

International Ph.D. Program in Environmental Science and Technology (University System of Taiwan) 【Yangming Campus】

| Intake | Degree Program | Group | Language of Instruction |
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| Fall Spring | Doctoral | - | English-taught Program |
| Application Regulations | | | |
| Department Restrictions | - | | |
| Academic Grades Criteria | 3.5 points or above (GPA) | | |
| Required Documents | 1. Required documents (Application shall not be processed if any of the following required documents is missing): | (1) Admissions application form (2) Study plan (3) Certificate of the highest educational level (certified translation is required if the original certificate is not issued in English or Chinese) (4) Transcripts of the highest educational level (including a description of the grading system, GPA, class, or school ranking. Certified translation is required if the original transcript is not issued in English or Chinese) (5) Two letters of recommendation (6) Proof of English language proficiency The English language proficiency of applicants must meet the following minimum requirement: TOFEL-iBT: 79-80↑、IELTS (academic) : 6.5↑ (7) Financial statement (proof of scholarship award or proof of bank deposit). (8) Passport or other proof of nationality (9) Taiwan Alien Resident Certificate (ARC) (if any) (10) Applicants for doctoral programs must upload their master's thesis. Graduating master's students who are applying for doctoral programs must upload an outline of their master's thesis. | |
| | 2. Other supporting documents: | Proof of Chinese language proficiency | |
| | 3. Documents required by the department/institute | (1) CV/Resume and research proposal. (2) "Ph.D. Elite Project Scholarship Suggestion Form" _ <u>(Without the following information, the student will not on the Scholarship Suggestion List)</u> ➤ List of publications ➤ Thesis topic and Master's research results or abstracts of thesis ➤ The expected research direction of the Ph.D. program | |

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| | | <ul style="list-style-type: none"> ➤ Overview of research potential ➤ Work experience ➤ Other supplementary notes ➤ Proof of English language proficiency |
| Selection Method | Preliminary Review | <p>Application material review: Comprehensive review of the application materials submitted by the applicants.</p> <p>Please specify. Evaluation items: Academic performance, research potential, research results published list, international corporation experience, practical skills, extracurricular activities, etc.</p> |
| | Second Review | Audiovisual Interview |
| Other Regulations | | - |
| Department/Institute Admissions Information | | |
| Department/Institute Profile | | <p>To face the new challenges in the pollution of air, soil and water brought on by environmental change and global warming, our program is designed to equip students with superb abilities in problem analysis and solving of regional and global issues; independent innovative thinking, planning and project execution; decision-making, interdisciplinary coordination, and international communication. The UST - International Doctoral Program in Environmental Science and Technology (UST-EST) will provide the most advanced graduate study program in interdisciplinary environmental research from the global scale to molecular level. All courses will be taught in English by a team of outstanding scholars with the further distinction of providing an unmatched Chinese-speaking surrounding and learning facilities. To ensure the highly cross-discipline nature of environmental study, all first-year students will take entry-level courses related to the four major topics, i.e., health science, physical chemistry, engineering and remote sensing techniques, before moving to specialized research work. The UST-EST program provides also the unique opportunity of joining collaborative projects in different UST campuses, either in national or international arenas. Counting together, UST has established bilateral scientific partnerships with academic institutions in the US, Germany, France, UK, Japan, Singapore, Hong Kong, Malaysia, India, Vietnam, Canada, South Korea, Dominica Republic, and Iceland, just to name a few. For multilateral collaborations, Taiwan is a key player to the Seven South East Asian Studies (7-SEAS) Project and the main driver for the COSMIC Meteorology Satellites Mission. The UST-EST Doctoral Program is therefore well prepared to train the next-generation leaders in the study, communications, and management of critical issues in environmental pollution and climate change.</p> <p>Environmental Remote Sensing</p> <ul style="list-style-type: none"> ● Science and applications of measurements from Earth-observing satellites and aircraft, with focus on calibration and fusion of passive and active remote sensing data in the optical and microwave spectral bands |

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| | <ul style="list-style-type: none"> •The 3S disciplines of remote-sensing, geographic information systems (GIS), and global navigation satellite systems, with focus on geospatial data acquisition, data processing, analysis, integrated applications and system development for the environmental issues •CSRSR, NCU; Dept. of Civil Engineering, National Yang Ming Chiao Tung University (NYCU) <p>Environmental Engineering</p> <ul style="list-style-type: none"> •Subsurface hydrology and industrial wastewater treatment– microbial toxicity and risk assessment, nano-catalyst and membrane technology for water treatment •Development of control devices for nanoparticle and gaseous air pollutants •Green technology for sustainable environment •Institute of Environmental Engineering, NYCU and NCU <p>Environmental Chemistry and Molecular Science</p> <ul style="list-style-type: none"> •Environmental nanotechnology- development of novel devices for investigation and applications in environmental monitoring, photo-catalysis, and remediation/treatment •Atmospheric chemistry - monitoring and characterization of physicochemical processes and determination of the effects of nano-and micro-particles on contaminant transport in geological systems as well as on climate and human health •Dept. of Biomedical Engineering and Environmental Sciences, NYCU; Dept. of Atmospheric Sciences and Dept. of Chemistry, NCU <p>Environmental and Occupational Health Science</p> <ul style="list-style-type: none"> •Study of highly concerned chemicals in air pollution, environmental stressors. •Management of poisoning by various environmental stressors -mechanism of toxicity, exposure assessment, health effect, control of pollution. •Institute of Environmental and Occupational Health Sciences (IEOHS), National Yang Ming Chiao Tung University (NYCU); Institute of Environmental Engineering, NYCU and NCU. <p>The Institute of Environmental Health Sciences was established in 1998, which was originally the Division of Environmental Health and Environmental Medicine in the Institute of Public Health and the Ph.D. program was initiated in 2003. The Institute of Environmental and Occupational Health Sciences is one of the subordinate organizations of the School of Medicine, while the Department of Environmental and Occupational Medicine is one of the Faculty of Medicine. In February 2006, these two units were consolidated to strengthen the faculty members. After that, the Ministry of Education authorized the renaming of the Institute as Institute of Environmental and Occupational Health Sciences in 2007. The mission of the Institute is to protect our peoples' health, to create a healthy workplace, to promote a comfortable living environment, and to safeguard our natural environment – air, water and land – upon which life depends.</p> |
| Program Curriculum | The goal of this program is to integrate state-of-the-art sciences and technology |

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| | <p>breakthroughs of diverse disciplines for advanced environmental monitoring as well as the forecast, mitigation and assessment of natural and man-made hazards and pollutions for the sustainable development of the Earth.</p> <p>To train the next-generation leaders in handling environmental issues and climate change</p> <p>To equip students with</p> <p>1) superb abilities in problem analysis and solving of regional and global issues;</p> <p>2) independent innovative thinking, planning and project execution;</p> <p>3) decision-making, interdisciplinary coordination, and international communication.</p> <p>Students must complete their program of study within 2 to 7 years. At least 18 credits including the compulsory courses and Seminars are required. Students should be qualified for the examination for Ph.D. candidates. Other rules not included here should abide by the requirements of the University and the Ministry of Education.</p> <p>Compulsory courses: Students are required to take courses from two out of the following three courses: Special Topics on Environmental Science and Technology (3 credits), Special Topics on Environmental Pollution and Health Risk (3 credits), Special Topics on Environmental Monitoring and Analysis (3 credits); and Seminar for four semesters.</p> <p>Elective courses: Students must take 12 or more credits from courses related to their field of study. Elective courses shall follow the graduate curriculum announced each semester at the University System of Taiwan.</p> | | | |
| Career / Future Development | <p>Environment is the most important element for human life. To maintain a healthy life, we need a normal and healthy environment. However, our environment is seriously degraded and human health is compromised by the growth of population and industrial activities. We are facing urgent problems, such as pollution in the air, water and soil. As a result of the transformation of industrial sector from traditional to high – tech industry, safety and health of workers have become more complicated. Professionals on occupational safety and health are highly demanded. We have dedicated to cultivate students that not only have technical skills in solving the environmental problems, but also think critically in protecting the environment.</p> | | | |
| Website | https://ust-est.nycu.edu.tw / https://ieohs.nycu.edu.tw | | | |
| Administration Staff | | | | |
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