BUILDING & ENVIRONMENT

- Civil & Environmental Engineering (N47)
- Environmental & Water Technology (N74)
- Facilities Management for Business (N40)
- Real Estate Business (N48)
Building & Environment Division

- R&D work and student attachments with established partners in the construction, real estate, and water & environment industries
- Strong endorsement and recognition from professional bodies with extra certifications
- Award winning students in the environmental arena – including the Bayer Young Environmental Envoy Award and the HSBC / NYAA Youth Environmental Award
- High-tech facilities, including the first Centre of Innovation for Environmental & Water Technology
Singapore. We are a city that leaves nothing to chance.

Our city landscape is constantly changing with new skyscrapers, residential areas, business centres and much more. We are fast becoming the regional water hub – providing leadership in environmental and water technology. With two integrated resorts underway, the demand for talent in facilities management, civil and environmental engineering, and real estate industries will rise even further.

Our Building & Environment Division (BE) will help you build a career in these most exciting building and environment industries.

As befitting our area of focus, we offer high-tech facilities and technology centres, like the Integrated Facilities Management Centre to enhance your learning experience. Our Division boasts the first Centre of Innovation for Environmental & Water Technology, giving you excellent opportunities in technological research and development.

Work alongside industry partners in development and research projects like the study of drainage system in Clementi Woods Park with National Parks Board. Cover topics such as vehicle emissions and pollutants, solid waste management with the National Environment Agency (NEA), water demand management with the Public Utilities Board (PUB), rainwater utilisation with D Plus Marketing, testing of ceramic filters for third world application with Lien Foundation, and polishing sludge as partial substitute for sand with Asahi Techno Vision Pte Ltd.
Learn about work in the real world through attachments with established industry players including Surbana International Consultants, Shell Eastern Petroleum Pte Ltd, Kai Shing Management Services Ltd in Hong Kong, Civil Aviation Authority of Singapore, Savills Residential (S) Pte Ltd and BP Singapore Pte Ltd.

Professional bodies like Building and Construction Authority (BCA), Inland Revenue Authority of Singapore (IRAS), PUB, NEA and Singapore Civil Defence Force support our programmes - which are also recognised for exemption from the Common Examinations for House Agents (CEHA) or for the Fire Safety Manager qualification. Graduates from our Diploma in Civil & Environmental Engineering also enjoy additional certification as Environmental Control Officers, Construction Supervisors and Noise Monitoring Officers.

Over the years, our BE Division has produced many award-winning students in the environmental arena. BE graduates have received the PUB Watermark Award, Bayer Young Environmental Envoy Award, HSBC/NYAA Youth Environmental Award and the Greenwave Environmental Care Award, to name a few. With our training, you could soon be one of them!

The BE Division comes under the School of Engineering, which also includes Electrical Engineering, Electronic & Computer Engineering, Multidiscipline Engineering, and Mechanical Engineering.

For more information, log on to http://soe.np.edu.sg/soe/be
When you graduate and as you move up the career ladder, you will most likely assume roles that require more than what you have learnt as an engineer. You will change jobs a few times, and like many engineers, take on management roles and switch to jobs in entirely new fields.

To help you become More Than An Engineer, the School of Engineering (SoE) is excited to offer you a radically different curriculum structure that spells: More Choices, Greater Flexibility and Broader Career Opportunities!

This revolutionary broad-based curriculum offers flexibility – breaking away from the limitations that come with the traditionally structured approaches of many engineering courses offered elsewhere.

So, join us and be plugged into the new exciting world of engineering where you graduate with more than just a Diploma. You can choose to take up Diploma Plus and/or Enhancement Certificates depending on your abilities and interests.
Diploma in Civil & Environmental Engineering

- Civil engineering with a “green” slant
- Good balance of civil and environmental modules – graduates are more versatile and given more career choices and opportunities for further studies
- Graduates can be certified as Construction Supervisors, and Environmental Control, Noise Monitoring and Safety Officers
- Exciting electives that include Sustainable Design & Development, Ecotourism, and Gardens Design & Park Management
About the Diploma

Civil engineering is not only responsible for some of the greatest structures in our time; it is important for building our future as well.

The malls you shop in, the place you live and the bridges you cross are all possible because of civil engineering. Contribute by designing, planning and supervising the construction of these structures with our Diploma in Civil & Environmental Engineering (CEE) – and do so with high environmental standards. It is a civil engineering course with an emphasis on “green” issues. You will provide the engineering field with a ‘human touch’ to protect our lives and the environment.

The CEE diploma has produced outstanding graduates for the industry for some 20 years. As a broad-based course, it will equip you with knowledge in infrastructure planning and development, as well as environmental protection, conservation and management. You will benefit from a curriculum with a good balance of civil and environmental modules, thus having the ability to design and build facilities using environmentally-friendly technology – turning you into a highly versatile professional in one of the fastest growing sectors in the region.

That's not all. The course also trains you in the areas of water and wastewater treatment, pollution control, waste management and recycling, as well as environmental health management. You will also appreciate the intricacies that go into any building design.

The Diploma is endorsed and recognised by professional organisations. You can even receive additional certification as a Construction Supervisor by the Building and Construction Authority, an Environmental Control Officer by the National Environment Agency and a Noise Monitoring Officer by the Ministry of Manpower (MOM). Our diploma also meets the partial requirements of MOM for the position of Safety Officer.
What will you learn in the course?

**Year 1**
- Structural Mechanics
- Civil Engineering Construction
- Ecology
- Environmental Health
- Engineering Mathematics 1 & 2
- Land Surveying
- Computer Aided Design
- Environmental Chemistry & Analysis
- Hydraulics
- Creativity & Applied Thinking Skills
- Sports & Wellness
- Individual & the Community
- Communication Toolkit

**Year 2**
- Structural Analysis
- Project Management
- Noise Pollution Monitoring & Control
- Clean Water Technology
- Engineering Mathematics 3
- Geotechnical Engineering
- Quantity Surveying
- Environmental Management
- Workplace Safety & Health 1
- Industrial Training Programme (not for IAP*/PDD* students)
- Innovation & Enterprise in Action
- Any 2 IS general modules

**Year 3**
- Reinforced Concrete Design
- Air Quality Monitoring & Control
- Steel Design
- Workplace Safety & Health 2
- Water Reclamation Technology
- Structural Inspection & Repairs (not for IAP*/PDD* students)
- International Business (not for IAP*/PDD* students)
- Final Year Project OR IAP* OR PDD*
- World Issues: A Singapore Perspective
- Any 1 IS general module

*IAP – Industrial Attachment Programme
* PDD – Project Design & Development

**School of Engineering Electives**
Choose your electives and customise your selection from a wide range of modules from engineering and non-engineering categories. See page 21.
What can you achieve in your career?

As a civil engineer, you will help to increase foreign investment and economic development, by creating good infrastructure and a high standard of environmental management. Your skills will be welcomed by the National Environment Agency and the Public Utilities Board, as well as multinational corporations, developers, contractors and consultancy firms.

Further Studies

Graduates who want to further their studies in civil or environmental engineering can get one to two years’ exemption or module exemptions in both local and overseas universities.

For example, you will qualify for one year’s advanced standing when you apply for the degree in Civil Engineering or Environmental Engineering at the National University of Singapore and Nanyang Technological University.

Obtain one to two years advanced standing from Australian and British universities such as University of Queensland, Deakin University, Bond University, University of Wollongong, RMIT University and University of Newcastle upon Tyne.

Entry Requirements

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

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The aggregate computation for selection is based on grades obtained for English, Mathematics, Science or Design & Technology and two other subjects.

** Candidates with English as a second language (EL2) must have attained a minimum grade of 6.

Candidates with hearing deficiency should not apply for the course.
Diploma in Environmental & Water Technology

- More than 20 years in environmental engineering education. Supported by the National Environment Agency and Public Utilities Board (PUB)
- First to offer PUB scholarships
- Work on industry-based projects at the Centre of Innovation in Environmental & Water Technology, the first centre of its kind
- Exciting value-added electives that include Gardens Design & Park Management, Ecotourism and Events & Promotion
About the Diploma

Do you know that one in three people around the world has to cope with water scarcity? In the future, wars might well be fought over clean water. Concerns about the environment range from pollution to energy conservation. Increasingly, businesses are under pressure to be environmentally responsible.

If you are passionate about the environment and water resources, our Diploma in Environmental & Water Technology (EWT) is the course for you.

EWT is jointly developed with the Public Utilities Board (PUB), and is backed by Ngee Ann Polytechnic’s strong heritage of providing environmental engineering education for more than 20 years. Our EWT diploma trains you to be a specialist in dealing with global concerns such as groundwater pollution, air pollution, global warming, ozone depletion and improper handling of hazardous waste.

You will have the opportunity to understand these challenges and find environmentally-friendly solutions for them. Benefit from a good grounding in the five key areas of water technology, waste management & resource conservation, renewable energy, pollution monitoring & control, and environmental management, health & safety. Enrich yourself through exciting electives including Gardens Design & Park Management, Ecotourism and Events & Promotion. You can gain hands-on experience in industry-based projects at the Centre of Innovation in Environmental & Water Technology, the first such Centre amongst local tertiary institutions.

Our Diploma is fully supported by the National Environment Agency and PUB, and endorsed by the Ministry of Manpower. These partnerships will ensure greater real-life exposure to the growing environmental and water technology industry prior to graduation. EWT is the first to offer PUB scholarships, where outstanding students can obtain a full-term scholarship with no bond, as well as a chance to work in the company!

“Ngee Ann Polytechnic is well-placed to play an important role in training skilled manpower to contribute significantly to a thriving and vibrant environment and water industry. This will enable Singapore to tackle her environmental challenges head-on and move towards environmental sustainability.”

- Mr Ram Bhaskar
  Head, Environmental Technology Unit, National Environment Agency
### Year 1
- Environmental Chemistry & Analysis
- Fundamentals of Civil Engineering
- Fundamentals of M&E Engineering
- Engineering Mathematics 1 & 2
- Hydraulics
- Environmental Biology

### Year 2
- Clean Water Technology
- Workplace Safety & Health 1
- Noise Pollution Monitoring & Control
- Solid & Hazardous Waste Management
- Engineering Mathematics 3
- Water Reclamation Technology
- Air Quality Monitoring & Control

### Year 3
- Environmental Management System
- Workplace Safety & Health 2
- Energy Conservation & Management
- Design of Water Systems
- Membrane Science & Technology
- Process Instrumentation & Control

Additional Modules:
- Renewable Energy
- Environmental Biotechnology
- Water & Marine Pollution
- Industrial Training Programme (not for IAP*/PDD* students)
- Innovation & Enterprise in Action
- Any 2 IS general modules

* IAP – Industrial Attachment Programme
* PDD – Project Design & Development

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**School of Engineering Electives**
Choose your electives and customise your selection from a wide range of modules from engineering and non-engineering categories. See page 21.
The aggregate computation for selection is based on grades obtained for English, Mathematics, Science or Design & Technology and two other subjects.

** Candidates with English as a second language (EL2) must have attained a minimum grade of 6.

Candidates with hearing deficiency or severe vision deficiency including colour appreciation deficiency should not apply for the course.

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**Entry Requirements**

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

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**Candidates with English as a second language (EL2) must have attained a minimum grade of 6.**

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**What can you achieve in your career?**

An announcement by the Singapore government in 2006 revealed that $2 billion in research funds would be set aside to drive the growth of the environment and water technology industry. As a result, employment opportunities will be doubled to 11,000 positions by 2015.

Start a career as an environmental technologist, water and wastewater treatment specialist, workplace health and safety auditor, as well as a marketing executive for environment-related equipment and products with our EWT diploma.

**Further Studies**

You will potentially enjoy one year’s exemption when you apply for the degree in Environmental Engineering at the National University of Singapore and Nanyang Technological University.

You can also apply for degree programmes in Environmental Science & Engineering and Environmental Management at UK and Australian Universities.
Diploma in Facilities Management for Business

- The only facilities management course of its kind - with a fully comprehensive and focused curriculum
- Graduates will be awarded the Fire Safety Manager Certificate, and will qualify for registration as a Qualified Fire Safety Manager
- Course is endorsed by the Building and Construction Authority of Singapore and recognised by the Civil Defence Academy
- Value-adding specialised modules like Interior Design, and Security Management & Business Recovery, with exciting electives in Hotel & Recreation Facilities, Ecotourism and Retail Management
About the Diploma

Mega-malls, convention centres and five-star hotels must function like clockwork. With the Diploma in Facilities Management for Business (FMB), you will have the skills to ensure that this happens. This diploma equips you with skills to manage processes, places and people.

The first programme of its kind, it is the only Facilities Management course with a fully comprehensive and focused curriculum that covers business management, operations, maintenance and even hospitality management. You will have the opportunity to undertake specialised modules like Interior Design, Lighting & Acoustics Design, Hotel & Recreation Facilities, and Healthcare & Business Park Facilities.

With a good grounding in financial management, business continuity and disaster recovery, you will be valued by companies as a facilities manager.

Students with excellent performance can go on a six-month attachment at companies like Raffles City Hotels, Jones Lang LaSalle Property Consultants, United Premas, Reuters and DBS Bank.

The Diploma is endorsed by the Building and Construction Authority of Singapore and recognised by the Civil Defence Academy. It qualifies you for the Fire Safety Manager Certificate and for registration as a Qualified Fire Safety Manager upon graduation. These will give you an extra edge and added advantage.

“We view this course as relevant and timely. It will train much needed technical personnel to manage and enhance our built-up facilities and environment so as to contribute to Singapore’s competitiveness and brand name. This area of management also has considerable export potential.”

- Mr Lam Siew Wah
Deputy Chief Executive Officer, Industry & Corporate Development
Building and Construction Authority
School of Engineering Electives
Choose your electives and customise your selection from a wide range of modules from engineering and non-engineering categories. See page 21.
What can you achieve in your career?

In Singapore, the demand for facility managers is high with the constant change in our city landscape. New mega-malls are springing up. With the integrated resorts and Formula 1 coming to Singapore, tourists and racing fans will pour in, creating demand for more hotels, and trained personnel to manage such facilities.

In addition to being a facility manager, you will be able to work as an environmental consultant, a project manager, property and workplace planner, or business development manager.

With your certification as a Fire Safety Manager, you can get an additional allowance of about $200 to $300.

Further Studies

The National University of Singapore (NUS) and various overseas universities in Australia, United Kingdom and United States offer advanced standing in degree courses related to Facilities Management. For example, you may potentially enjoy one year’s exemption when you apply for the degree in Project & Facilities Management or the degree in Real Estate at NUS.

A fast track degree in Facilities Management can be completed in one year at Deakin University, Heriot-Watt University and University of Central Lancashire.

You may also be eligible for up to one year’s exemption when you apply for a Business degree, with specialisation in Economics, Management or International Hotel and Tourism Management at the University of Queensland.

Entry Requirements

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

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** Candidates with English as a second language (EL2) must have attained a minimum grade of 6.
Diploma in Real Estate Business

- First and only full-fledged, comprehensive diploma course in real estate
- Recognition from professional bodies and organisations like Inland Revenue Authority of Singapore (IRAS) and Singapore Institute of Surveyors and Valuers (SISV)
- Wide range of electives that include Ecotourism and Hospitality Management and Retail Management
About the Diploma

Ever thought of cutting real estate deals the way property tycoon Li Ka-shing does, but in Singapore? Yes? You are hired!

Ngee Ann Polytechnic’s Diploma in Real Estate Business (REB) teaches you to wheel and deal your way to a job in the property market.

Singapore may have a shortage of land, but its billion-dollar property market is buzzing with excitement. With developments such as the integrated resorts in Marina Bay and Sentosa, as well as the rejuvenation of the Central Business District and the Orchard Shopping Belt, your future in this industry looks rosy.

As the first and only full-fledged real estate diploma course, REB provides a comprehensive and up-to-date curriculum. It will introduce you to the real estate market. From planning and development, to managing, valuing and marketing real estate projects, you can gain a full understanding of the real estate business. In addition, you will learn the intricacies of investing in innovative real estate-related financial products such as REITs (Real Estate Investment Trusts).

You can also choose from a wide array of electives that include Ecotourism, Hospitality Management and Retail Management. Overseas training opportunities are available in major cities of China, India and Australia, as well as with prominent local companies.

As a REB graduate, you will help estate owners, investors and tenants to maximise their land use and achieve the highest financial returns. You will also have a hand in the strategic marketing and management of shopping centres, integrated resorts and theme parks; as well as valuing luxury condominiums, office and retail properties.

Our REB diploma enjoys recognition from several professional organisations. You can register as a housing agent with the IRAS without having to take the Common Examination for House Agents (CEHA).

“The curriculum is definitely relevant to the current and future demands of the construction and real estate industry.”

- Associate Professor Liow Kim Hiang  
Deputy Head (Administration & Finance), Department of Real Estate  
National University of Singapore
School of Engineering Electives
Choose your electives and customise your selection from a wide range of modules from engineering and non-engineering categories. See page 21.
What can you achieve in your career?

Further Studies

A range of jobs are open to REB graduates. Become an investment executive, finance and loans officer, valuation officer, property officer, planning & development executive, project supervisor or assistant quantity surveyor.

Employers include government departments, banking and financial institutions, property developers, property investment companies, real estate consultancies and town councils.

Gain advanced standing in Real Estate and Project & Facilities Management courses at the National University of Singapore and enjoy a one-year exemption.

For universities in Australia, UK and US, advanced standing is granted when you apply for degree courses in Real Estate, Facilities Management and Business. At the University of Reading and Heriot-Watt University, you enjoy exemptions of one and two years respectively for degrees in Real Estate. Fast track degree in Facilities Management can be completed in only one year at Deakin University, University of Central Lancashire and Heriot-Watt University (via distance-learning).

You may also be eligible for exemption of up to one year when you apply for a Business degree, with specialisation in Economics, Management or International Hotel & Tourism Management at the University of Queensland.

Entry Requirements

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

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** Candidates with English as a second language (EL2) must have attained a minimum grade of 6.
You will take two elective modules to complete your diploma. Choose your elective modules from a wide range of clusters available under both engineering and non-engineering categories.

You want more? Just top up with two additional elective modules. If any three of the four elective modules completed are from the same cluster, you will qualify for a Diploma Plus!

The Diploma Plus will better prepare you if you wish to pursue a university degree or increase your employability in discipline-specific areas.

### Engineering Category
- Advanced Engineering Mathematics Cluster*
- Applied Physics Cluster*
- Mechanical Technology Cluster

### Non-Engineering Category
- Economics & Financial Applications Cluster
- Green Development Cluster
- Leisure & Retail Management Cluster

### Other Available Diploma Plus Certificates
- Business
- Innovation Management
- Languages (Japanese)

*Designed in collaboration with the Department of Electrical and Computer Engineering, National University of Singapore (NUS). The syllabus is based on the first-year engineering mathematics and science curricula of NUS.*
With over 40 full-time diploma courses at Ngee Ann Polytechnic, you will definitely find something to suit your interests and passion.

SCHOOL OF BUSINESS & ACCOUNTANCY
- Accountancy
- Banking & Financial Services
- Business Information Technology
- Business Studies
- Tourism & Resort Management

SCHOOL OF ENGINEERING
- Aerospace Electronics
- Aerospace Technology
- Audio-visual Technology
- Biomedical Engineering
- Business Process & Quality Engineering
- Civil & Environmental Engineering
- Electrical Engineering
- Electronic & Computer Engineering
- Engineering Informatics
- Environmental & Water Technology
- Facilities Management for Business
- International Supply Chain Management
- Logistics Management
- Marine & Offshore Technology
- Mechanical Engineering
- Mechatronic Engineering
- Network Systems & Security
- Product Design & Innovation
- Real Estate Business

SCHOOL OF FILM & MEDIA STUDIES
- Digital Visual Effects
- Film, Sound & Video
- Mass Communication

SCHOOL OF HEALTH SCIENCES
- Health Sciences (Nursing)

SCHOOL OF HUMANITIES
- Business & Social Enterprise
- Chinese Studies
- Early Childhood Education
- Psychology & Community Services

SCHOOL OF INFOCOMM TECHNOLOGY
- Enterprise IT Systems
- Information Technology
- Mobile Business Solutions
- Multimedia & Animation

SCHOOL OF LIFE SCIENCES & CHEMICAL TECHNOLOGY
- Biomedical Laboratory Technology
- Biomedical Science
- Chemical & Biomedical Engineering
- Horticulture & Landscape Management
- Molecular Biotechnology
- Pharmacy Science

courses with that something xtra

NEW!
Join Us

If you took the 2007 GCE ‘O’ Level examinations as a school candidate, you may apply on-line through the Joint Admissions Exercise (JAE). Details will be available in the JAE information booklet which you will receive when collecting your results.

Applicants who are not eligible to apply under the JAE and holders of other qualifications may refer to our website at http://www.np.edu.sg/aa/info.html for application details.

Fees
S$2,100 per academic year (for local students)

All information correct at time of printing (Oct 2007)