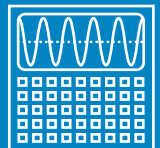


NUS
National University
of Singapore

College of Design
and Engineering

COMPUTER ENGINEERING



Developing Computing Systems for a Smarter World

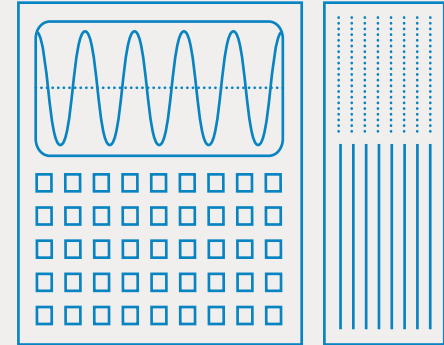
Why Choose NUS Computer Engineering?

In a world where technology is integral to every aspect of our lives, the NUS Computer Engineering (CEG) programme equips graduates with the skills needed to design sophisticated computing systems for a smarter world.

The programme bridges the gap between computer science and electrical engineering, offering a balanced education that encompasses both software design and hardware/software integration. It prepares students to innovate in a variety of fields, from creating advanced, intelligent devices to developing the networked electronic systems and industrial controls that drive modern economies.

Career Prospects

Graduates of the NUS Computer Engineering enjoy a wide array of career opportunities, not only in the IT industry but also in sectors such as finance, government, healthcare and more. Past graduate employment surveys have consistently shown that computer engineers have some of the highest employment rates and best starting pay among all graduates.



Career Paths Include Roles in:

Finance & Investment: DBS, GIC, Goldman Sachs, VISA, Barclays Capital

IT Consulting: Accenture

Consumer Business: Dyson, Procter & Gamble

Government Sector: DSO National Laboratories, DSTA, GovTech, LTA

Infocommunications: M1, Singtel, Starhub, Vodafone

Logistics & Supply Chain Management: DHL, FedEx, PSA

Media & Digital Entertainment: Mediacorp, Sony Singapore

Medical Technology & Healthcare: Medtronic, Philips Healthcare, Synapse

Online Commerce: Shopee, Amazon Web Services

Big Tech: Alphabet, Amazon, Apple, Google, Meta, Microsoft



Programme Overview

Build Your Own Degree

The NUS CEG programme offers an innovative curriculum allowing students flexibility to tailor their education. Students will complete a total of 160 units (or the equivalent of 40 courses), consisting of 60 units of Common Curriculum courses, 60 units of major requirements and 40 units of Unrestricted Electives (UE), all designed with input from industry partners.

Unrestricted Electives (UE): Within and Beyond Computer Engineering

The 40 units of UE enable students to deepen their knowledge within CEG or explore new areas, with options to pursue a second major, minor, specialisation or a combination thereof, fitting seamlessly into their degree without extending graduation time.

Specialisations within CEG include:

- Advanced Electronics
- Industry 4.0
- Internet of Things (IoT)
- Robotics
- Space Technology

Alternatively, students can broaden their horizons with over 40 majors and 70 minors available at NUS:

Second major in:

- Innovation & Design (iDP)
- Management
- Public Health
- Systems Engineering
- Sustainable Urban Development

Minor in:

- Data Engineering
- Entrepreneurship
- Management
- Public Health

Additional learning opportunities:

- **Enhancement Courses:** Experiential learning opportunities for innovation, teaching and research within CDE
- **Design Your Own Course (DYOC):** Offers students the freedom to decide their learning content, method and mentors for up to eight units
- **Career Catalyst:** A foundational course preparing students for internships and careers



Profile of Current Students



Isabella Lu

Bachelor of Engineering (Computer Engineering), Class of 2024

"I started without any background in coding or electrical work. From my first coding assignment to building advanced robots, every project was a step towards gaining knowledge and technical skills. A standout experience was with the Bumblebee Team. It was both an educational and thrilling adventure to Sydney and San Diego to deploy and compete with our self-developed robots. My role as the president of the 8th Undergraduate Student Council has sharpened my leadership skills and deepened my connection with the student community. Throughout this journey, I collaborated with peers who shared my enthusiasm for robotics, in a vibrant, collaborative atmosphere. NUS Computer Engineering has provided me with supportive professors who enriched my experience, guiding and inspiring me every step of the way. This experience transcended technical learning, immersing me in a community passionate about innovation and personal growth."



Cheah Hao Yi

Bachelor of Engineering (Computer Engineering), Class of 2024

"Studying at NUS Computer Engineering provided theoretical knowledge and practical exposure to technical topics such as digital circuits and programming methodologies. This was complemented by soft skills learned through various CDE core courses such as design thinking and project management. Moreover, the resources offered by NUS Computer Engineering were instrumental in securing engineering internships, enabling me to hone my engineering skills and contribute back to the NUS CEG community via hackathon workshops. NUS Computer Engineering cultivates holistic development, encouraging me to become a leader, a team player and an aspiring engineer ready to make an impact in the future."





Azfarul Matin Bin Mohamad Afandi

Bachelor of Engineering (Computer Engineering),
Class of 2025



“My NUS Computer Engineering journey has been incredibly rewarding. Courses like CG1111A and CG2111A have allowed me to delve into the practical aspects of the field, including collaborative projects where we built robots to navigate mazes. This hands-on experience seamlessly blends the realms of software and hardware, aligning perfectly with my passion for both disciplines. As a CEG major, I seized the opportunity to participate in the renowned CP2106: Independent Software Development Project, commonly known as Orbital. For our project, we created a 2D platformer game using Unity and C#, achieving the level of Apollo.”



Ramon Bospinyowong (Jae)

Bachelor of Engineering (Computer Engineering), Class of 2014
Backend Software Engineer,
ByteDance

“Choosing NUS Computer Engineering was a game-changer. Its top-notch faculty and research facilities sparked my love for computing, turning every challenge into an exciting journey. The UROP programme and CG3002 Embedded Systems Design project were eye-openers, showing me how software and hardware seamlessly work together. The student exchange programme and a variety of informative talks broadened my perspective, teaching me cultural adaptability and valuable networking skills. NUS did not just boost my technical skills; it also shaped me into a great team player and enhanced my people skills in its diverse, energetic environment. Joining NUS Computer Engineering is more than an education — it is a journey towards becoming both a well-rounded individual and a proficient engineer.”



Michelle Tee

Bachelor of Engineering (Computer Engineering), Class of 2016
FX Risk Tech Senior Vice President, Citi

“After my journey with NUS Computer Engineering, I started my dream job at Citi as part of the Technology Analyst programme, during which I learnt that my NUS CEG experience had equipped me with skills that worked to my advantage in my career. For example, one of the key skills I learnt during my academic years was the ability to learn quickly and apply effectively. This gave me the confidence I needed to pursue different technologies and business spaces within the organisation.

The monumental experience gained from the Student Exchange Programme to Korea Advanced Institute of Science and Technology (KAIST) enabled me to respect and appreciate diversity. In my current role, I manage a team of 18 people spanning different geographies like Singapore, Poland, India and the UK. Navigating a global team is not easy and I am extremely grateful that NUS CEG gave me the solid footing I needed to achieve anything I aspire to.”



Alumni Success Stories



Rishab Patwari

Bachelor of Engineering (Computer Engineering),
Class of 2023
Chief Executive Officer, HiveBotics



“NUS ECE was instrumental in the existence and progress of HiveBotics so far. The confidence to build my own startup came from the inspiration gained from student projects such as Bumblebee, FSAE and Rovers. As I took on the iDP programme as my second major, I was able to tap into the EG4301A course to recruit and build my initial multidisciplinary team. This was essential to my startup idea of creating a toilet cleaning robot, which required skills from multiple disciplines. One of the team members eventually became the co-founder of HiveBotics as well. We also underwent the NUS GRIP accelerator programme and raised our first pre-seed investment of SGD 100,000 from them.”

Admission Requirements

Singapore-Cambridge GCE 'A' Level

A pass in H2 Mathematics or Further Mathematics; AND
A pass in H2 Physics* or Chemistry or Computing.

Polytechnic Diploma

An accredited diploma.

International Baccalaureate (IB) Diploma

A pass in HL Mathematics: Analysis and Approaches; AND
A pass in HL Physics# or Chemistry or Computer Science.

NUS High School Diploma

A good major CAP in Mathematics; AND
A good major CAP in Physics or Chemistry.

International Qualifications

Applicants presenting international qualifications may
apply with equivalent high school results.

*Students without H1 or H2 Physics must possess
GCE 'O' Level Physics or an equivalent qualification and
will be required to enrol in physics bridging course(s).

#Students without HL Physics must possess SL Physics,
GCE 'O' Level Physics or an equivalent qualification and
will be required to enrol in physics bridging course(s).



Contact

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