THE ASIAN SCHOOL OF THE ENVIRONMENT

The Asian School of the Environment (ASE) at NTU is a world leader in environmental research focused on environmental challenges in Asia. We integrate earth and environmental life science, ecology, engineering and technology, humanities and the social sciences to address Asia and the world’s key environmental challenges, including climate change, deforestation, natural disasters and sustainability. The ASE builds upon the strengths of the Earth Observatory of Singapore (EOS) and the Singapore Centre for Environmental Life Science Engineering (SCELSE), two research Centres of Excellence within NTU.
SOLUTIONS FOR EARTH’S FUTURE

Undergraduates learn the skills to tackle the big issues facing the world today: human impact on the environment, effects of climate change, location and management of natural resources, forecast and mitigation of natural disasters, water resource availability, implementation or alternative energy systems, and ecosystem conservation.
ENVIRONMENTAL EARTH SYSTEMS SCIENCE (EESS)

The Environment Earth Systems Science Major is a highly selective programme, favouring a small cohort which encourages an innovative and interactive learning environment. Students who choose this course will gain a strong background in quantitative skills such as spatial analysis, core science, maths and modern computing techniques. We also place emphasis on applying these skills through critical thinking, communication and collaboration.

ENVIRONMENTAL EARTH SYSTEMS SCIENCE AND PUBLIC POLICY AND GLOBAL AFFAIRS (ESPP)

Our double major programme combines courses from ASE and School of Social Sciences. Students admitted to this multidisciplinary course will develop a strong background in quantitative environmental earth systems science and communication, public affairs, and international relations, giving students the opportunity to build complementary skills in leadership, collaboration, and innovative problem-solving. Through this course we hope to empower the next generation of public policy makers with the tools required to face the challenges of today’s rapidly changing world.
CURRICULUM OVERVIEW FOR EESS

Courses for all specialisations

**E2S2 Core Modules:**
- Environment & Society
- Solid Earth
- Climate Change
- Biosphere
- Introductory Field Experience (Bali)
- Computational Earth Systems Science
- Futures in E2S2
- Calculus for the Sciences
- GIS and the Earth System
- Fundamentals of Data Science

**Math and Sciences Foundation Modules:**
- 4 – 6 courses from Biology, Chemistry and Physics

**Electives for Honours Eligibility (by application):**
- Final Year Project
- Professional Internship

---

**Specialisation Core Courses**

<table>
<thead>
<tr>
<th>Geosciences</th>
<th>Ecology and Ecosystems</th>
<th>Society and the Earth System</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Earth Materials</td>
<td>- Introduction to Ecology</td>
<td>- Introduction to Ecology</td>
</tr>
<tr>
<td>- Structural Geology and Tectonics</td>
<td>- Bioinformatics &amp; Statistics</td>
<td>- Probability and Introduction to Statistics</td>
</tr>
<tr>
<td>- Layers and Landforms</td>
<td>- Microbes on Natural Ecosystems</td>
<td>- Global Environmental Politics and Governance</td>
</tr>
<tr>
<td>- Intro. to Geochemistry</td>
<td>- Principles of Heredity and Ecological Genetics</td>
<td>- Coupled Human and Natural Systems</td>
</tr>
<tr>
<td>- Intro. to Geophysics</td>
<td>- Intro. to Field Ecology</td>
<td>- Principle of Economics</td>
</tr>
<tr>
<td>- Advanced Field Course in Geology</td>
<td>- Plant &amp; Animal Physiology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Conservation Biology and Biodiversity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### CURRICULUM OVERVIEW FOR ESPP

#### EESS Core Courses
- Environment & Society
- Solid Earth
- Climate Change
- Biosphere
- Introductory Field Experience (Bali)
- Computational Earth Systems Science
- GIS and the Earth System
- Futures in E2S2
- Calculus for the Sciences
- Introduction to Ecology
- Probability and Introduction to Statistics
- Global Environmental Politics and Governance
- Coupled Human and Natural Systems

#### PPGA Core Courses
- Introduction to International Relations and Foreign Policy
- Introduction to Political Theory
- Introduction to Public Administration and Policy
- Politics of Singapore
- Fundamentals of Politics

---

Rabaul caldera, an active volcano in **Papua-New Guinea**.
EXCITING CAREER OPPORTUNITIES

ENVIRONMENT AND CONSERVATION
- Academic research
- Environmental media and journalism
- Non-Government Organizations and Volunteer-Welfare Organizations such as WWF, Nature's Society or Birdlife
- International Governance such as World Food Bank or UNESCO

PRIVATE SECTOR
- Natural resource exploration, extraction, and management (oil, gas, and minerals)
- Environmental consulting
- Geotechnical consulting
- Geologic surveying or monitoring

BUSINESS & SUSTAINABILITY
- Businesses or corporations that value technical knowledge, creative problem solving and leadership ability when dealing with changing environmental policy and the global move towards improved global sustainability practices
- Sustainability reporting

ENTREPRENEURSHIP & FINANCE
- Where firms seek quantitative knowledge about the science that drive changes in the energy market.
- Reinsurance companies, who rely on a balance of earth science data and policy intuition to help assess long-term risk

PUBLIC SECTOR
- Foreign and domestic policy
- Government roles in Environmental Planning, Policy and Management
- Water resource management or hydrogeology
- Teaching

POSTGRADUATE STUDIES
- Our graduates have gone on to Masters and PhD studies in some of the world’s top institutions, including Harvard, Caltech and UCLA, studying issues such as Climate Change and Physical Science
ADMISSIONS

Our major programmes are highly selective. Between 30 to 40 students are admitted each year. Students will be evaluated on an oral interview and academic background. ASE undergraduate programmes accepts ‘A’ Level, IB, NUSHS Diploma, Polytechnic Diploma and other equivalent international qualifications on a selective basis. All candidates with strong academic potential who satisfy the minimum subject requirements as well as the general admission requirements set by NTU will be considered.

Minimum subject requirements:

**Singapore Cambridge A Level students:**
- H1 Level pass in Mathematics AND
- H2 Level Pass in Physics/Chemistry/Biology/Economics/Computing
- A good grade in General Paper/Knowledge & Inquiry/H1 Level History/English Literature/Geography (For ESPP students only)

**IB Diploma students:**
- Mathematics at Standard Level AND
- Physics/Chemistry/Biology/Economics/Computer Science at Higher Level
- A good grade in English at Standard Level (for ESPP students only)
International and other qualifications:
- O-Levels/Additional Mathematics at Junior High School AND
- Physics/Chemistry/Biology/Economics at Senior High School
- A good grade in General Paper/English at Senior High School Level (for ESPP students only)

NUS High School Diploma:
- Major CAP of 2.0 in Mathematics AND
- Major CAP of 2.0 in Physics/Chemistry/Biology
- Good Overall CAP in English Language (for ESPP students only)

Please visit us on the web to learn which polytechnic diplomas are eligible for our programme.

Contact us for more detailed information about admissions: ase_undergrad@ntu.edu.sg
OVERSEAS OPPORTUNITIES

FIELD EXPERIENCE
Students participate in a 2 weeks introductory field course in Bali after their first year of study. Advanced students have opportunities to participate in longer field courses abroad in places like Malaysia, Taiwan, Sri Lanka or California.

OVERSEAS ENTREPRENEURSHIP PROGRAMME (OEP)
Through OEP, students will be able to gain invaluable skills outside the classroom through start-up internship, international immersion and entrepreneurship experience. OEP offers students the chance to gain the experience, know-how, contacts and skill sets they need to kick-start their own entrepreneurial journey.

EXCHANGE PROGRAMME
In addition to the field courses and opportunities for research abroad, students are encouraged to study abroad for one or two semesters on an exchange programme with our partner universities in Australia, Canada, East Asia, Europe, New Zealand, the United Kingdom, and the United States.

OUR STUDENTS’ EXPERIENCES
Students also have opportunities to conduct an independent final-year research project in collaboration with a faculty advisor or conduct a professional internship with industrial attachment with a local or overseas employers.
TESTIMONIALS FROM OUR STUDENTS!

NG JING YI, STEPHANIE, Year 4 student

“I embarked on my semester exchange at the University of Waterloo, ON. Aside from completing my modules, it was a thrilling experience to be overseas for a semester and I had the opportunity to explore Canada’s nature through road trips and forged meaningful friendships. I experienced the transition from Fall to Winter (which is something we do not get in Singapore) and picked up ice skating as a leisure activity. Needless to say, exchange was the highlight of my undergraduate studies.”

TEO ZHI YING, Year 3 student

“During my month-long summer program at the University of British Columbia in Canada, I made friends from around the world, got the chance to explore Vancouver and the Rockies, and had a fantastic time there! I also enjoyed the hands-on classes under the School of Community and Regional Planning at UBC.”

REGINE TIONG, Year 4 student

“Being an adventurous soul, I’ve always loved gaining new experiences in science and research and being in ASE gave me many opportunities to do so. Here in ASE, our professors encourage us to reach for the stars and we are always able to seek for advice and guidance from them. My exchange in Sydney, Australia was really meaningful as I was able to learn new skills and experience marine research in a completely different environment and ecosystem from Singapore through the Undergraduate Research on Campus Experience (URECA). During my final summer as an undergraduate, I also had the opportunity to be involved in sea turtle research and conservation work in Northern Cyprus for a month through the Marine Science Research and Development Programme (MSRDP). These experiences enabled me to see my passion in research and conservation and motivated me to embark on my final year project this year focusing on the hawksbill turtles in Singapore.”

LEON SUN, Year 4 student

“The MSRDP grant allowed me to conduct my own marine science research and furthered my interest in corals. I had the opportunity to explore the mysteries surrounding the blue coral which was extremely fulfilling and eye-opening. This research experience has prepared me numerous skills which will be beneficial for me as I progress forward into the working world or towards graduate schools. The technical and social aspect of skillsets that I have acquired during this journey is definitely worth the time and effort that I’ve spent in this project.”
SCHOLARSHIPS & FINANCIAL AID

THE NANYANG SCHOLARSHIP
Awarded to students who excel academically, with strong leadership potential and outstanding CCA track records.
- Full coverage of subsidised tuition fees (after Tuition Grant).
- Living, accommodation and computer allowance.
- Travel grant for an overseas programme.
- Priority for Overseas Programme.
- Participation in Scholars Orientation Programme, Scholars Award Ceremony, Outreach Programmes, and Eminent Speaker Series.

THE COLLEGE SCHOLARSHIP
Awarded to outstanding freshmen pursuing full-time undergraduate programmes in NTU.
- Full coverage of subsidised tuition fees (after Tuition Grant).
- Living allowance.

THE SCHOOL SCHOLARSHIP
Awarded to outstanding freshmen pursuing full-time undergraduate programmes in NTU
- Full coverage of subsidised tuition fees (after Tuition Grant).
TREIS ASE SCHOLARSHIP
Awarded to outstanding freshmen pursuing full-time undergraduate programmes in NTU
- 50% coverage of subsidised tuition fees (after Tuition Grant)
- 50% coverage of living and accommodation allowance

For enquiries pertaining to financial assistance:
Tel: (65) 6790 4115
Email: FinAid@ntu.edu.sg

For enquiries pertaining to scholarships:
Tel: (65) 6790 6766
Email: ug_scholarships@ntu.edu.sg

For enquiries pertaining to CN Yang Scholars programme:
Tel: (65) 6514 1900
Email: D-CNYang@ntu.edu.sg

For enquiries pertaining to University Scholars Programme (USP):
Tel: (65) 6908 3345
Email: usp@ntu.edu.sg
CHUA YING XUAN, Year 4, EESS

“I have always been impressed by how students’ interests and learning has always been at the heart of the ASE faculty. The faculty has been extremely receptive to our feedback, with constant improvements made to the curriculum based on present-day developments. I recalled how the faculty designed a field trip curriculum to palm oil plantations from scratch, after students of the Society specialisation students expressed their desire for more field exposure.

ASE has been supportive of my personal growth – I had the opportunity to pursue multiple internships during the duration of my undergraduate life and was granted time off classes to attend regional conferences. There is a high level of flexibility in the ASE programme as well as I could always choose to work on a diverse range of topics that interest me for ASE modules.

I am thankful to be placed in this faculty which opened my eyes to the wonders of the world we live in today through the multiple field trips in and out of Singapore. Most importantly, ASE taught me how to learn through questioning and reignited my passion for learning.”
FOO ZHEN HUI, Member of the 2019 Sentosa Graduate Development Programme

"Prior to my graduation, I completed an ASE internship with Sentosa Development Corporation to incorporate geology as a new frontier in nature outreach. My positive experience has propelled my interest in planning for Sentosa’s future developments as part of the Sentosa-Brani Master Plan."

EUNICE TAN, Sustainability Executive at DBS

"My work revolves around sustainability reporting and encouraging the bank to improve its environmental and social impacts, based on the policies and processes in place. Lessons from ASE on complexity and systems science are valuable in understanding the interdependencies in environmental, social issues and business considerations."

MIRANDA ONG, Crisis Response Analyst APAC at Facebook (SRS)

"My experience with ASE has allowed me to gain a deeper understanding of natural disasters occurrence in the Asia Pacific region through the Geoscience field trips and the research experience I had in earthquake modeling. This has benefited me greatly for my role now in analysing crisis that are occurring around the world and their impact on the community."

JASLYN CHAN, Analyst, RENERGii

"I’m currently working as an Analyst at RENERGii; a venture-building, innovation and advisory start-up that functions in the sustainability sector. My work goes into making urban cities more sustainable by employing circular economy strategies. Working in a start-up is very dynamic and I have found myself involved in a range of roles and activities. I can be helping to build an insect farming business one day, organising a zero waste design workshop the next and pouring through literature the next week. ASE and the faculty has helped me in this job by building my foundation to analyse and tackle environmental problems. In particular, I have employed the use of systems thinking, stakeholder management and the analytical frameworks taught to me at ASE. My research skills gained from working on projects with ASE faculty has also been particularly useful in my role as an analyst, allowing me to easily handle and summarise research into succinct findings for real life usage."

EUNICE TAN, Sustainability Executive at DBS

"My work revolves around sustainability reporting and encouraging the bank to improve its environmental and social impacts, based on the policies and processes in place. Lessons from ASE on complexity and systems science are valuable in understanding the interdependencies in environmental, social issues and business considerations."

MIRANDA ONG, Crisis Response Analyst APAC at Facebook (SRS)

"My experience with ASE has allowed me to gain a deeper understanding of natural disasters occurrence in the Asia Pacific region through the Geoscience field trips and the research experience I had in earthquake modeling. This has benefited me greatly for my role now in analysing crisis that are occurring around the world and their impact on the community."