

Instructive Cultivation Plan for the Program of Environmental Engineering

(Grade 2019)

Course code: 082502

1. Orientation

This program revolves around the "career-oriented higher education" construction positioning of the school, integrates application ability, knowledge transfer, and skills training, practices the integration of production and education, double certification and international teaching, and aims at cultivating application-oriented advanced engineering and technical talents of environmental monitoring and pollution control technology in the field of solid waste (featured by the utilization of electronic waste as a resource) who meet the needs of my country's modern ecological civilization construction.

2. Cultivation Objective

1. General Objective

This program is based on the concept of ecological civilization construction, and cultivates application-oriented professional and technical talents who are comprehensively developed on the aspects of morality, intelligence, physique, beauty and labor. The purpose of this program is to enable students to master the basic theories, professional knowledge and engineering technology related to environmental engineering, and obtain the professional qualities and engineering capabilities in the management, treatment and disposal of solid waste recycling (with the professional characteristics of electronic waste recycling technology). Talent cultivation corresponds to government, enterprise and other departments to meet the needs of engineering design, operation and maintenance, research and development, management consulting, monitoring and analysis in the field of environmental engineering.

2. Cultivation Value

The country attaches great importance to environmental problems. As the saying goes "preferably green water and green mountains, not golden mountains and silver mountains, green water and green mountains are golden mountains and silver mountains", the country is vigorously promoting environmental pollution control. This program strives to guide students to pay attention to the concept and practice of green development in the new era, establish an awareness of ecological civilization, enhance China's environmental protection "ideology", "practice", "system view" and "global view", and actively cultivate the values of environmental engineering programs, so as to consolidate the value foundation of college students.

3. Five-Year Goal after Graduation:

About 5-10 years after graduation, students shall:

(1) Be able to independently engage in engineering planning, design, construction, operation and management related to environmental engineering, and be able to use modern tools and analysis methods to independently design solutions to complex environmental engineering problems, and be competent for positions such as engineers and technical managers;

(2) Have good scientific research literacy and teamwork spirit, and be able to undertake environmental-related application technology development projects;

(3) Have practical experience and management capabilities in related fields of environmental management, and be able to serve as technical leader, project team leader, and grassroots manager in environmental protection companies.

3. Requirement for Graduation

The environmental engineering program of our school expands the core competence and quality expression of 12 graduation requirements based on the 12 general professional certification standards and the actual situation of our school. The graduation requirements are as follows:

Graduation requirement 1: Ability to acquire and apply engineering knowledge: have basic and professional knowledge of mathematics, physics, chemistry, engineering foundation and pollution control engineering needed to solve complex environmental engineering problems, and be able to use the knowledge to solve complex environmental engineering problems such as e-waste recycling.

Graduation requirement 2: Ability to analyze problems: Be able to apply basic principles of mathematics, natural sciences, and engineering sciences to identify, express, and analyze complex environmental engineering issues such as e-waste recycling through literature research, and can obtain effective conclusions.

Graduation requirement 3: Be able to design solutions to complex environmental engineering problems such as e-waste recycling, design systems, units (structures) or technological processes that meet specific needs, and be able to reflect the sense of innovation in the design process, and always consider society, health, safety, legal, cultural and environmental factors.

Graduation requirement 4: Scientific research ability: Be able to study complex environmental engineering issues such as e-waste recycling based on scientific principles and by using scientific methods, including designing experimental plans, conducting experiments, analyzing and interpreting data, and obtaining reasonable and effective conclusions through information synthesis.

Graduation requirement 5: Ability to use modern tools: Be able to develop, select and use appropriate technologies, resources, modern engineering tools and information technology tools for complex environmental engineering problems, such as e-waste recycling, including prediction and simulation of complex environmental engineering problems, and be able to understand the limitations.

Graduation requirement 6: Ability to analyze and evaluate the relationship between engineering and society: Be able to conduct reasonable analysis based on the background knowledge of environmental engineering, evaluate the impact of professional engineering practices and e-waste recycling and other complex environmental engineering problem solutions on society, health, safety, laws and culture, and understand the responsibility to be taken.

Graduation requirement 7: Ability to understand and evaluate the environment and sustainable development: Be able to understand and evaluate the impact of professional engineering practices of complex environmental engineering issues such as e-waste recycling on the environmental and social sustainable development.

Graduation requirement 8: Abide by professional standards: Have humanities and social science literacy and a sense of social responsibility, be able to understand and abide by engineering professional ethics and standards in engineering practice, and can perform responsibilities.

Graduation requirement 9: Ability to assume individual and team roles: Be able to assume the roles of individuals, team members and leaders in a multidisciplinary team.

Graduation requirement 10: Ability to effectively communicate and exchange: Be able to

effectively communicate and exchange with industry colleagues and the public on complex environmental engineering issues such as e-waste recycling, including writing reports and design manuscripts, presentations, clear expressions or response instructions; have a certain international perspective, be able to communicate and exchange in a cross-cultural context.

Graduation requirement 11: Ability to manage engineering projects: understand and master engineering management principles and economic decision-making methods, and be able to apply them in a multidisciplinary environment.

Graduation requirement 12: Have the consciousness and ability of lifelong learning: Have the consciousness of independent learning and lifelong learning, and have the ability to continuously learn and adapt to development.

4. Schooling System

Four-year undergraduate education

5. Length of Study

Generally four years. The length of schooling can be flexible from no less than three years to no longer than six years.

6. Requirements for Graduation and Degree Conferring

Students of this program must complete the minimum credits required for each category of courses and complete all the content specified in extracurricular class according to the requirements of the instructional training plan, and the total credits must reach 157 credits for graduation; those who meet the requirements for bachelor's degree can be conferred bachelor degree in engineering.

7. Discipline

Environmental Science, Environmental Engineering, Chemical Engineering

8. Core Courses

1. Solid waste treatment and disposal

This course is one of the main professional courses for environmental engineering programs. The contents of this course include: solid waste pretreatment technologies and methods, including collection, compaction, crushing, sorting, and solidification; solid waste resource recycling technologies and applications, including incineration, pyrolysis, high-temperature composting, biogas fermentation, etc.; principles of solid waste final disposal, techniques and technologies, including marine disposal and land disposal. Through the study of this course, students will be able to systematically master the basic principles and practical knowledge of solid waste treatment and disposal, master solid waste management, treatment, disposal and utilization and other processes and technologies, so that students will lay a foundation for being engaged in technical management and design of solid waste treatment and disposal in the future.

2. Water pollution control engineering

This course is a compulsory professional course for environmental engineering programs in higher engineering schools. The course mainly teaches the basic theories and technologies of sewage treatment, such as the physical treatment, chemical treatment, biological treatment and other technical methods of sewage, as well as the treatment and disposal of sludge and the process design of small sewage treatment plants. Through the study of this course and the corresponding practical links, students can understand the basic situation of water pollution, and understand the

principles and methods of comprehensive prevention and control of water pollution. Through the study of this course, students will have a more systematic and in-depth understanding of the basic concepts of water pollution control engineering and the basic theories of various control methods, basically master the application scope and conditions of various control methods, be able to apply the basic theories and control methods learned in this course and coordinate with the teaching links of course design and graduation design to conduct plan, design, equipment selection, research and development and operation management of general water pollution control projects.

3. Air pollution control engineering

Air pollution control engineering is an important professional course for environmental programs in colleges and universities. The purpose of this course is to introduce the basic concepts, basic principles, basic methods and related design calculation problems of air pollution control engineering, introduce the advanced air pollutant control technology used at home and abroad, so that students can gradually accept and master basic knowledge and cultivate the ability to solve actual air pollution problems, thus laying a good foundation for future air pollution control work.

4. Environmental impact assessment

The environmental impact assessment course is based on the basic theories of environmental science, and provides scientific basis for the judgment, adjustment and selection of human social relationship behaviors by evaluating the impact of human economic activities and development on the environment and the value relationship between environmental changes and human social behaviors. Through the study of this course, students can initially grasp the basic principles and methods of environmental impact assessment, thus laying a foundation for future environmental impact assessment work.

5. E-waste management and resource technology

The course is the main professional course for environmental engineering programs. This course mainly explains the law of e-waste management and resource-based technology. Through the study of this course, the students will be able to understand and master e-waste management methods and technical policies, focusing on the conventional e-waste recycling technology, so that they can lay a solid foundation for future engineering technology and research and development of urban e-waste recycling and disposal.

6. Environmental monitoring

This course is a major professional basic course for environmental engineering programs, and is one of the major professional abilities required for professional training. This course teaches and practices the basic theories and techniques related to environmental monitoring, so that students can use the theories and techniques they have learned to formulate and implement environmental monitoring programs and monitoring techniques, thus laying a solid foundation for learning environmental engineering professional courses and solving practical problems in future.

7. Principles of Environmental Engineering

This course is one of the professional core courses. It plays a role in connecting the basic courses and the professional courses, and is an introductory course for the transition from the basic courses of natural science to the professional courses of engineering science. This course systematically analyzes and summarizes the technical principles involved in water treatment engineering, air pollution control engineering, solid waste treatment and disposal engineering, polluted environment purification and ecological restoration engineering, and extracts common basic principles, phenomena and processes, and conduct systematic and in-depth explanation with strong theoretical and systematic nature. Through the study of this course, students will be able to master the basic principles and technical processes of "isolation technology", "separation technology" and "transformation technology" in environmental pollution control, and obtain the

comprehensive ability to solve complex environmental pollution problems and the concept of system and overall optimization.

8. Environmental fluid mechanics

Environmental fluid mechanics is an important basic course for environmental engineering programs. The purpose of this course is to systematically introduce the mechanical properties of fluids, the basic concepts and viewpoints of fluid mechanics, basic theories and common analysis methods, and related engineering application knowledge; train students to obtain the ability to analyze and solve simple fluid mechanics problems, and master certain experimental skills, thus laying a solid foundation for studying professional courses in the future and engaging in related engineering technology and scientific research.

9. Environmental engineering drawing

The environmental engineering drawing course mainly introduces the projection foundation, drawing standards, drawing methods and basic knowledge of computer graphics (CAD) related to engineering drawing, and introduces the reading and drawing methods of professional drawings according to the relevant standards of environmental engineering. This course will cultivate students' basic ability to draw and read drawings of environmental engineering drawings and environmental protection equipment drawings, and cultivate their patient and meticulous work style and serious work attitude.

10. Instrumental analysis

Through learning this course, students will have a more comprehensive understanding of the field of instrumental analysis and basically master various methods of instrumental analysis. In this course, students are required to have a deeper understanding and mastery of the basic principles of these methods, instruments and equipment, their basic structure, method characteristics and applications, and initially obtain the ability to choose appropriate analysis methods to solve problems according to the analysis objects. In addition, through the study of this course, students will understand the new methods, new technologies and development trends newly established in modern instrumental analysis, and enhance their awareness and ability of innovation.

9. Practical Training (Related courses)

Inorganic chemistry experiment, organic chemistry experiment, analytical chemistry experiment, Instrumental analysis experiment, Principles of Environmental Engineering experiment, Environmental monitoring experiment, Air pollution control engineering experiment, Water pollution control engineering experiment, Solid waste treatment and disposal experiment, environmental engineering comprehensive experiment, Professional knowledge internship, professional production internship, Water pollution control engineering course design, e-waste resource recycling course design, innovation and entrepreneurship, graduation practice and graduation design (thesis), etc.

10. Course Structure and Course Hours (excluding extracurricular class)

Category	Total Credit	%	Total Course Hours	Theory Learning	Practical Training
Public Course	50	32	944	880	64
Basic Course	38	24	608	528	80
Professional Course	30	19	480	476	4
Practical Training	28	18	816	0	816
General Course	10	7	160	160	0
Total	156	100	3008	2044	964
Theory : Practice(%)	68 :32				

11. Teaching Schedule (1)

Category	Type	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training	Semester
Public Course	Required	School of Marxism	b1080001	Basic principles of Marxism	Test	3	48	42	6	Autumn semester 1
	Required	School of Marxism	b1080003	Ideological and moral cultivation and legal foundation	Non-test	3	48	42	6	Autumn semester 1
	Required	School of Marxism	b1080006	Outline of Chinese Modern History	Non-test	3	48	42	6	Spring semester 1
	Required	School of Marxism	b1080004	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics I	Test	3	48	42	6	Autumn semester 2
	Required	School of Marxism	b1080007	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics II	Test	2	32	28	4	Spring semester 2
	Required	School of Marxism	----	Situation and Policy (Module 1~4)	Non-test	2	32	28	4	Autumn semester 1~Spring semester 2
	Required	College of Arts and Sciences	b1020080+	Advanced Mathematics A1	Test	4	64	64		Autumn semester 1
	Required	College of Arts and Sciences	b1020081+	Advanced Mathematics A2	Test	4	64	64		Spring semester 1
	Required	College of Arts and Sciences	b1020064	College Physics A(Module 3)	Test	3	48	48		Spring semester 1
	Required	College of Arts and Sciences	b1020065	College Physics B	Test	2	32	32		Autumn semester 2
	Required	College of Arts and Sciences	b1020066	College Physics C	Non-test	1	32		32	Autumn semester 2
	Required	College of Arts and Sciences	b1020012	Linear algebra	Test	2	32	32		Autumn semester 2
	Required	College of Arts and Sciences	b1020013	Probability Theory and Mathematical Statistics	Non-test	2	32	32		Spring semester 2
	Required	College of Arts and Sciences	b1020018	College Chinese	Non-test	2	32	32		Spring semester 1
	Required	Department of Physical Education	----	Physical Education I~VI	Non-test	3	160		160	Autumn semester 1~Autumn semester 4
	Required	Others	b1110003	Military skills	Non-test	0.5	2W			Autumn semester 1
	Required	College of Arts and Sciences	b1110002	Military theory	Non-test	0.5	32	32		Spring semester 1
	Required	College of Arts and Sciences	b1020003	General English III	Test	3	48	48		Autumn semester 1
Required	College of Arts and Sciences	b1020004	General English IV	Test	3	48	48		Spring semester 1	
Required	College of Arts and Sciences	b1020005	General Academic English A	Test	2	32	32		Autumn semester 2	
Required	College of Arts and Sciences	---	English development	Non-test	2	32	32		Spring semester 2	
Sub-total (Public Course)						50	944	880	64	
General Course	Required	College of Engineering	b2013024	Scientific paper writing and document retrieval	Non-test	2	32	32		Autumn semester 2
	Selective	Others	b0----	Social Science and Humanities Literacy (4 credits) Natural Science and Technological Innovation (2 credits) Public Art (2 credits)	Non-test	8	128	128		Autumn, Spring
Sub-total (General Course)						10	160	160		

11. Teaching Schedule (2)

Category	Type	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training	Semester	
Basic Course	Required	College of Engineering	b2013025	Introduction to Environmental Engineering	Non-test	2	32	32		Autumn semester 1	
	Required	College of Engineering	b2013127	Fundamentals of Computer and Information Technology	Non-test	2	32	32		Autumn semester 1	
	Required	College of Engineering	b2013172	Inorganic Chemistry (including experiment)	Test	3	48	32	16	Autumn semester 1	
	Required	College of Engineering	b2013093	Organic chemistry	Test	3	48	48		Spring semester 1	
	Required	College of Engineering	b2013173	Analytical Chemistry (including experiment)	Test	3	48	32	16	Autumn semester 2	
	Required	College of Engineering	b2013081	Physical Chemistry (including experiment)	Test	4	64	48	16	Spring semester 2	
	Required	College of Engineering	b2013036	Engineering mechanics	Test	2	32	32		Autumn semester 2	
	Required	College of Engineering	b2013061	Environmental Chemistry	Test	2	32	32		Spring semester 2	
	Required	College of Engineering	b2013064	Environmental fluid mechanics	Test	2	32	32		Autumn semester 3	
	Required	College of Engineering	b2013154	Environmental engineering drawing	Test	3	48	32	16	Spring semester 2	
	Required	College of Engineering	b2013155	Instrumental analysis	Test	2	32	32		Spring semester 2	
	Required	College of Engineering	b2013063	Environmental monitoring	Test	2	32	32		Autumn semester 3	
Required	College of Engineering	b2013156	Principles of Environmental Engineering	Test	3	48	48		Autumn semester 3		
Required	Engineering Training Center	b2090005	Electrician and Electronics	Test	3	48	32	16	Autumn semester 3		
Required	College of Engineering	b2013157	Environmental Engineering Microbiology	Test	2	32	32		Autumn semester 3		
Sub-total (Basic Course)						38	608	528	80		
Professional Course	Required	College of Engineering	b2013160	Solid waste treatment and disposal	Test	2	32	32		Spring semester 3	
	Required	College of Engineering	b2013161	Air pollution control engineering	Test	3	48	48		Spring semester 3	
	Required	College of Engineering	b2013162	Water pollution control engineering	Test	3	48	48		Spring semester 3	
	Required	College of Engineering	b2013168	Physical pollution control	Test	2	32	32		Autumn semester 3	
	Required	College of Engineering	b2013065	Environmental impact assessment	Non-test	2	32	28	4	Spring semester 3	
	Required	College of Engineering	b2013028	E-waste management and resource technology	Test	2	32	32		Spring semester 3	
	Required	College of Engineering	b2013046	Environmental protection equipment foundation	Test	2	32	32		Autumn semester 4	
	Required	College of Engineering	b2013169	Environmental engineering construction technology	Test	2	32	32		Spring semester 3	
	Required	College of Engineering	b2013084	Science of Modern Environmental Law	Non-test	2	32	32		Spring semester 2	
	Required	College of Engineering	b2013060	Environmental planning and management	Non-test	2	32	32		Autumn semester 2	
	Required	College of Engineering	b2013170	Toxic substances in electronic products and their prevention	Test	2	32	32		Spring semester 3	
	Subtotal (required professional courses)						24	384	380	4	
	★ Selective by module 6 credits	Module A	b2013051	Environmental water supply and drainage	Non-test	2	32	32		Autumn semester 4	
			b2013054	Environmental engineering materials	Non-test	2	32	32		Autumn semester 3	
			b2013158	Environmental Engineering Instrumentation and Automation	Test	2	32	32		Spring semester 3	
			b2013126	Principles and Technology of Environmental Remediation	Non-test	2	32	32		Autumn semester 4	
		Module B	b2013048	Environment, health and safety	Non-test	2	32	32		Autumn semester 4	
b2013089			Circular economy and cleaner production	Non-test	2	32	32		Spring semester 3		
b2013171			Environmental Engineering Technology Economy	Test	2	32	32		Autumn semester 3		
b2013159	Environmental engineering project management	Non-test	2	32	32		Autumn semester 4				
Subtotal (professional module courses)						6	96	96	0		
Subtotal (professional courses)						30	480	476	4		

11. Teaching Schedule (3)

Category	Type	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training	Semester
Practical Training	Required	College of Engineering	b4000010	Innovation and Entrepreneurship in Environmental Engineering	Non-test	2	48		48	Summer semester 1~ Summer semester 3
	Required	Engineering Training Center	b4090003	Basic Engineering Training C	Non-test	2	48		48	Summer semester 1
	Required	College of Engineering	b4013044	Professional cognition internship	Non-test	1	24		24	Summer semester 1
	Required	College of Engineering	b4013043	organic chemistry experiment	Non-test	1	24		24	Summer semester 1
	Required	College of Engineering	b4013054	Instrumental analysis experiment	Non-test	1	24		24	Summer semester 2
	Required	College of Engineering	b4013055	Professional production practice	Non-test	4	96		96	Summer semester 2
	Required	College of Engineering	b4013085	Environmental Engineering Microbiology experiment	Non-test	1	24		24	Autumn semester 3
	Required	College of Engineering	b4013028	Environmental monitoring experiment	Non-test	1	24		24	Autumn semester 3
	Required	College of Engineering	b4013024	Principles of Environmental Engineering Experiment	Non-test	1	24		24	Autumn semester 3
	Required	College of Engineering	b4013019	Solid waste treatment and disposal experiment	Non-test	1	24		24	Spring semester 3
	Required	College of Engineering	b4013006	Air pollution control engineering experiment	Non-test	1	24		24	Spring semester 3
	Required	College of Engineering	b4013034	Water pollution control engineering experiment	Non-test	1	24		24	Spring semester 3
	Required	College of Engineering	b4013074	Air pollution control engineering course design	Non-test	1	24		24	Summer semester 3
	Required	College of Engineering	b4013075	Water pollution control engineering course design	Non-test	1	24		24	Summer semester 3
Required	College of Engineering	b4013026	Comprehensive Environmental Engineering Experiment	Non-test	1	24		24	Summer semester 3	
Required	College of Engineering	b4013010	Curriculum Design of E-waste Resources	Non-test	2	48		48	Summer semester 3	
Required	College of Engineering	b4013059	Graduation Practice and Graduation Design (Thesis) for Environmental Engineering	Non-test	6	288		288	Spring semester 4	
Subtotal (Practical Training)						28	816		816	
Extracurricular Class	Required	Others	b5110001	Extracurricular Class	Non-test	1	-	-	-	Autumn, Spring, Summer
Total						157	3008	2044	964	

★ 1. Guidance for selecting professional module and practical module:

Professional courses are divided into modules according to different ability requirements. Students must select one of the modules and obtain the required credits for that module. Professional practice modules must be selected according to the corresponding professional course modules.

1. Module A: Environmental engineering technology, focusing on introducing environmental pollution control technology, and cultivating environmental engineering construction, pollution control and project development capabilities;
2. Module B: Environmental Economic Management, focusing on introducing environmental economic analysis and engineering management, and training the ability to use environmental economic laws to solve environmental pollution problems.

2. Professional Certificates can be gained after learning following courses:

Students who have passed the courses of Environmental fluid mechanics, Environmental Engineering Microbiology, Environmental monitoring, Environmental planning and management, Physical pollution control, Environmental impact assessment, Science of Modern Environmental Law, etc., can participate in the professional qualification assessment related to the program: Environmental impact Assessment engineer, registered environmental engineer.

Students who have obtained the qualification certificates of Environmental impact assessment engineer and registered environmental engineer can apply for exemption from Environmental fluid mechanics, Environmental Engineering Microbiology, Environmental monitoring, Environmental planning and management, Physical pollution control, Environmental impact assessment, Science of Modern Environmental Law courses and obtain corresponding credits.

12. Schedule for Semesters(Suggested)

Autumn semester 1:

Type	Course Name	Assessment	Credit	Course Hour
Required	Outline of Chinese Modern History	Non-test	3	48
Required	First Foreign Language	Test	3	48
Required	Advanced Mathematics A1	Test	4	64
Required	Situation and Policy	Non-test	0.5	8
Required	Physical Education I	Non-test	0.5	32
Required	Military skills	Non-test	0.5	2W
Required	Introduction to Environmental Engineering	Non-test	2	32
Required	Fundamentals of Computer and Information Technology	Non-test	2	32
Required	Inorganic Chemistry (including experiment)	Test	3	48

Spring semester 1:

Type	Course Name	Assessment	Credit	Course Hour
Required	Basic principles of Marxism	Test	3	48
Required	Ideological and moral cultivation and legal foundation	Non-test	3	48
Required	First Foreign Language	Test	3	48
Required	Advanced Mathematics A2	Test	4	4
Required	College Physics A	Test	3	48
Required	College Chinese	Non-test	2	32
Required	Situation and Policy	Non-test	0.5	8
Required	Physical Education II	Non-test	0.5	32
Selective	General Course	Non-test	2	32
Required	Military theory	Non-test	0.5	32
Required	Organic chemistry	Test	3	48

Summer semester 1:

Type	Course Name	Assessment	Credit	Course Hour
Required	Innovation and Entrepreneurship in Environmental Engineering	Non-test	1	24
Required	Basic Engineering Training C	Non-test	2	48
Required	Professional cognition internship	Non-test	1	24
Required	organic chemistry experiment	Non-test	1	24

Autumn semester 2:

Type	Course Name	Assessment	Credit	Course Hour
Required	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics I	Test	3	48
Required	First Foreign Language	Test	2	32
Required	Linear algebra	Test	2	32
Required	College Physics B	Test	2	32
Required	College Physics C	Non-test	1	32
Required	Situation and Policy	Non-test	0.5	8
Required	Physical Education III	Non-test	0.5	32
Selective	General Course	Non-test	2	32
Required	Scientific paper writing and document retrieval	Non-test	2	32
Required	Analytical Chemistry (including experiment)	Test	3	48
Required	Engineering mechanics	Test	2	32
Required	Environmental planning and management	Non-test	2	32

Spring semester 2:

Type	Course Name	Assessment	Credit	Course Hour
Required	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics II	Test	2	32
Required	First Foreign Language	Non-test	2	32
Required	Situation and Policy	Non-test	0.5	8
Required	Physical Education IV	Non-test	0.5	32
Selective	General Course	Non-test	2	32
Required	Probability Theory and Mathematical Statistics	Test	2	32
Required	Environmental engineering drawing	Test	3	48
Required	Instrumental analysis	Test	2	32
Required	Physical Chemistry (including experiment)	Test	4	64
Required	Science of Modern Environmental Law	Non-test	2	32
Required	Environmental Chemistry	Test	2	32

Summer semester 2:

Type	Course Name	Assessment	Credit	Course Hour
Required	Professional production practice	Non-test	4	96
Required	Instrumental analysis experiment	Non-test	1	24

Autumn semester 3:

Type	Course Name	Assessment	Credit	Course Hour
Required	Physical Education V	Non-test	0.5	16
Selective	General Course	Non-test	2	32
Required	Environmental fluid mechanics	Test	2	32
Required	Environmental monitoring	Test	2	32
Required	Principles of Environmental Engineering	Test	3	48
Required	Electrician and Electronics	Test	3	48
Required	Environmental Engineering Microbiology	Non-test	2	32
Required	Environmental Engineering Microbiology experiment	Non-test	1	24
Required	Physical pollution control	Non-test	2	32
Selective	Environmental engineering materials	Non-test	2	32
Selective	Environmental Engineering Technology Economy	Test	2	32
Required	Environmental monitoring experiment	Non-test	1	24

Spring semester 3:

Type	Course Name	Assessment	Credit	Course Hour
Required	Solid waste treatment and disposal	Test	2	32
Required	Air pollution control engineering	Test	3	48
Required	Water pollution control engineering	Test	3	48
Required	Air pollution control engineering experiment	Non-test	1	24
Required	Water pollution control engineering experiment	Non-test	1	24
Required	Solid waste treatment and disposal experiment	Non-test	1	24
Required	Environmental impact assessment	Non-test	2	32
Required	Environmental engineering construction technology	Non-test	2	32
Required	E-waste management and resource technology	Test	2	32
Required	Toxic substances in electronic products and their prevention	Non-test	2	32
Selective	Circular economy and cleaner production	Non-test	2	32
Selective	Environmental Engineering Instrumentation and Automation	Non-test	2	32

Summer semester 3:

Type	Course Name	Assessment	Credit	Course Hour
Required	Air pollution control engineering course design	Non-test	1	24
Required	Water pollution control engineering course design	Non-test	1	24
Required	Comprehensive Environmental Engineering Experiment	Non-test	1	24
Required	Curriculum Design of E-waste Resources	Non-test	2	48

Autumn semester 4:

Type	Course Name	Assessment	Credit	Course Hour
Required	Physical Education VI	Non-test	0.5	16
Selective	Environmental water supply and drainage	Non-test	2	32
Selective	Principles and Technology of Environmental Remediation	Non-test	2	32
Selective	Environment, health and safety	Non-test	2	32
Selective	Environmental protection equipment foundation	Test	2	32
Selective	Environmental engineering project management	Non-test	2	32

Spring semester 4:

Type	Course Name	Assessment	Credit	Course Hour
Required	Graduation Practice and Graduation Design (Thesis) for Environmental Engineering	Non-test	6	288

13. Prerequisite for Course Study

No.	Course Name	Prerequisite Course	No.	Course Name	Prerequisite Course
1	Environmental Chemistry	Inorganic chemistry	4	Environmental equipment foundation	Air pollution control engineering
		Organic chemistry			Water pollution control engineering
		Analytical chemistry			Solid waste treatment and disposal
2	Environmental monitoring	Analytical chemistry	5	Curriculum Design of E-waste Resources	Toxic substances in electronic products and their prevention
		Instrumental analysis			E-waste management and resource technology
					Physical pollution control
3	Principles of Environmental Engineering	Four major chemistry	6	Comprehensive Environmental Engineering Experiment	Air pollution control engineering experiment
		Environmental fluid mechanics			Water pollution control engineering experiment
					Solid waste treatment and disposal experiment

14. Extracurricular Class

Through taking extracurricular classes, students are encouraged to take part in academic lectures, social practice activities, campus cultural and sports activities, innovative and entrepreneurial activities, voluntary activities, etc. to improve their social adaptability and enhance the competitiveness in the job market. Details are specified in Students' Manual.