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 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, Singapore Workforce Development Agency, National Trade Union Congress, Building and Construction Authority Academy, Ong Teng Cheong Labour Leadership Institute, Institute of Systems Science (National University of Singapore) and Singapore Human Resources Institute.

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.

The NUS Graduate School for Integrative Sciences and Engineering, Lee Kuan Yew School of Public Policy and Duke-NUS Medical School offer higher degree courses only. 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 ground 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 and Social Sciences
- Wee Kim Wee School of Communication and Information

Interdisciplinary Graduate School
A graduate school that supports PhD research in the University's interdisciplinary research centres, covering Sustainable Earth, Secure Community, Healthy Society and Global Asia.

Lee Kong Chian School of Medicine
A joint medical school between NTU and Imperial College London in Singapore, offering a five-year MBBS programme.

Autonomous entities
- National Institute of Education (NIE);
- S Rajaratnam School of International Studies;

- Earth Observatory of Singapore (EOS) ; and
- Singapore Centre for Environmental Life Sciences Engineering (SCELSE).

The **Singapore Management University** (SMU) incorporated in 2000, is Singapore's third university.

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 in business and other disciplines.

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

- *SIM University* (UniSIM) is the only national private university in Singapore. Home to more than 14,000 students, UniSIM offers more than 50 academic programmes (part-time and full-time) in various disciplines. Eligible students taking UniSIM's undergraduate programmes enjoy government subsidies and access to government bursaries, tuition fee and study loans.

UniSIM is a not-for-profit university and the SIM University Education Fund has been a Singapore 'Institution of a Public Character' (IPC) since September 2005.

- *SIM Global Education* students can choose from a wide range of overseas degree programmes made available through SIM's partnership with international universities and institutions from the United Kingdom, United States and Australia. Most of the students are undergoing full-time programmes, but SIM Global Education also offers part-time programmes that cater to working adults. Offering over 100 academic programmes, its enrolment stands at 20,000, with about 3,500 foreign students.

- *SIM Professional Development* trains about 11,000 professionals annually through its selection of short executive training programmes.

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

SP offers full-time courses that lead to diploma qualifications in various fields.

In 2015, 49 full-time courses were offered by SP's 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.

In FY 2015, the Polytechnic offered 49 full-time diploma courses.

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 51 diploma courses and 46 Polytechnic Foundation Programme courses in 2016. TP also conducts part-time courses for working adults.

The **Nanyang Polytechnic** (NYP) was established in 1992 to provide quality education and training opportunities for school leavers. The Polytechnic currently has seven schools offering a wide range of courses in Business Management, Chemical & Life Sciences, Design, Engineering, Health Sciences, Information Technology, and Interactive & Digital Media.

The **Republic Polytechnic** (RP) was established in 2002 as the fifth polytechnic in Singapore. RP has seven academic schools (School of Applied Science, School of Engineering, School of Infocomm, School of Sports, Health and Leisure, School of Technology for the Arts, School of Hospitality, School of Management and Communication), an academic Centre for Educational Development and an Academy for Continuing Education. In 2016, 42 full-time diploma programme are offered by RP's seven academic schools.

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 Info-communications Technology. Upon completion of the courses, students are awarded a Higher National ITE Certificate (*Higher Nitec*) and 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 adults 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.

The **Singapore Workforce Development Agency** (WDA) aims to enhance the competitiveness and employability of workers by helping them acquire skills to adapt in a changing economy.

To achieve this, WDA works with industry leaders, labour unions, employers, economic agencies, professional associations and training organisations.

WDA also supports the growth of Singapore industries by building a pipeline of competent workers through the constant upgrading of workers' skills, supporting companies' productivity enhancement efforts, and raising industry performance standards.

The Singapore Workforce Skills Qualifications (WSQ) system was launched in October 2005. It is a national credentialing system that provides training and certifications for adult workers to obtain

nationally recognised and industry-relevant qualifications. WSQ emphasises flexible competency-based adult learning, open access to skills upgrading and clear career progression pathways for workers to upgrade their skills.

The WSQ is anchored on the development of skills and competencies linked to occupational structures, and developed in close consultation with industries. Under the WSQ system, competency standards, assessment strategies and training curriculum incorporating adult learning principles, are established for each key industry.

WDA introduced the Professional Conversion Programme (PCP) in April 2007 to help professionals, managers, executives and technicians (PMEs) convert and upgrade their skills and make career switches in sectors, such as precision engineering, aerospace, healthcare, community & social services and training.

The **Employment and Employability Institute** (e2i) creates solutions for better employment and employability. An initiative of the National Trades Union Congress (NTUC), supported by the Singapore Workforce Development Agency (WDA), the Singapore Labour Foundation (SLF), and the Singapore National Employers' Federation (SNEF), e2i serves all segments of workers, from rank and file to professionals, managers, executives and technicians. Since 2008, e2i has helped more than 470,000 workers through developing better skills, job matching, and improving productivity with companies.

BCA Academy is the education and research arm of the **Building and Construction Authority** (BCA). Founded in 1984, the Academy plays a key role in ensuring that the skills and expertise required to shape a safe, high quality, sustainable, and friendly built environment are readily available.

The Academy provides training and education programmes ranging from craft skills and plant training for tradesmen and supervisors to degree and executive management programmes for industry professionals conducted in collaboration with overseas universities, as well as certification programmes.

The **Ong Teng Cheong Labour Leadership Institute** was founded as the Singapore Institute of Labour Studies in 1990 by the National Trades Union Congress (NTUC). In 2002, the Institute changed its name to Ong Teng Cheong Institute of Labour Studies to commemorate the contributions of the late Mr. Ong Teng Cheong, a former Secretary-General of the NTUC and President of the Republic of Singapore. In 2009, the institute integrated

with NTUC Leadership Development Department and took on its present name to create the hub for labour leadership development and advancing tripartism.

The Institute is guided by a Board of Governors comprising senior leaders from the government, trade unions, industry and academia. The Institute offers the following programmes :

- Continuing Professional Development Programmes;
- International Programmes;
- Progressive Leadership Development Programmes;
- Public Courses; and
- Union-Management Programmes.

Established in 1981, the **Institute of Systems Science** (ISS) at the National University of Singapore (NUS) provides graduate education, professional development courses, consultancy and research services. Its objectives are to develop infocomm leaders, and drive business and organisation innovation.

ISS was appointed the National Continuing Education and Training (CET) Centre for the National Infocomm Competency Framework (NICF) by Singapore Workforce Development Agency (WDA). It is also a Programme Partner for WDA's Service Excellence Competency & Creative Industries Frameworks. The Institute is accredited by international and local accreditation and certification bodies to deliver programmes that lead to recognised certifications and qualifications. It also conducts research, organises management, technology and innovation update seminars and provides consulting services to the industry. The Singapore e-Government Leadership Centre (eGL) in ISS helps government leaders innovate and transform through e-Government education, and consulting and research.

To date, over 103,000 infocomm professionals, 5,600 corporate customers and 4,700 post-graduate alumni members have benefitted from NUS-ISS's suite of services.

The **Singapore Human Resources Institute** (SHRI) is a not-for-profit professional HR body, which represents a network of members, comprising individuals and organisations across diverse industries. Since 1965, the Institute has remained committed to advocating best practices in HR, connecting a community of HR professionals and enhancing the HR profession.

The SHRI Group consists of SHRI Academy Pte Ltd and SHRI Corporation Pte Ltd.

SHRI Academy Pte Ltd is a training institution that caters to the learning and development needs of adult. It offers lifelong learning opportunities and a diverse

range of academic programmes from certificate to master degree levels under its School of Human Capital Management. SHRI Academy also works with the Edinburgh Napier University (UK).

SHRI Corporation Pte Ltd is the Corporate Learning & Consultancy arm of SHRI, which focuses on enabling knowledge acquisition and skills development at both corporate and individual levels.