

Department of Environmental Administration

► General Introduction

As the attention to the quality of life increases, it is expected that duties on environmental issues dealt with in the state, local governments and social organizations would be enlarged, and agencies undertaking the duties would be increased. And by the industrial structure transformation of the manufacturing industry into service and IT industry, the new job and occupation are being created in the fields of health and environment. The Dept. Environmental Administration as the first in Korea is the future-oriented promising department meeting the needs of our society and the governmental demand for human resources, its ultimate goal is training students to be professional specialists equipped with the knowledge of health, environment and administration.

► Education Objectives

The Dept. Environmental Administration aims at training students to be professional specialists equipped with the knowledge of health, environment and administration.

1. To cultivate basic capability to lead social changes by the curriculum which be composed with natural sciences and social sciences for overcoming the limit of the fields of science and engineering.
2. To foster the sense of duty as a professional through the education for the whole person by harmonizing the subjects of liberal education and major.
3. To develop the ability of application and originality on the major field with step-up of field practices and researches.
4. To develop the ability of foreign language and information-technology step by step by the level
5. To offer goal-oriented educational program suited for students, considering their capability, aptitude and career.

► Course Descriptions

Category	Seme-ster	Years	Code	Courses	Credit	Hours		Note
						theory	practice	
Basic courses	1	Freshmen	01504	Environmental Sanitation	3	3		double major
			02257	General Physics	3	3		
Basic courses	2	Freshmen	01229	General Chemistry	3	3		
			02383	Introduction to Administration	3	3		
Required courses	1	Sophomore	03211	Water Pollution and Practice	3	2	2	double major
			02460	Computer Application	2		4	
			03212	Environmental Basic Calculation and Practice	3	2	2	
Elective courses	1	Sophomore	02666	Ecology	3	3		double major
			02466	Practical Sino-Korean	3	3		
			03139	Environmental Mathematics	3	3		
			02471	Environmental Chemistry	3	3		
			02480	Practical English I	3	3		

			02668	Career Counseling I	1	1		
Required Courses	2	Sophomore	02463	Statistics	3	3		
			01679	General Chemistry Lab.	2		4	
			03213	Air Pollution and Practice	3	2	2	double major
Elective courses	2	Sophomore	02462	Administration I	3	3		double major
			03214	Water Pollution Control and Practice	3	2	2	
			01482	Solid Waste Management	3	3		
			03140	Information Processing and Practice	3	2	2	
			02487	Practical English II	3	3		
			02669	Career Counseling II	1	1		
Elective courses	1	Junior	02464	Administrative Law I	3	3		double major
			03215	Air Pollution Control and Practice	3	2	2	
			02474	Administration II	3	3		
			03141	Waste Treatment and Recycling	3	3		
			02477	Industrial Hygiene	3	3		
			02672	Environmental Analysis and Lab. I	3	2	2	
			02329	CAD in Environmental Engineering	3	3		
			03217	Scientific Research and Seminar I	1	2		
Elective courses	2	Junior	03216	Noise and Vibration with practice	3	2	2	
			02481	Administrative Law II	3	3		
			02893	Environmental Law	3	3		
			02673	Environmental Analysis and Lab. II	3	2	2	
			03143	Environmental Affairs in Water Quality	3	2	2	
			01629	Public Health	3	3		
			03218	Scientific Research and Seminar II	1		2	
Elective courses	1	Senior	02453	Health Administration	3	3		double major
			02674	Ventilation and Indoor Air Pollution	3	3		
			02470	Advanced Korean History	3	3		
			03144	Environmental Affairs in Air Quality	3	2	2	
			03145	Reading Original Texts of Environmental Science	3	3		
Elective courses	2	Senior	01497	Environmental Impact Assessment	3	3		
			02484	Food Sanitation	3	3		
			03146	Energy Engineering	3	3		
			02676	Environmental Administration Affairs	3	3		
			01683	Studies in Special Topics and Internship	3		6	

▶ **01504 Environmental Sanitation**

Students acquire general knowledge on creating and maintaining physically, mentally and socially pleasant and stable living environment by controlling all environmental factors that surround us, including water sanitation, waste treatment, residential sanitation, industrial health, water and atmosphere pollution, in scientific measures.

▶ **02257 General Physics**

Students study on the fundamental concepts of physics, force and motion, structure of matter, heat, sound, electricity, magnetism, light and modern physics.

▶ **01229 General Chemistry**

Students study on the fundamental concepts of chemistry, material and energy, properties of gases, electronic structures of atoms, chemical bond, solid and liquid state, properties of solution, chemical equilibrium, acid and base and chemical reaction rate.

▶ **02383 Introduction to Administration**

This course focuses on the comprehensive understanding of the basic concepts and the history of public administration, including the environmental elements and the principal theories of public administration.

▶ **03211 Water Pollution and Practice**

Students learn treating waste water using biochemical measures and designing processes, operating systems, and efficiency/diagnostics evaluation methods. Class will use both theoretical knowledge and field experience.

▶ **02460 Computer Application**

This course focuses on basic concepts of computer and a whole field of practical computer use technique including word processing, MS office, presentation skill and internet.

▶ **03212 Environmental Basic Calculation and Practice**

This course focuses on principles of mass and energy conservation, material balance, energy balance, ideal gas and application of combined material and energy balances for steady state.

▶ **02666 Ecology**

This course focuses on relationship between organisms and environments; population characteristics, competition, community structure and change, species diversity, production and nutrient cycles.

▶ **02466 Practical Sino-Korean**

By studying the famous classics written in chinese characters, this course aims at improving students' proficiency of chinese characters which are needed to comprehend current affairs and their major, and making themselves familiar with the oriental classics.

▶ **03139 Environmental Mathematics**

Students study on vector analysis, matrices and determinants, derivatives and integration, differential equation, partial differential equation, Laplace transform and so on.

▶ **02471 Environmental Chemistry**

As a part of environmental science, this course focuses on environmental chemicals and the chemical aspects. Students study on instrumental methods of analysis, water and wastewater analysis, gases pollutant analysis, ozone depletion and global climate change and so on, related to human life and environment.

▶ **02480 Practical English I**

This is a Level I advanced English course that prepares students for standardized English tests, such as the TOEFL or TOEIC test. Students particularly focus on listening and writing to acquire high scores on these tests.

▶ **02668 Career Counseling I**

This is a level I in career counseling course that prepares students for the career search and self-improvement by giving them a lecture on various subjects.

▶ **02463 Statistics**

This course aims to improve students' comprehension and application by the theory and application about probability variable, regression analysis and distribution analysis and so on.

▶ **01679 General Chemistry Lab.**

This course is introduction to experimental chemistry. It covers laboratory techniques, preparation of solution, the effect of pressure and temperature on gas volume, acid-base titration, redox reaction, the concepts of chemical equilibrium and analysis of cations and anions.

▶ **03213 Air Pollution and Practice**

Students study on the concept of air pollution, climate, dispersion of pollutants, and combustion; sources of air pollution and controlling methods of dust, SO_x, NO_x, and odors, as well as mobile sources of air pollution.

▶ **02462 Administration I**

Based on the understanding of Introduction of Administration, this course focuses on the theories of the State, the policy-making process, government organizations, and public issues in public administration.

▶ **03214 Water Pollution Control and Practice**

This subject covers basic physical, chemical and biological concepts on the treatment of sewage and waste water.

▶ **01482 Solid Waste Management**

Students study the fundamental theory related to terminology classification, emissions, qualities, collection, transportation, cutbacks, and others in various wastes.

▶ **03140 Information Processing and Practice**

Students learn about the concept and principles of computer's CPU, input/output devices, memory devices, and control devices. Students study on basic concepts of data transmission through information communication devices and all related transmission techniques, connection method, link control, wire exchange technology, packet exchange technology and related protocols.

▶ **02487 Practical English II**

This is a Level II advanced English course that prepares students for standardized English tests, such as the TOEFL or TOEIC test. Students particularly focus on listening and writing to acquire high scores on these tests.

▶ **02669 Career Counseling II**

This is a level II in career counseling course that prepares students for the career search and self-improvement by giving a lecture on various subjects.

▶ **02464 Administrative Law I**

Students study on administrative action, administrative legislation, administrative compulsion and various kinds of remedy measures in a legal aspect in this course. And also they comprehend the concepts of the law and the meaning of the legal act.

▶ **03215 Air Pollution Control and Practice**

Students study sources of particle or gas pollutants; and facilities, such as generators, floor machines, back filters, and electric dust collectors. Students also study attachment, absorption, and oxidation theories, as well as operation of facilities.

▶ **02474 Administration II**

Based on the basic understanding of Administration I, students study the government policy-making process, the structure and function of organizations, public personnel administration, financial administration, urban/local administration, administrative reform and responsibility.

▶ **03141 Waste Treatment and Recycling**

Students study kinds and amount of waste, and processing, reusing and recycling of urban and industrial wastes.

▶ **02477 Industrial Hygiene**

Students analyze and assess harmful physical, chemical, and biological factors that occur in industrial sites and acquire general theoretical knowledge to establish industrial hygiene control measures.

▶ **02672 Environmental Analysis and Lab. I**

This course discusses basic issues concerning gathering, analyzing and measuring various water pollutants in accordance to the Water Pollution Assessment Regulations. Students practice qualitative and quantitative analysis of water pollutants and prepare for field examinations to become water environment specialists.

▶ **02329 CAD in Environmental Engineering**

Students systematically study the techniques of drawing and design for environmental process utilizing CAD.

▶ **03217 Scientific Research and Seminar I**

This is a level I in scientific research course. Students analyze various present situations, and then raise several points, and also understand the method to find solutions for environment, health, and administration with researches, presentations, and discussions. Also, they study the technique of scientific researches, writing a paper, and presentation.

▶ **03216 Noise and Vibration with Practice**

Students acquire general theoretical knowledge on noise and vibration that are becoming important issues in urbanization and industrialization and learn about ways to prevent relevant damages.

▶ **02481 Administrative Law. II**

Based on the understanding of Administrative Law I, students study on the administrative organization law, the local administration law, the public officials law, and others (police, public property, finance, etc) in this course.

▶ **02893 Environmental Law**

This course focuses on fostering macro perspectives by teaching the various environmental laws related to regulations and policies to prevent the pollution and preserve the environment.

▶ **02673 Environmental Analysis and Lab. II**

This course discusses basic issues concerning gathering, analyzing and measuring various air pollutants in accordance to the Air Pollution Assessment Regulations. Students practice qualitative and quantitative analysis of water pollutants and prepare for field examinations to become atmosphere environment specialists.

▶ **03143 Environmental Affairs in Water Quality**

The purpose of this course is to study how facilities on water pollution are licensed, declared, maintained and managed and how estimates are produced onsite. Students discuss how relevant civil petitions are processed to enhance adaptation to environmental administration.

▶ **01629 Public Health**

Students study on knowledges to promote and maintain health for community resident through learning the environmental sanitation, health education, health management, and controlling communicable and adult disease.

▶ **03218 Scientific Research and Seminar II**

This is a level II in scientific research course. Students analyze various present situations, and then raise several points, and also understand the method to find solutions for environment, health, and administration with researches, presentations, and discussions. Also, they study the technique of scientific researches, writing a paper, and presentation.

▶ **02453 Health Administration**

Students understand the roles, functions and duties of national health administration organizations that are established for public health. Students learn how to plan and manage accurate and efficient health administration policies based on scientific resources that are gathered from scientific surveys, researches, tests, and examinations.

▶ **02674 Ventilation and Indoor Air Pollution**

Students understand how various indoor pollutants and harmful gases are generated and impact human body. Students also acquire theoretical knowledge on measuring pollutants, assessing quality of indoor air, and providing improvement measures.

▶ **02470 Advanced Korean History**

In this course, students broaden the understanding of the Korean people and history by studying the Korean history from the ancient to the contemporary age. Students learn about main historical events that are often asked in various history examinations.

▶ **03144 Environmental Affairs in Air Quality**

The purpose of this course is to study how facilities on air pollution are licensed, declared, maintained and managed and how estimates are produced onsite. Students study how relevant civil petitions are processed to enhance adaptation to environmental administration.

▶ **03145 Reading Original Texts of Environmental Science**

By reading original texts of environmental science and understanding several technical terms and notions, students make any progress in their ability to read and understand various environmental texts that are written in the original language.

▶ **01497 Environmental Impact Assessment**

Environmental impact assessment is a system that is currently implemented to assess how various developmental activities impact the surroundings. In this course, students study various theories and realities for environmental impact assessment and then actually produce environmental impact assessment reports on certain developmental projects.

▶ **02484 Food Sanitation**

Students acquire general knowledge on preventing harmful factors and improving quality of foods, additives, equipments and containers in all stages from production and packaging to ingestion.

▶ **03146 Energy Engineering**

This course addresses definition and history of energy resources and overview of various energy resources including hydrocarbon, atomic, solar, hydrogen energy, biomass and fuel cells. It also introduces petroleum and natural gas engineering.

▶ **02676 Environmental Administration Affairs**

Students study actual environmental administration issues based on case studies and foster adaptation to environmental administration.

▶ **01683 Studies in Special Topics and Internship**

Students will visit actual fields where they can measure and analyze environmental pollutants and experience general field affairs. Students will apply their environmental theories and knowledge to actual environmental fields and adapt themselves to the field as future environmental specialists.