

Division of Water Environment Protection

The research of Water Environment focuses on both water pollution control and water restoration, and has long been an integral part of School of Environment's environmental research developments. Research on this area endeavors to be at the international forefront of water technology and to address many of China's urgent environmental issues, through modern biotechnology, new materials technology, chemical technology, and information technology. With the integration of high-tech technologies, the research focuses on the following research schemes: new developments in industrial wastewater treatment, urban sewage purification, and resource recovery; novel theories and technologies for resource and energy recovery from wastewater; monitoring and mathematical simulation in water pollution control processes; and water reclamation technologies and theories.

Division of Drinking Water Safety

Drinking water safety is an important factor in influencing economic development, social stability and human health. It is a significant research field in the national intermediate and long-term technology development plan. It is also a national and global challenge that we are facing. The main research topics of drinking water safety are: Drinking water pre-treatment and advanced treatment principles and technology; Emerging treatment technology and system construction for urban water supply; Health risk assessment of drinking water quality; Water cluster structure theory; Modern drinking water safe disinfection technology and theory; Control theory and technology for water stability in the distribution system, etc.

Division of Ground Water Environment

Groundwater and Soil Environment aims to meet the national strategic requirements and to do cutting-edge research on groundwater and the soil environment. Our objectives are to provide technical support to scientific decision-making entities and to promote the improvement of groundwater and soil environmental quality via a multidisciplinary effort. The main research topics are: Protection and utilization of ground water resources; Risk assessment and remediation of contaminated sites; Transport processes and simulation of contaminant transport in the groundwater system; Pollution control and environmental protection of soil, etc.

Division of Air Pollution Control

Air Pollution Control aims to develop new technologies and theories for air pollution control, and dedicates its whole effort to improving urban, regional and global air quality. This program has established high-quality environmental

education and research on the formation and emission profiles of air pollutants, on-site monitoring, atmospheric transport and physical-chemical processes, air quality simulation, air pollution control technologies, and control strategies and policies.

Division of Solid Waste Management

Solid Waste Management specializes in the teaching and research on management, treatment and disposal technology of hazardous waste, industrial solid waste and municipal solid waste. This program pioneers the research of theory and technology in waste reduction, recycling and decontamination in China, and has made a significant contribution to the development of the profession of solid waste disposal and recycling.

Division of Water Supply and Drainage Engineering

The program is committed to developing cutting-edge technology for engineering applications and education. The main research topics of environmental engineering are: Industrial wastewater treatment systems; Engineering design of water and wastewater treatment systems; Optimization of wastewater treatment plant operations.

Division of Ecology

The main research interests of the Institute of Ecology (IOE) are conservation ecology, regional ecological assessment, microbial ecology, ecosystem genomics, and environmental health. IOE offers five courses, which are Principles of Ecology, Restoration Ecology and Applications, Biodiversity Conservation, and Remote Sensing and Health, to undergraduate and graduate students. The education and research purposes are to help students develop the ecological awareness and ability to apply ecological theories, methods and techniques to solve problems, and expose them to world-class researches in the field of ecology. Specifically, IOE engages in the following research focus areas: (1) Ecosystem responses to climate change with focuses on pattern-process relationships, environmental microbial gene and function, biodiversity discovery and conservation, regional ecological balance and high capacity maintenance; (2) Impacts of climate change on human health; (3) Integration of theory, method and application for macro- and micro- ecology; and (4) Ecological management and policies relevant to ecological compensation and restoration.

Division of Environment Chemistry

Environmental Chemistry focuses on research in the fields of pollutant chemistry, pollution control chemistry, and the development of environmental

nano-materials to control emerging persistent organic pollutants (POPs) in various environmental media.

Division of Environmental Biology

Environmental Biology is dedicated to fundamental and advanced studies on ecological and health risks of potential pollutants, environmental quality criteria, microorganism resources, and the development of biological engineering processes for environmental pollution control and bioremediation.

Division of Environmental System Analysis

Environmental System Analysis involves multidisciplinary research on surface water environmental modeling, water quality prediction and assessment, environmental risk management and early warning, environmental planning and management, water policy analysis, development strategy evaluation and decision support, information technology and GIS.

Division of Environmental Management and Policy

Environmental Management and Policy focus on solving the problems facing environmental protection today and are an integral component of environmental study programs. This program aims to enhance the understanding of environmental management and policy through a multidisciplinary approach, and to provide theoretical and practical support for the decision-making process using symbiosis systems, environmental economics and environmental investment and financing mechanisms, the constitution and implementation of environmental policy and legislation, the development of environmental decision-support systems, etc.

Division of Nuclear Environmental Engineering

Nuclear environmental engineering division is mainly engaged in application oriented radioactive pollution control technologies, including the development of middle and lower put the reduction technology and final disposal of the solid waste, low and medium radioactive waste water, such as nuclear overhaul waste water cleaning technology, radioactive pollutants produced by human activities, such as fly ash cleaning and resource recovery technology and so on. The division is developing treatment for printing and dyeing wastewater with radioactive irradiation technique.