

## HIGHER EDUCATION AND SKILLS TRAINING

### Source of Data

Statistics on starting salaries of graduates are collected through the Graduate Employment Survey conducted by publicly-funded local universities, polytechnics and Institute of Technical Education (ITE). The monthly gross starting salary comprises the basic salary, fixed allowances, overtime pay and commissions, but does not include bonuses, as the graduates generally would not have worked long enough to get bonus payouts. The data pertain to graduates in full-time permanent employment, including those on contracts of one year or more.

Statistics on the number of graduates from the institutions of higher learning in Singapore are provided by the National University of Singapore, Nanyang Technological University (including National Institute of Education), Singapore Management University, Singapore University of Technology and Design, Singapore Institute of Technology, Singapore University of Social Sciences, Singapore Institute of Management, Singapore Polytechnic, Ngee Ann Polytechnic, Temasek Polytechnic, Nanyang Polytechnic and Republic Polytechnic.

Statistics on the number of persons who completed or participated in vocational

or professional skills training courses are provided by the Institute of Technical Education, SkillsFuture Singapore, Workforce Singapore and National Trade Union Congress.

### About the Institutions

The **National University of Singapore** (NUS) was established in 1980 with the merger of the University of Singapore (founded in 1962) and Nanyang University (founded in 1955).

NUS has 17 faculties and schools, namely:

- Faculty of Arts and Social Sciences;
- NUS Business School;
- School of Computing;
- School of Continuing and Lifelong Education;
- Faculty of Dentistry;
- School of Design and Environment;
- Faculty of Engineering;
- Faculty of Law;
- Yong Loo Lin School of Medicine;
- Yong Siew Toh Conservatory of Music;
- Faculty of Science;
- University Scholars Programme;
- Yale-NUS College;
- Saw Swee Hock School of Public Health;

- NUS Graduate School for Integrative Sciences and Engineering;
- Lee Kuan Yew School of Public Policy;
- Duke-NUS Medical School.

There is also a specialty institute known as the Institute of Systems Science offering higher degree courses and executive education programmes.

The **Nanyang Technological University** (NTU Singapore) was established in 1991 and has roots that go back to 1981 when its predecessor institution, Nanyang Technological Institute (NTI), was set up on the grounds of the former Nanyang University as a teaching university.

NTU is organised into the following colleges and schools:

### Colleges and Schools

#### *College of Engineering*

- School of Chemical and Biomedical Engineering
- School of Civil and Environmental Engineering
- School of Computer Science and Engineering
- School of Electrical and Electronic Engineering
- School of Materials Science and Engineering
- School of Mechanical and Aerospace Engineering

#### *College of Business*

- Nanyang Business School

#### *College of Science*

- Asian School of the Environment
- School of Biological Sciences
- School of Physical and Mathematical Sciences

#### *College of Humanities, Arts & Social Sciences*

- School of Art, Design and Media
- School of Humanities
- School of Social Sciences
- Wee Kim Wee School of Communication and Information

#### *Graduate College*

##### *Interdisciplinary Graduate School*

##### *Lee Kong Chian School of Medicine*

#### Autonomous entities

- National Institute of Education (NIE);
- S Rajaratnam School of International Studies (RSIS);
- Earth Observatory of Singapore (EOS);
- Singapore Centre for Environmental Life Sciences Engineering (SCELSE);
- Wealth Management Institute (WMI);
- Chinese Heritage Centre (CHC).

The **Singapore Management University** (SMU) was incorporated in 2000.

SMU comprises six schools, namely:

- Lee Kong Chian School of Business;
- School of Accountancy;
- School of Economics;
- School of Information Systems;
- School of Law; and
- School of Social Sciences.

Together, they offer Bachelor's, Master's and PhD degree programmes and executive development and professional programmes. Through SMU Executive Development and the SMU Academy, SMU also provides customised corporate training and lifelong learning for individuals and organisations.

The **Singapore University of Technology and Design** (SUTD) was established in 2009.

SUTD offers degrees in four pillars:

- Architecture and sustainable design,
- Engineering product development,
- Engineering systems and design, and
- Information systems technology and design.

SUTD also offers Masters and PhD degree programmes. In addition, skill-based professional education and training courses are available at the SUTD Academy.

The **Singapore Institute of Technology** (SIT) was established in 2009.

SIT offers degree programmes targeted at growth sectors of the economy and spanning five clusters:

- Engineering
- Chemical Engineering and Food Technology
- Infocomm Technology
- Health and Social Sciences
- Design and Specialised Businesses

In AY2019, SIT offers a total of 42 degree programmes from across SIT and nine overseas universities, including DigiPen Institute of Technology, Massey University, Newcastle University, Technical University of Munich, The Culinary Institute of America, The Glasgow School of Art, Trinity College Dublin, University of Glasgow, and University of Liverpool.

The **Singapore University of Social Sciences** (SUSS) became an autonomous university in 2017.

SUSS offers more than 70 undergraduate and graduate programmes, available in full- and part-time study modes, to both fresh school leavers and adult learners. It also offers continuing education and training modular courses.

SUSS' programmes and courses are made available through its five schools:

- School of Business
- School of Humanities and Behavioural Sciences
- School of Law
- School of Science and Technology
- S R Nathan School of Human Development.

The **Singapore Institute of Management** (SIM Group) was founded in 1964 to support Singapore's economic development. SIM Group offers its educational and training services through the following brands:

- SIM Global Education
- SIM International Academy
- Singapore (Cambodia) International Academy
- SIM Professional Development
- Platform E.

The **Singapore Polytechnic** (SP), founded in 1954, is the first polytechnic to be established in Singapore.

In 2018, SP offered 45 full-time courses that lead to diploma qualifications in various fields.

SP is organised into 10 schools (School of Architecture & the Built Environment, SP Business School, School of Chemical & Life Sciences, School of Communication, Arts & Social Sciences, SP Design School, School of Digital Media & Infocomm Technology, School of Electrical &

Electronic Engineering, School of Mechanical & Aeronautical Engineering, School of Mathematics & Science and Singapore Maritime Academy).

The **Ngee Ann Polytechnic** (NP) assumed its name in 1982. It was initially established as a private institution in 1963 under the name of Ngee Ann College. It became a public institution and was renamed Ngee Ann Technical College in 1968.

NP offers full-time diplomas in Arts, Design & Media, Built Environment, Business, Engineering, Health Sciences, Humanities & Social Sciences, Information & Digital Technologies and Sciences. NP also offers part-time Continuing Education and Training (CET) course for adult learners.

The **Temasek Polytechnic** (TP) was established in 1990. It is organised into seven schools, namely Applied Science, Business, Design, Engineering, Humanities & Social Sciences, Informatics & IT, and Centre for Foundation Studies. They offer a total of 37 diploma courses and 39 Polytechnic Foundation Programme courses in 2019. TP also conducts part-time courses for working adults.

The **Nanyang Polytechnic** (NYP), established as an institution of higher learning in 1992, has seven academic schools that offer a wide range of full-time diploma courses. NYP also has continuing education (CET) options for lifelong learning, ranging from specialist and advanced diplomas, to SkillsFuture modules and course.

NYP's Asian Culinary Institute and the Singapore Institute of Retail Studies are CET institutes set up in partnership with SkillsFuture Singapore (SSG) to champion and transform Singapore's F&B and retail sectors respectively. A third NYP CET institute - the National Centre of Excellence for Workplace Learning, - spearheads the development of progressive workplace learning strategies and programmes for companies in Singapore.

The **Republic Polytechnic** (RP) was established in 2002 as the fifth polytechnic in Singapore. RP has seven schools and one academic centre offering 39 full-time diplomas in Applied Science, Engineering, Management and Communication, Hospitality, Infocomm, Sports, Health & Leisure, and Technology for the Arts. RP Academy for Continuing Education offers lifelong learning programmes to provide adult learners with skills upgrading opportunities.

The **Institute of Technical Education** (ITE) was established in 1992 as a post-secondary institution which provides pre-employment training for secondary school graduates and Continuing Education and Training (CET) for adult learners.

ITE offers full-time and traineeship programmes to secondary school graduates, as well as skills training and academic education programmes to adult learners. Employees can also undergo On-the-Job Training in companies which are Certified On-the-Job Training Centres. In addition, ITE conducts skills evaluation tests for public candidates and instructional skills and related programmes for industry trainers.

Full-time training is offered to secondary school graduates with the GCE 'O' and 'N' Level qualifications in Applied & Health Sciences, Business & Services, Design & Media, Engineering, Hospitality and Electronics & Info-communications Technology. Upon completion of the courses, students are awarded a Higher National ITE Certificate (*Higher Nitec*) or National ITE Certificate (*Nitec*). ITE also offers Technical Diploma programmes in niche areas in collaboration with overseas institutions as another pathway for upgrading.

The Traineeship programme is an 'earn-as-you-learn' scheme for secondary school graduates or adult learners who wish to work and upgrade concurrently. It has two training components - On-the-Job Training (OJT) and Off-the-Job Training (Off-JT). OJT is conducted by the sponsoring companies on their premises while Off-JT could be provided by ITE or companies certified by ITE as Approved Training Centres.

Adult learners may choose from a range of CET programmes from *Nitec*, *Higher Nitec*, *Specialist Nitec* to ITE Skills Certificate (ISC) courses, to upgrade their skills. These programmes are offered in modules, giving adult learners the flexibility to sign up for training based on their needs.

Adult learners who wish to acquire academic qualifications otherwise obtained through the formal school system, can enrol in the part-time General Education Programme from Secondary One (Normal) to GCE 'N' and GCE 'O' Levels.

In April 2018, ITE launched four Work-Learn Technical Diploma (WLTD), namely in Marine & Offshore Engineering, Mechanical & Electrical Services Supervision, Rehabilitation Care and Security Systems Engineering. The WLTD is an apprenticeship-based training programme delivered in partnership with employers to give *Nitec* and *Higher Nitec*

graduates a head-start in careers related to their discipline of study. The training comprises of Off-JT at ITE and OJT at the companies.

The **SkillsFuture Singapore** (SSG) is a statutory board under the Ministry of Education (MOE) that drives and coordinates the implementation of the national SkillsFuture movement, promotes lifelong learning through the pursuit of skills mastery, and strengthens the ecosystem of quality education and training in Singapore.

Together with educational institutions and training partners, SSG brings to students and working adults access to industry-relevant training throughout life. SSG synergises continuing education and training (CET) and pre-employment training (PET) so that skills requirements will continue to meet the demands of different sectors of the economy. SSG also regulates the local Private Education industry, provides student services, consumer education, and facilitates capability development efforts to uplift standards in this industry via the Committee for Private Education.

The **Workforce Singapore** (WSG) is a statutory board under the Ministry of Manpower. It strives to minimise mismatches and maximise matching between jobs and skills, workers and businesses by working with individuals, businesses and partners such that innovation-driven growth of our economy can also provide inclusive growth for our people.

WSG works with individuals to help them find jobs, build careers at all life stages and manage career transitions throughout their lives. WSG also promotes the inclusiveness of all levels of our workforce.

WSG supports businesses to adopt new business models, be more manpower lean and create progressive workplaces, so that businesses can create quality jobs to attract and build a stronger Singaporean core.

The Professional Conversion Programmes (PCPs), which are administered by WSG under the Adapt and Grow Initiative, were introduced in 2007 to help professionals, managers, executives and technicians (PMETs) convert and upgrade their skills and make career switches to jobs in growth areas.

The **Employment and Employability Institute** (e2i) creates solutions for better employment and employability. An initiative of the National Trades Union Congress (NTUC), e2i assists Singapore workers through Career Coaching, Training and Job Matching initiatives, impacting more than 710,000 workers since 2008.