subjects and 2 other best subjects) listed at [www.np.edu.sg/docs/ELR2B2.pdf](http://www.np.edu.sg/docs/ELR2B2.pdf).

For students with other qualifications, please refer to the NP website for the entry requirements and admissions exercise period.

Candidates with colour vision deficiency, severe vision deficiency or hearing deficiency may encounter difficulties meeting the course requirements and expectations.

## CONTACT US

For the most up-to-date information on NP’s Common ICT Programme, log on to [www.np.edu.sg/cictp](http://www.np.edu.sg/cictp)

# N94

## Diploma in Cybersecurity & Digital Forensics



Get latest updates on course



- ▶ Get ahead with in-demand skills by specialising in **AI for Cybersecurity** or **Cloud Security**
- ▶ Go on a **one-year internship** at renowned organisations or pursue **MINDEF's Polytechnic Cyber Work-Learn Scheme** to build deeper skills and professional networks **New**
- ▶ **Industry-driven curriculum** curated with leading industry partners such as Cisco Systems, Palo Alto Networks, Group-IB, Darktrace, and Red Hat
- ▶ Boost your portfolio with up to **8 industry-recognised certifications** such as Security+, Certified Ethical Hacker, and Cisco Certified Network Associate
- ▶ Kickstart your degree with the **NP-University Pathway** and earn credits towards your degree while still in poly **New**

### WHAT THE COURSE IS ABOUT

As a digital warrior, you're ready to join the fight against cybercrime. With the Diploma in Cybersecurity & Digital Forensics (CSF), you will play a crucial role in keeping data, applications, networks, and systems safe.

#### Be Industry-ready

Learn with cutting-edge technologies and an industry-driven curriculum curated with leading partners, ensuring you stay at the forefront of the cybercrime battle. You'll gain practical expertise in:

- Windows & Linux server security
- Cybersecurity operations
- Threat intelligence
- Network security
- Digital forensics
- Malware analysis
- Ethical hacking
- Web application pen-testing

#### Learning Beyond the Classroom

Immerse yourself in realistic cybersecurity scenarios with CSF's hands-on learning approach. You will learn to use industry-recognised platforms and tools such as Cisco's Networking Academy, EC-Council's CodeRed & CyberQ, Group IB's Managed Extended Detection and Response (Managed XDR), and many more. You will also have the chance to work on real-world projects in areas such as bug hunting, penetration testing, and cyber threat intelligence. Plus, hone your cybersecurity skills through masterclasses led by cybersecurity professionals and put your abilities to the test in exciting Capture the Flag competitions.

#### NP-University Pathway **New**

Fast-track your university journey with our pathways to SMU and SUTD! These programmes let you take university modules during your diploma studies. For the SMU Pathway, you'll gain advanced placement in their Information Systems and Computing Science programmes. Meanwhile, the SUTD Pathway allows you to explore humanities and science modules that count towards your degree at SUTD.

#### Choose Your Pathway

Embark on a tailored learning journey in your third year by selecting from our specialisations or choosing the versatile General Track.

##### • AI for Cybersecurity

Dive into the future of cybersecurity with training co-developed by global leader Darktrace. Master advanced machine learning and deep learning applications, and gain expertise in cutting-edge AI tools and techniques designed to protect against modern threats.

##### • Cloud Security

Deepen your cloud computing skills and explore essential cloud security tools and techniques. Delve into cloud native security practices to safeguard cloud infrastructure against vulnerabilities.

##### • General Track

Broaden your skill set with our General Track, which offers a wide variety of modules in mobile and web applications development, data science, blockchain, quantum computing, mobile forensics, and secure software development.

#### Get a Professional Head Start

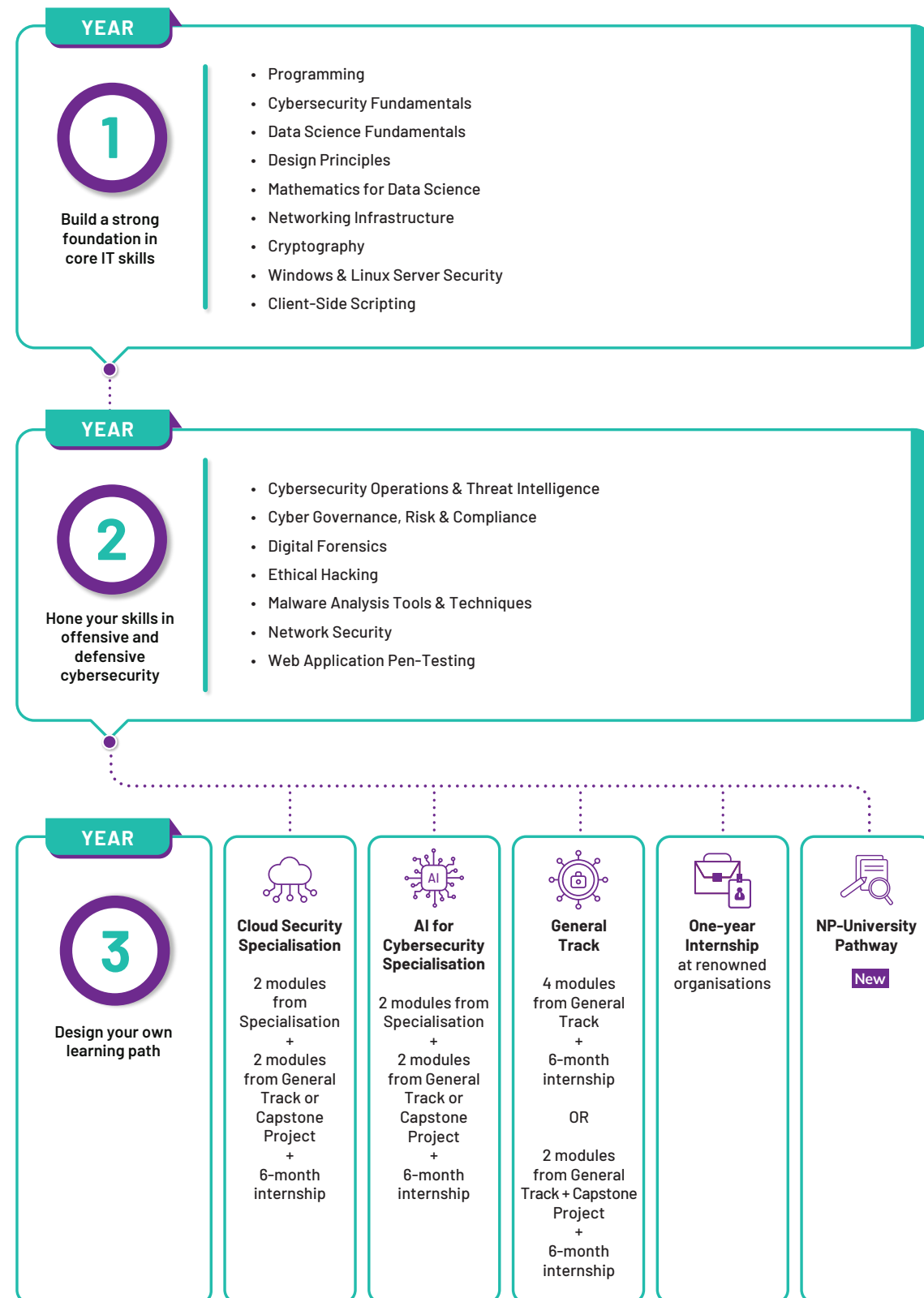
Pursue either a six-month or one-year internship at leading organisations such as A\*STAR, Bank of America, CSA, CSIT, DSO, DSTA, Ensign, Group-IB, NTT, Oracle, PwC, Singtel, and ST Engineering to kickstart your cybersecurity career with real-world experience.

Additionally, gain industry-recognised certifications such as Security+, Certified Ethical Hacker, Computer Hacking Forensic Investigator, Cisco Certified Network Associate, Certified Cloud Security Engineer, Certified SOC Analyst, Red Hat Certified System Administrator and Certified Engineer, AWS Certified Cloud Practitioner, and Palo Alto Networks Certified Network Security Administrator.

### Partnerships



## OVERVIEW OF YOUR CSF JOURNEY



## WHAT YOU WILL LEARN

### YEAR 1

- Client-Side Scripting
- Computing Mathematics
- Cryptography
- Cyber Security Fundamentals
- Data Science Fundamentals
- Design Principles
- Fundamentals for IT Professionals I
- Networking Infrastructure
- Programming I & II
- Windows & Linux Server Security



### YEAR 2

- Cybersecurity Operations & Threat Intelligence
- Cyber Governance, Risk & Compliance
- Digital Forensics
- Ethical Hacking
- Fundamentals for IT Professionals II & III
- Malware Analysis Tools & Techniques
- Network Security
- Web Application Pen-Testing
- One elective module
- Confident Communication: Find Your Voice (VOICE)^

### YEAR 3

- Six-month Internship with four elective modules OR One-year Internship#
- Project ID: Connecting the Dots^

#### ELECTIVE MODULES

##### AI for Cybersecurity Specialisation\*

- AI Tools & Techniques for Cybersecurity
- Emerging AI Trends in Cybersecurity
- Machine & Deep Learning Applications for Cybersecurity

##### Cloud Security Specialisation\*

- Cloud Architecture & Technologies
- Cloud Security Tools & Techniques
- Cloud Native Architecture Security

##### General Track

- Applied Analytics
- Back-End Development
- Blockchain
- Capstone Project
- Data Discovery & Visualisation
- Data Structures & Algorithms
- Emerging Trends in IT
- Infocomm Sales & Marketing Strategies
- Mobile Applications Development
- Mobile Device Security & Digital Forensics
- Quantum Computing
- Secure Software Development

^Critical Core modules account for 13 credit units of the diploma curriculum. They include modules in communication, innovation and world issues, as well as an interdisciplinary project. By bringing students from diverse diplomas together, the interdisciplinary project fosters collaboration to explore and propose solutions for real-world problems. NP aims to develop students to be agile and self-directed learners, ready for the future workplace.

# You will get to work on an industry-driven project, a technopreneurship-enterprise project, or an IT-related project with a local or overseas organisation.

\* To graduate with a specialisation, students must successfully complete 3 prescribed electives under that specialisation.

To keep our curriculum current and robust, diploma modules are subject to change over the three years. Please visit our website for latest updates.



## FURTHER STUDIES

Explore related degree programmes locally or overseas. You may enjoy advanced standing when you apply for related courses at universities abroad.

### Singapore

- Nanyang Technological University
- National University of Singapore
- Singapore Institute of Technology
- Singapore Management University
- Singapore University of Technology and Design
- Singapore University of Social Science

### Australia

- Monash University
- Queensland University of Technology
- University of Adelaide
- University of New South Wales
- University of Queensland
- University of Sydney



#### Taufiq Mohammed Class of 2022

Received the Public Service Commission Scholarship (Engineering) to pursue Computer Science at NUS



#### Elsa Lee Class of 2023

The recipient of the 2023 Smart Nation Scholarship by the Cyber Security Agency of Singapore is pursuing a degree in Computer Science at SMU



#### Sherlena Ngui Class of 2024

Pursuing a degree in Information Security at NUS

## WORLD SKILLS TRIUMPH



CSF student Qin Guan (centre) won a medallion for excellence in the IT Software Solutions for Business category at WorldSkills Singapore 2023, where he used his programming skills to develop an integrated software system.

## CAREER

The global demand for IT cybersecurity professionals is growing rapidly, and Singapore is building a strong talent pool to meet this need. Our course aligns with the ICT Skills Framework - Cybersecurity Track, preparing you for exciting career paths such as:

- Associate Security Analyst / Engineer
- Cyber Risk Analyst
- Forensic Investigator
- Security Engineer / Executive
- Security Operations Analyst
- Vulnerability Assessment & Penetration Testing Analyst

## ENTRY REQUIREMENTS

### Aggregate Type ELR2B2-C

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results.

Subject	'O' level Grade
English Language	1-7
Additional Mathematics/Mathematics	1-6
Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type	1-6

Applicants must also fulfil the aggregate computation requirements for the ELR2B2-C Aggregate Type (English Language, 2 relevant subjects and 2 other best subjects) listed at [www.np.edu.sg/docs/ELR2B2.pdf](http://www.np.edu.sg/docs/ELR2B2.pdf).

For students with other qualifications, please refer to the NP website for the entry requirements and admissions exercise period.

Candidates with severe vision deficiency may encounter difficulties meeting the course requirements and expectations.

### CONTACT US

For the most up-to-date information on NP's Diploma in Cybersecurity & Digital Forensics, log on to [www.np.edu.sg/csf](http://www.np.edu.sg/csf)

# N81

## Diploma in Data Science



Get latest updates on course



- ▶ Become a highly **sought-after AI talent** with a solid foundation in data engineering and machine learning
- ▶ Choose from two exciting specialisation areas: **Data Engineering or Generative AI**
- ▶ **Earn professional certifications** from industry leaders such as Alteryx, Google, IBM, Nvidia and Singapore Computer Society
- ▶ Be among the first to earn a **Second Major in Business** and unlock new opportunities for your career and further studies **New**
- ▶ Kickstart your degree with the **NP-University Pathway** and earn credits towards your degree while still in poly **New**

## WHAT THE COURSE IS ABOUT

With every click, like, and share, data is being created and collected. There's never been a greater demand for data science professionals to help businesses derive insights, drive traffic and boost profits. If you are passionate about data analytics and machine learning, and want to make your mark in the big data industry, the Diploma in Data Science (DS) is the course for you!

Besides benefitting from the expertise of ICT – co-founder of the Data School set up to train data practitioners for industry – you will get to collaborate with leading industry partners such as OCBC and Indorse.

### Learning for the Future Economy

Gain core skills in programming, databases, and analytics. Master data science fundamentals, key statistical concepts, and data visualisation techniques. All of these skills will set you up for success as a data analyst, junior data scientist, associate data engineer, or associate business analyst.

### Exposure to Reputable Enterprise Platforms

Hone programming and analytical skills essential for managing AI projects by working with leading enterprise platforms including Salesforce, Tableau, SAP, and Alteryx. These competencies will pave the way for future careers in project management and business consultancy.

### Specialise in Emerging Areas

Gain an edge with one of these specialisations from your second year:

- **Data Engineering**

Co-developed by industry partners including Alteryx, Denodo, and Snowflake, this specialisation offers in-depth training in data pipelines, data virtualisation and data wrangling.

- **Generative AI**

Dive into generative AI tools and techniques, as well as deep learning. This robust curriculum will equip you for careers in this fast-evolving field.

### Double Major New

Be among the first poly students to pursue a Second Major in Business. Gain an edge with this dual qualification, which will unlock new opportunities for your career and further studies.

### NP-University Pathway New

Fast-track your university journey with our pathways to SMU and SUTD! These programmes let you take university modules during your diploma studies. For the SMU Pathway, you'll gain advanced placement in their Information Systems and Computing Science programmes. Meanwhile, the SUTD Pathway allows you to explore humanities and science modules that count towards your degree at SUTD.

### Experiential Learning

Boost your workplace readiness with a one-year Industry Kickstart Programme. Engage in industry-driven data science projects, explore emerging trends, and apply machine learning techniques in real-world data workflows.

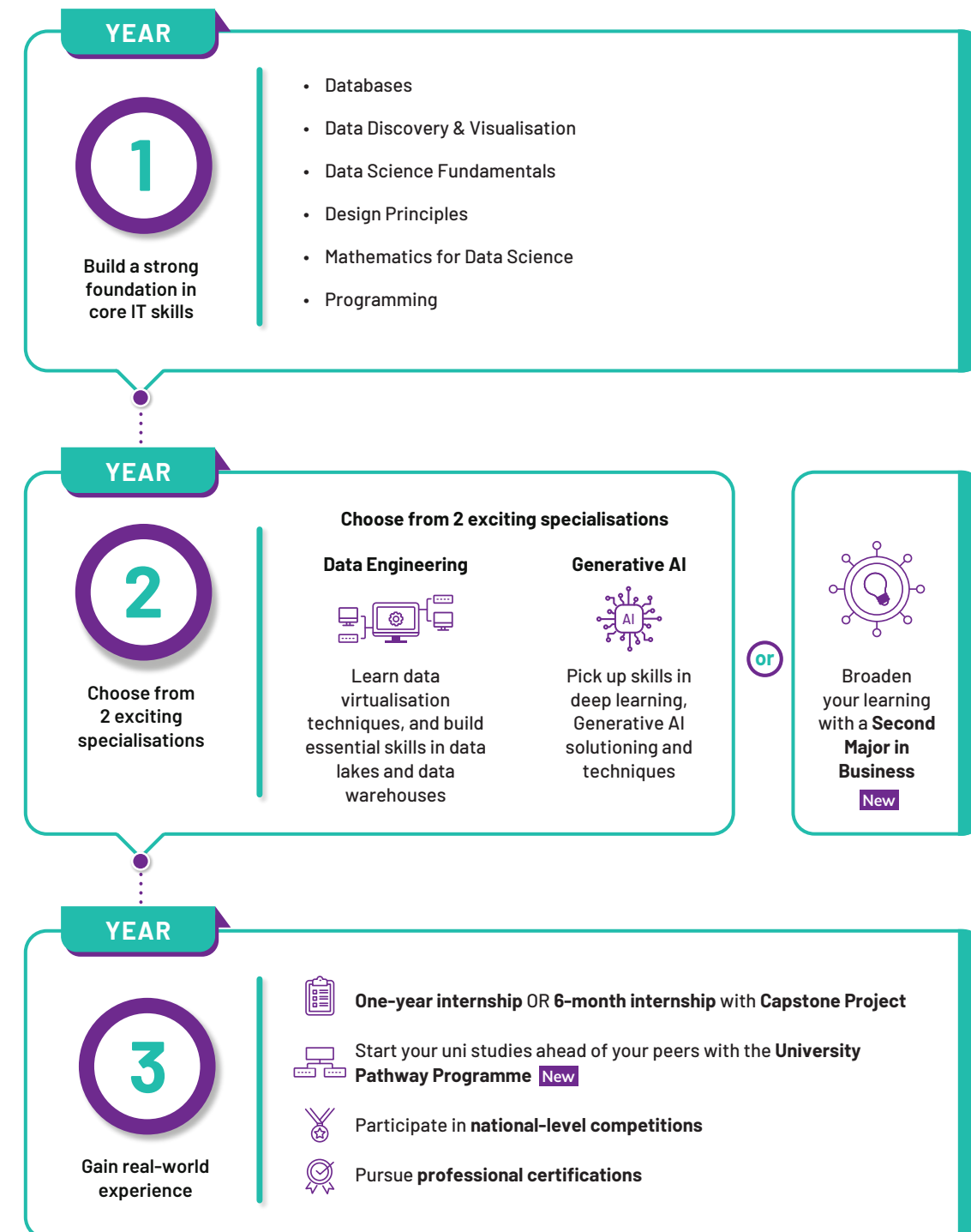
You will also benefit from internships, workshops, field trips, and industry mentorship. Plus, put your skills to the test in national-level competitions like the PolyFintech100 Hackathon.

### Industry Certifications

Gain a head start with professional certifications such as:

- Nvidia's Certificate of Competency on Getting Started with Deep Learning
- Alteryx Core Designer
- Associate Certificate in AI Ethics & Governance by Singapore Computer Society
- Salesforce's Lightning Experience Reports & Dashboards Specialist Superbadge

## OVERVIEW OF YOUR DS JOURNEY



## WHAT YOU WILL LEARN

### YEAR 1

- Cyber Security Fundamentals
- Databases
- Data Discovery & Visualisation
- Data Science Fundamentals
- Design Principles
- Fundamentals for IT Professionals I
- Mathematics for Data Science
- Programming I & II
- Health & Wellness<sup>^</sup>
- Innovation Made Possible<sup>^</sup>
- Confident Communication: Find Your Voice (VOICE)<sup>^</sup>
- English Language Express<sup>^\*</sup>

### YEAR 2

- Agile DataOps
- Intelligent Enterprise Systems
- Data Wrangling
- Emerging Trends in Data Science
- Fundamentals for IT Professionals II & III
- Machine Learning I & II
- Three elective modules
- World Issues: A Singapore Perspective<sup>^</sup>

### Second Major in Business

- Economics
- Finance & Accounting for Business
- Financial Markets & Instruments
- Global Business

<sup>^</sup>Critical Core modules account for 13 credit units of the diploma curriculum. They include modules in communication, innovation and world issues, as well as an interdisciplinary project. By bringing students from diverse diplomas together, the interdisciplinary project fosters collaboration to explore and propose solutions for real-world problems. NP aims to develop students to be agile and self-directed learners, ready for the future workplace.

\* The Multidisciplinary Capstone is a 12 credit-unit module designed to build cross-disciplinary knowledge and skills by developing a solution to an industry challenge. Students will be exempted from Project ID: Connecting the Dots and Capstone modules.

<sup>^\*</sup> For selected students only.

<sup>#</sup> You will get to work on an industry-driven project, a technopreneurship-enterprise project, or an IT-related project with a local or overseas organisation.

<sup>+</sup> You will need to complete 3 prescribed electives to graduate with a specialisation.

### YEAR 3

- Six-month internship with four elective modules OR Six-month internship with Capstone Project and two elective modules OR One-year Internship<sup>#</sup> OR Six-month internship and University Pathway Programme
- Project ID: Connecting the Dots<sup>^</sup> OR Multidisciplinary Capstone<sup>+</sup>

### ELECTIVE MODULES

#### Generative AI Specialisation<sup>+</sup>

- Deep Learning
- Generative AI Tools & Techniques
- Generative AI Solutioning

#### Data Engineering Specialisation<sup>+</sup>

- Distributed Data Pipelines
- Data Virtualisation
- Data Lake and Data Warehouse

#### General Track<sup>%</sup>

- AI Tools & Techniques for Cybersecurity
- Artificial Intelligence Concepts and Techniques
- Blockchain
- Capstone Project
- Cloud Databases
- Cloud Architecture and Technologies
- Customer Experience Management
- Designing User Experience
- Digital Transformation
- Emerging AI Trends in Cybersecurity
- Financial Ecosystem
- Infocomm Sales & Marketing Strategies
- Machine & Deep Learning Applications for Cybersecurity
- Mobile Applications Development
- Modern Artificial Intelligence
- Reinforcement Learning

<sup>%</sup> General track electives are subject to availability

#### Second Major in Business

- Business Law
- Corporate Finance
- Develop a Business
- People & Culture
- Marketing in the Digital Age

To keep our curriculum current and robust, diploma modules are subject to change over the three years. Please visit our website for latest updates.

## FURTHER STUDIES

Receive advanced standing when you apply for related degree programmes at universities both locally and abroad. These include:

- Nanyang Technological University
- National University of Singapore
- Singapore Institute of Technology
- Singapore University of Social Sciences
- Singapore University of Technology and Design

You can also look forward to pursuing a specialist diploma in an analytics-related field and other advanced diploma courses at local polytechnics.



**Evelyn Peh**  
Class of 2019

Pursuing a degree in Information Systems with a specialisation in FinTech and Business Analytics at SMU



**Alec Ong**  
Class of 2024

The recipient of the Lee Kuan Yew Award, Ngee Ann Polytechnic Outstanding Achievement Award and IMDS Gold Medal & Alteryx Prize is pursuing a double degree in Information Systems and Business Management with a major in Innovation & Entrepreneurship at SMU



**Anettejoy Yeo**  
Class of 2024

Pursuing a Bachelor of Science with Honours in Applied Computing with a specialisation in Fintech at SIT



**Gwyneth Yeo**  
Class of 2024

Pursuing a double degree in Accountancy & Data Science and Artificial Intelligence at NTU

## CAREER

As Singapore strives to become a global hub for AI development and deployment, demand for professionals who possess skills in areas such as data extraction, data wrangling, machine learning and deep learning techniques will increase. Graduates can look forward to careers in roles such as:

- Artificial Intelligence Engineer
- Associate Business Analyst
- Associate Data Engineer
- Data Analyst
- Data Engineer

## ENTRY REQUIREMENTS

### Aggregate Type ELR2B2-C

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results.

Subject	'O' level Grade
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English Language	1-7
Additional Mathematics/Mathematics	1-6
Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type	1-6

Applicants must also fulfil the aggregate computation requirements for the ELR2B2-C Aggregate Type (English Language, 2 relevant subjects and 2 other best subjects) listed at [www.np.edu.sg/docs/ELR2B2.pdf](http://www.np.edu.sg/docs/ELR2B2.pdf).

For students with other qualifications, please refer to the NP website for the entry requirements and admissions exercise period.

Candidates with severe vision deficiency may encounter difficulties meeting the course requirements and expectations.

### CONTACT US

For the most up-to-date information on NP's Diploma in Data Science, log on to [www.np.edu.sg/ds](http://www.np.edu.sg/ds)

# N55

## Diploma in Immersive Media



Get latest updates on course



- Design immersive experiences and games that feature **augmented, virtual and mixed realities (AR/VR/MR)**
- **Build your portfolio** through integrated projects that hone your skills
- Opportunities to work on **capstone projects** and go on **internships** at renowned organisations such as HelloHolo, UbiSoft, White Label Studio, The Doodle People, En Group and UXArmy
- Gain insights into the IT and creative media industries with **masterclasses, industry visits, networking sessions and collaborations**
- Kickstart your degree with the **NP-University Pathway** and gain advanced placement in undergraduate programmes **New**

### WHAT THE COURSE IS ABOUT

As digital technology increasingly permeates every aspect of our lives, there is growing demand for creative professionals who can design immersive experiences that engage audiences.

If you are passionate about interactive media, simulations, or game development, the Diploma in Immersive Media (IM) will equip you with the skills for these dynamic sectors. Here, you will explore Augmented, Virtual, and Mixed Realities (AR/VR/MR), and create digital products ranging from web applications to extended reality platforms.

With training in user experience (UX) and user interface (UI) design, as well as real-time environment design workflow, IM will get you ready for careers in the creative and tech industries. These include roles such as UX/UI designer, app or web developer, technical/3D artist, and immersive media designer.

#### Project-Based Learning

Learn through hands-on projects – and say goodbye to exams! Our signature Project-Based Learning allows you to build your portfolio by working on an Integrated Project every semester.

Round up a team to set up your own studio to develop games, design interactive 3D experiences or create media content. You could even design your very own metaverse! By the end of your studies, you will have a stellar portfolio that will give you a career head start.



#### Industry Immersions

Hear from industry insiders and gain valuable insights through masterclasses, industry visits, networking sessions, and collaborations. Embark on internships and contribute to real-world projects at companies like HelloHolo, The Doodle People, White Label Studio, Ubisoft, and UXArmy. Gain a competitive edge in your career by earning professional certifications from industry leaders like Unity Technologies and Adobe!

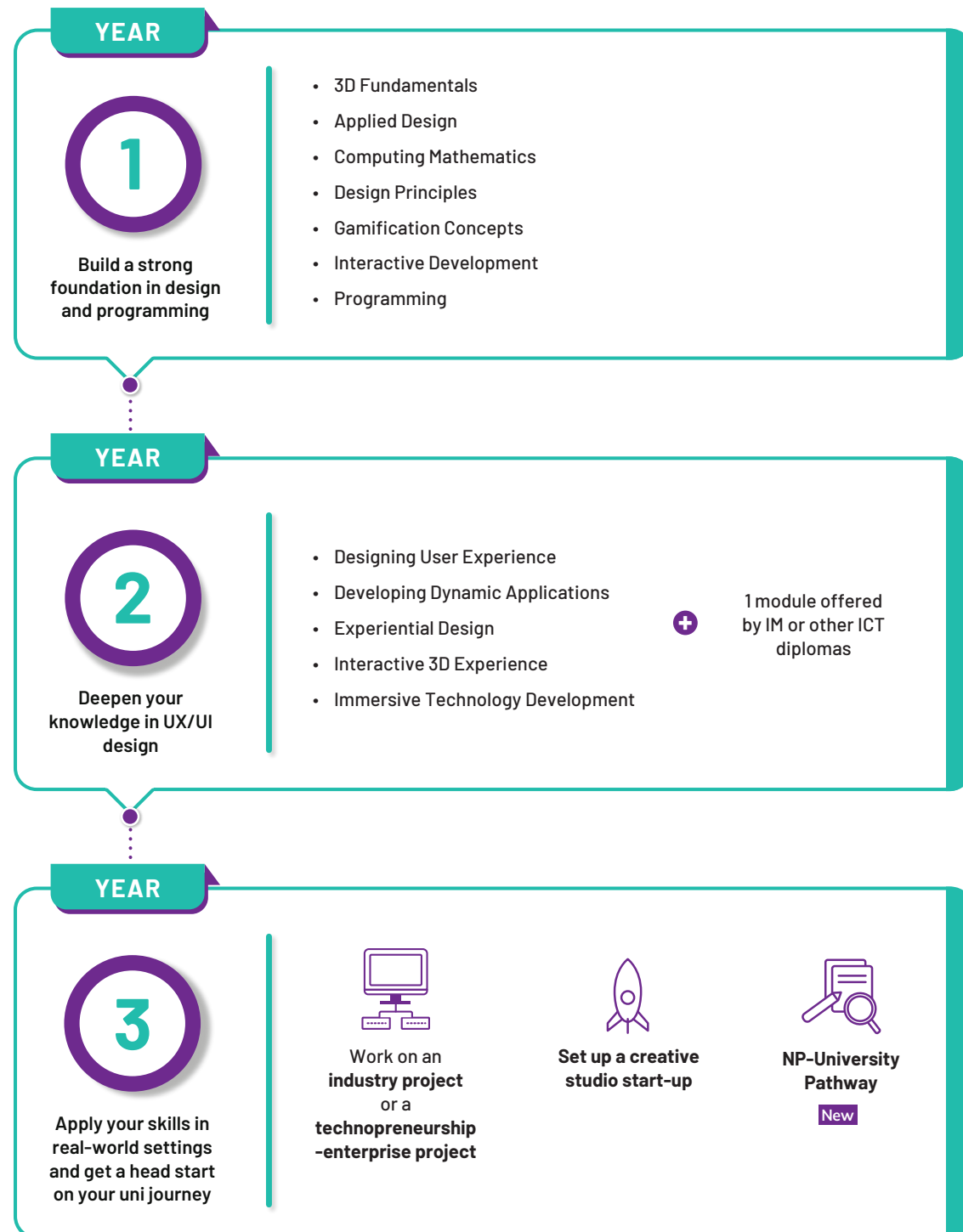
#### NP-University Pathway **New**

Fast-track your university journey with our NP-SMU Pathway! This pathway allows you to take university modules during your diploma studies, and gain advanced placement in their Information Systems and Computing Science programmes.

#### Partnerships



## OVERVIEW OF YOUR IM JOURNEY



## WHAT YOU WILL LEARN

### YEAR 1

- 3D Fundamentals
- Applied Design
- Computing Mathematics
- Cyber Security Fundamentals
- Design Principles
- Data Science Fundamentals
- Fundamentals for IT Professionals I
- Gamification Concepts
- Interactive Development
- Production Management
- Programming I
- Health & Wellness<sup>^</sup>
- Innovation Made Possible<sup>^</sup>
- Confident Communication: Find Your Voice (VOICE)<sup>^</sup>
- English Language Express<sup>^\*</sup>

### \*ELECTIVE MODULES

- 3D Character Creation
- 3D Prototyping
- Digital Audio Design
- Digital Video & Audio
- Motion Graphics & Effects
- Procedural Modelling & Simulation
- Serious Games & Simulation
- Social Media & Branding



### YEAR 2

- 3D Environments
- 3D for Real-time
- Designing User Experience
- Developing Dynamic Applications
- Experiential Design
- Fundamentals for IT Professionals II
- Immersive Technology Development
- Interactive 3D Experience
- Spatial Theory & Level Design
- One elective module<sup>+</sup>
- World Issues: A Singapore Perspective<sup>^</sup>

### YEAR 3

- Capstone Project OR Multidisciplinary Capstone<sup>\*</sup>
- One elective module<sup>+</sup>
- Fundamentals for IT Professionals III
- Internship<sup>#</sup>
- Project ID: Connecting the Dots<sup>^</sup>

<sup>^</sup>Critical Core modules account for 13 credit units of the diploma curriculum. They include modules in communication, innovation and world issues, as well as an interdisciplinary project. By bringing students from diverse diplomas together, the interdisciplinary project fosters collaboration to explore and propose solutions for real-world problems. NP aims to develop students to be agile and self-directed learners, ready for the future workplace.

<sup>\*</sup> The Multidisciplinary Capstone is a 12 credit-unit module designed to build cross-disciplinary knowledge and skills by developing a solution to an industry challenge. Students will be exempted from Project ID: Connecting the Dots and Capstone modules.

<sup>^\*</sup> For selected students only.

<sup>#</sup> You will get to work on an industry-driven project, a technopreneurship-enterprise project, or an IT-related project with a local or overseas organisation.

<sup>+</sup> You will be able to choose from a basket of electives offered or take electives offered by other Diplomas.

To keep our curriculum current and robust, diploma modules are subject to change over the three years. Please visit our website for latest updates.

## FURTHER STUDIES

You may receive advanced standing when you apply for related degree programmes at universities both locally and abroad. These include:

### Singapore

- DigiPen Institute of Technology
- Nanyang Technological University
- National University of Singapore
- Singapore Institute of Technology
- Singapore University of Social Sciences
- Singapore University of Technology and Design

### Australia

- Queensland University of Technology
- RMIT University

### United Kingdom

- The Glasgow School of Art
- University of Hertfordshire

### United States

- Savannah College of Art and Design
- University of Southern California



**Celest Goh**  
Class of 2023

Pursuing a degree in User Experience and Game Design at DigiPen under a Singapore Institute of Technology Scholarship



**Tay Kai Yuan**  
Class of 2021

Pursuing a degree in Interactive Design and Game Development at the Savannah College of Art and Design under the Distinguished Student Scholarship

## CAREER

With our course skills mapped to the ICT Skills Framework, you can look forward to pursuing a career in these job roles:

- 3D Artist
- Creative Technologist
- Digital Content Creator
- Extended Reality (AR/VR/MR) Designer/Developer
- Front-End Designer
- Game Developer/Designer
- Game Interface Designer
- Junior Designer
- Junior Programmer
- Level Designer
- Multimedia Designer
- Producer
- UI/UX Designer
- Visual Designer
- Web Designer

## ENTRY REQUIREMENTS

### Aggregate Type ELR2B2-C

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results.

Subject	'O' level Grade
English Language	1-7
Additional Mathematics/Mathematics	1-6
Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type	1-6

Applicants must also fulfil the aggregate computation requirements for the ELR2B2-C Aggregate Type (English Language, 2 relevant subjects and 2 other best subjects) listed at [www.np.edu.sg/docs/ELR2B2.pdf](http://www.np.edu.sg/docs/ELR2B2.pdf).

For students with other qualifications, please refer to the NP website for the entry requirements and admissions exercise period.

Candidates with colour vision deficiency, severe vision deficiency or hearing deficiency may encounter difficulties meeting the course requirements and expectations.

Students are required to own a MacBook or Windows notebook and purchase art materials.

## CONTACT US

For the most up-to-date information on NP's Diploma in Immersive Media, log on to [www.np.edu.sg/im](http://www.np.edu.sg/im)

# N54

## Diploma in Information Technology



Get latest updates on course



- ▶ Build a strong foundation in **full stack development and software engineering for wide-ranging careers**
- ▶ **Four exciting specialisations:** Artificial Intelligence, Cloud Computing, Software Engineering and Enterprise Computing
- ▶ Deepen skill sets with the **one-year OCBC-NP Technology Young Talent Programme**
- ▶ Earn **professional industry certifications** from renowned organisations such as IBM, AWS and Salesforce
- ▶ Be among the first to earn a **Second Major in Business** and unlock new opportunities for your career and further studies **New**

## WHAT THE COURSE IS ABOUT

Dive into the world of technology with our Diploma in Information Technology (IT). This comprehensive course will equip you with the essential skills and knowledge needed for today's tech-driven industries.

With a strong foundation in programming, networking, databases and operating systems, you will be prepared for further studies or careers in fields such as artificial intelligence, blockchain, cloud computing, and data analytics.

### Build Full-Stack Development Competencies

Develop skills to become a full-stack developer and be well-versed in software engineering, as well as front- and back-end application development. Learn to code and apply user engagement strategies to integrate front-end interfaces with back-end components to create seamless user experiences.

### Specialise in Emerging Areas

Design your learning by choosing modules that best match your interests and strengths. Alongside core modules such as design principles, cybersecurity fundamentals, and programming, our flexible curriculum structure allows you to specialise in one of these four areas:

- Artificial Intelligence
- Cloud Computing
- Software Engineering
- Enterprise Computing

Alternatively, opt for the General Track and select three electives to broaden your skills. With our extensive range of electives, you can explore technologies like machine learning, cloud databases, blockchain, game programming, robotic process automation, and digital forensics.

### Double Major New

Be among the first poly students to take a Second Major in Business. Gain an edge with this dual qualification, which will unlock new opportunities for your career and further studies.

### NP-University Pathway New

Fast-track your university journey with our pathways to SMU and SUTD! These programmes let you take university modules during your diploma studies. For the SMU Pathway, you'll gain advanced placement in their Information Systems and Computing Science programmes. Meanwhile, the SUTD Pathway allows you to explore humanities and science modules that count towards your degree at SUTD.

### Gain a Professional Head Start

Build your digital portfolio with a capstone project to showcase your skills to potential employers.

Advance your career with additional professional certifications, such as Certified Scrum Master, AWS Certified Cloud Practitioner, Salesforce ADX 201 Certification, UiPath Certified RPA Associate, and Tableau Desktop Specialist.

### Experiential Learning with Industry

Many elective modules are co-delivered with our industry partners such as Dell, Google, IBM, Microsoft, Salesforce and SAP, ensuring you are well-prepared for the industry.

Gain an edge through curated opportunities, including our exclusive one-year Technology Young Talent Programme with OCBC and valuable networking opportunities with industry professionals.



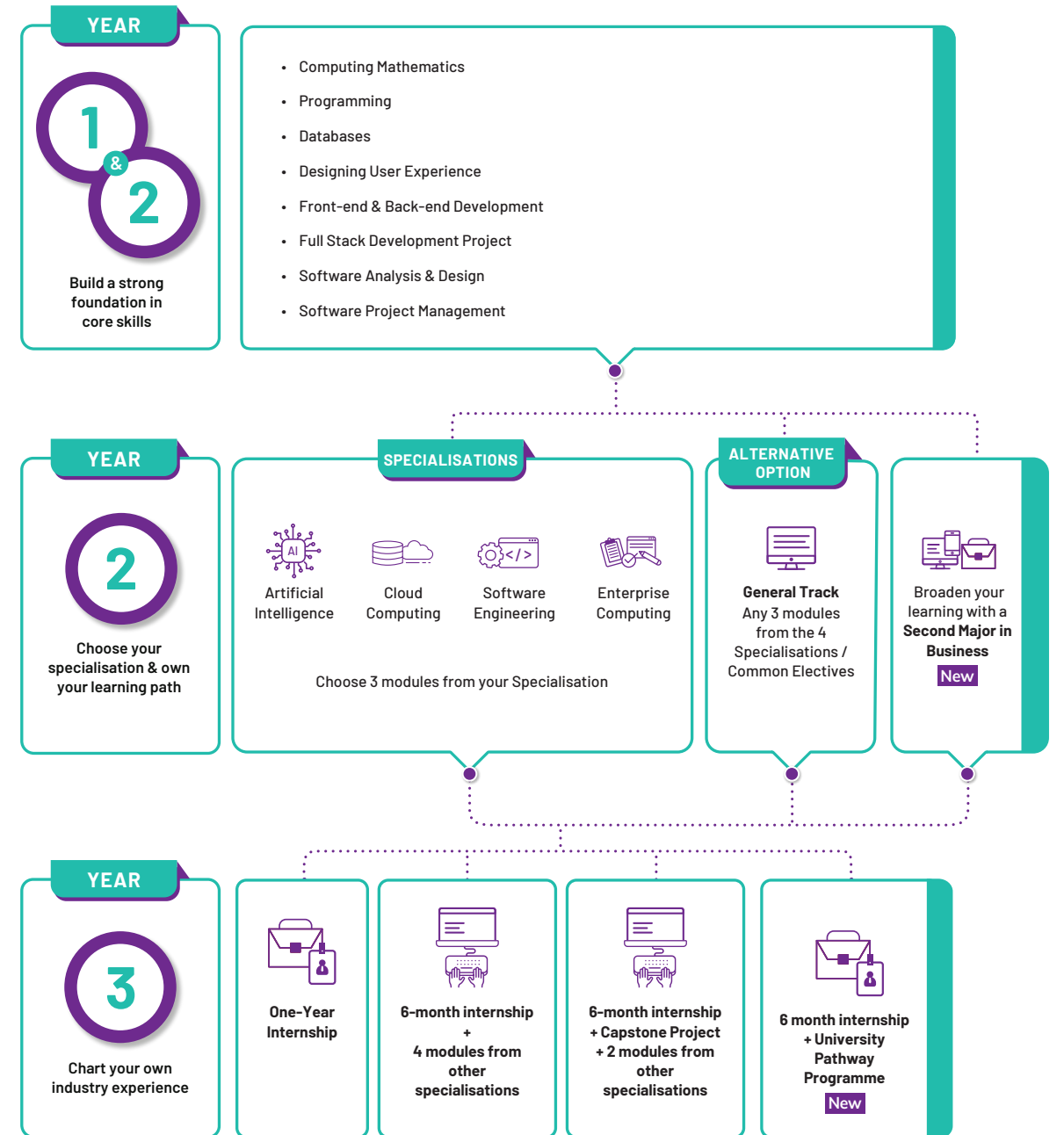
## SAF YOUNG LEADER

"From competing in WorldSkills Singapore to visiting top tech firms, studying IT in NP has given me many opportunities to grow my tech skills. I hope to contribute to the nation through the development of cutting-edge generative cybersecurity technologies and formulation of tech-related defence policies."

### Koh En Yang Class of 2024

For demonstrating academic excellence and leadership qualities, En Yang received the prestigious SAF Young Leaders Award in 2023.

## OVERVIEW OF YOUR IT JOURNEY



## CHOOSE YOUR IT SPECIALISATION

### ELECTIVE MODULES FROM 4 SPECIALISATIONS

#### Artificial Intelligence Specialisation

- Artificial Intelligence Concepts and Techniques
- Computer Vision and Natural Language Processing
- Deep Learning
- Machine Learning
- Modern Artificial Intelligence
- Reinforcement Learning

#### Software Engineering Specialisation

- Blockchain
- Data Structures and Algorithms
- DevOps
- Game Programming
- Mobile Applications Development
- Software Design Patterns

#### Cloud Computing Specialisation

- Cloud Architecture and Technologies
- Cloud Native Architecture and Development
- Cloud Databases
- Cloud Security Tools & Techniques
- Virtualisation & Data Centre Management

#### Enterprise Computing Specialisation

- Customer Experience Management
- Digital Transformation
- Data Discovery & Visualisation
- Enterprise Resource Planning
- Infocomm Sales & Marketing Strategies
- Robotic Process Automation

### COMMON ELECTIVES\*

- Advanced Mathematics in Computing
- Capstone Project
- Digital Forensics
- Emerging Trends in IT
- Networking Infrastructure
- Quantum Computing

\*All electives are subject to availability

## WHAT YOU WILL LEARN

### YEAR 1

- Computing Mathematics
- Cyber Security Fundamentals
- Databases
- Data Science Fundamentals
- Design Principles
- Front-End Development
- Fundamentals for IT Professionals I
- Operating Systems & Networking Fundamentals
- Programming I & II
- Health & Wellness<sup>^</sup>
- Innovation Made Possible<sup>^</sup>
- Confident Communication: Find Your Voice (VOICE)<sup>^</sup>
- English Language Express<sup>^</sup>

### YEAR 2

- Back-End Development
- Designing User Experience
- Full Stack Development Project
- Fundamentals for IT Professionals II & III
- Software Analysis and Design
- Software Project Management

#### Choose one of these pathways\*:

- Artificial Intelligence Specialisation
- Cloud Computing Specialisation
- Software Engineering Specialisation
- Enterprise Computing Specialisation
- General Track
- World Issues: A Singapore Perspective<sup>^</sup>

#### Second Major in Business

- Economics
- Finance & Accounting for Business
- Financial Markets & Instruments
- Global Business



### YEAR 3

- Six-month Internship with four elective modules OR One-year Internship<sup>#</sup> OR Six-month Internship + University Pathway Programme
- Project ID: Connecting the Dots<sup>^</sup> OR Multidisciplinary Capstone<sup>\*</sup>

#### Second Major in Business

- Business Law
- Corporate Finance
- Develop a Business
- People & Culture
- Marketing in the Digital Age

<sup>^</sup>Critical Core modules account for 13 credit units of the diploma curriculum. They include modules in communication, innovation and world issues, as well as an interdisciplinary project. By bringing students from diverse diplomas together, the interdisciplinary project fosters collaboration to explore and propose solutions for real-world problems. NP aims to develop students to be agile and self-directed learners, ready for the future workplace.

\* The Multidisciplinary Capstone is a 12 credit-unit module designed to build cross-disciplinary knowledge and skills by developing a solution to an industry challenge. Students will be exempted from Project ID: Connecting the Dots and Capstone modules.

<sup>^</sup>\* For selected students only.

<sup>#</sup> You will get to work on an industry-driven project, a technopreneurship-enterprise project, or an IT-related project with a local or overseas organisation.

<sup>\*</sup> For each specialisation, take 3 elective modules from your chosen path. For the General Track, take 3 elective modules from any Specialisation / Common Electives

To keep our curriculum current and robust, diploma modules are subject to change over the three years. Please visit our website for latest updates.



## FURTHER STUDIES

You can receive advanced standing when you apply for related degree programmes at universities both locally and abroad. These include:

### Singapore

- Nanyang Technological University
- National University of Singapore
- Singapore Institute of Technology
- Singapore Management University
- Singapore University of Social Sciences
- Singapore University of Technology and Design

### Australia

- Australian National University
- University of Adelaide
- University of Melbourne
- University of New South Wales
- University of Queensland
- University of Western Australia

### United Kingdom

- University of Essex
- University of Kent
- University of Manchester
- University of Newcastle



**Chua Dong En**  
Class of 2023

Pursuing a degree in Computer Science under the SMU Merit Scholarship Programme



**Isabelle Pak**  
Class of 2024

Pursuing a Bachelor in Computer Science at NUS under the CSIT Undergraduate Scholarship

## CAREER

With our course skills aligned to the ICT Skills Framework, you can look forward to pursuing careers in these roles:

- Applications Developer
- Back-End Developer
- Channel Sales Executive
- Cloud Engineer
- Customer Experience Manager
- Database Administrator
- Data Analyst
- Data Engineer
- Front-End Developer
- Full Stack Developer
- Infrastructure Executive
- Platform Engineer
- Pre-/Post-Sales Consultant
- Systems Analyst
- Technical Support Executive
- UX/UI Designer



**Aaron Tan**  
Class of 2004

Co-founder of Carro, Singapore's largest AI-driven used car marketplace



**Jonaisah Sahidjuan**  
Class of 2020

Sales Development Representative at Sitecore



**Esther Loh**  
Class of 2020

Business Analyst at IBM

## OCBC INTERNSHIP

"During my internship at OCBC, I worked on consumer-facing mobile app projects, and gained hands-on experience and valuable industry knowledge.

Collaborating with my peers helped me grow professionally, and the skills I learned will shape my future career."



**Chua Jun Hong**  
Class of 2023



## WINNING BIG AT INNOVATEFEST

IT students Caden Toh, Noel Yap, Ong Meng Li, Quah Ming Hui, Rafol Emmanuel Legaspi, and S. Sairam clinched the top prize in the polytechnic category of Dell Technologies' InnovateFest competition. Partnering with MINDS and Lions Befrienders, they developed the SocialCompass app which helps individuals with intellectual disabilities navigate social settings and combat social isolation.

## ENTRY REQUIREMENTS

### Aggregate Type ELR2B2-C

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results.

Subject	'O' level Grade
English Language	1-7
Additional Mathematics/Mathematics	1-6
Any one of the 2nd group of Relevant Subjects for the ELR2B2-C Aggregate Type	1-6

Applicants must also fulfil the aggregate computation requirements for the ELR2B2-C Aggregate Type (English Language, 2 relevant subjects and 2 other best subjects) listed at [www.np.edu.sg/docs/ELR2B2.pdf](http://www.np.edu.sg/docs/ELR2B2.pdf).

For students with other qualifications, please refer to the NP website for the entry requirements and admissions exercise period.

Candidates with severe vision deficiency may encounter difficulties meeting the course requirements and expectations.

### CONTACT US

For the most up-to-date information on NP's Diploma in Information Technology, log on to [www.np.edu.sg/it](http://www.np.edu.sg/it)

# Our Graduates with That Something XTRA



## FOUNDER OF FAST-GROWING START-UP

“One of the best decisions I made was joining ICT. Not only did I become a better programmer, but I also developed leadership skills and a business owner’s mindset during my time at NP. Thanks to ICT, I had the opportunity to participate in the WorldSkills competition, an experience that has made a significant impact on my life.”

### AARON TAN

**Information Technology graduate, Class of 2004**

Aaron is the co-founder of Carro, an online car marketplace with a regional footprint that covers Singapore, Malaysia, Indonesia and Thailand. The company is raising over S\$134 million ahead of a possible US listing.



## ENHANCING USER EXPERIENCES

“Immersive media is an exciting field that allows me to use digital media tools to create engaging 3D content. The skills I’ve acquired in ICT have been invaluable in my role as a mixed-reality developer, enabling me to experiment with extended realities and enhance user experiences.”

### KRYSTAL YAMIN

**Immersive Media and Game Design\* graduate, Class of 2021**

Krystal was the Gold Medallist of her cohort and a recipient of the Ngee Ann Polytechnic Scholarship. She is pursuing a Bachelor of Science in Computer Science in Real-Time Interactive Simulation at DigiPen Institute of Technology.

\*Renamed the Diploma in Immersive Media



## MAKING DESIGN COUNT

“My internship provided me with a holistic understanding of the creative process, helping me develop more practical and intuitive designs. Through IM, I learnt that design goes beyond aesthetics – it must also be functional and meet the needs of those who require it the most.”

### ELICIA NG

**Immersive Media graduate, Class of 2023**

A recipient of the IMGD Gold Medal & Prize and the Ngee Ann Polytechnic Outstanding Achievement Award, Elicia is currently pursuing a degree in Communications and New Media at NUS.



## FIGHTING CYBERCRIME

“Thanks to my training in NP, I can identify and fix vulnerabilities easily, and build stronger web defences. Indeed, it nurtured my patience and resolve to keep cyber attacks at bay!”

### SEH XIN RU

**Information Security & Forensics\* graduate, Class of 2019**

A recipient of the Smart Nation Scholarship, Xin Ru graduated with a Bachelor of Computing in Information Security at NUS. She is now a systems engineer at the Cyber Security Agency of Singapore.

\*Renamed the Diploma in Cybersecurity & Digital Forensics



## EQUIPPED FOR THE FUTURE

“During my time at ICT, I acquired essential technical skills and gained valuable industry exposure, which have prepared me for a career in cybersecurity. I am eager to apply this knowledge to further my professional growth and make meaningful contributions to the community.”

### MUHAMMAD ZAIDAN SANI

**Information Security & Forensics\* graduate, Class of 2021**

Zaidan was the Silver Medallist and valedictorian of his cohort, as well as a recipient of the A\*STAR Science Award (Poly). He is currently pursuing a degree in Computer Science at NUS.

\*Renamed the Diploma in Cybersecurity & Digital Forensics



## CREATING INNOVATIVE BUSINESS SOLUTIONS

“My time at NP was a fulfilling journey that paved the way for my career. The challenging yet enriching curriculum not only expanded my knowledge but also played a pivotal role in refining my character.”

### IMZUMI CHIA

**Financial Informatics\* graduate, Class of 2023**

Imzumi works as a FICO (finance accounting and controlling) consultant for cbs Corporate Business Solutions, APAC. She collaborates with clients to design, build, and deploy SAP-based enterprise resource planning solutions that support their business and organisational goals.

\*Renamed the Diploma in Data Science



## PSC SCHOLAR BUILDING TECH FOR GOOD

“My internship at GovTech was eye-opening as it allowed me to see firsthand how building mobile applications such as SingPass and anti-scam app Scamshield can benefit the community. I hope to create solutions that help others.”

### TAUFIQ MOHAMMED

**Information Security & Forensics\* graduate, Class of 2022**

A recipient of the Public Service Commission Scholarship (Engineering) award, Taufiq will pursue a degree in Computer Science at NUS.

\*Renamed the Diploma in Cybersecurity & Digital Forensics



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[askNP@np.edu.sg](mailto:askNP@np.edu.sg)

