

水资源与环境学院

School of Water Resources and Environment



环境工程专业培养方案

一、专业培养目标

本专业围绕国家地下水资源开发与生态文明建设需求，培养德、智、体、美、劳全面发展，具备较好的人文素质、扎实的数理基础和较强的计算机、外语水平，掌握地球科学基本理论和野外工作方法，精通地下水科学与工程的专业知识和技能，具备分析与解决问题能力的专业人才。毕业后可在自然资源、水利、城建、环保等部门从事与专业相关的勘查、规划、设计、监测、评价以及科研、管理等工作。经过5年的实际工作，能够成为专业骨干，具备工程师或与之相当的专业技术能力，并能通过不断学习适应发展。

二、毕业要求

(1) 工程知识：掌握数学、物理、化学、计算机、环境科学与工程等方面的基础知识、基本原理和基本工作方法；具备分析和解决复杂环境工程问题的知识储备。

(2) 问题分析：能够应用工程科学的基本原理，进行识别、表达科学问题，并通过中外文文献资料查询、文献检索的基本方法，了解本专业的发展动态；具有一定开展实验设计，创造实验条件，归纳、整理、分析实验结果的能力，能够分析复杂工程问题，以获得有效结论。

(3) 设计/开发解决方案：能够设计针对不同环境问题的解决方案，并能够在设计环节中体现创新意识，考虑社会、健康、安全、法律、文化以及环境等因素。

(4) 研究：能够基于科学原理并采用科学方法对水、土、气、声、固体废物等污染问题进行研究，包括设计实验、分析与解释数据、通过信息综合得到合理有效的结论；初步具备撰写论文，参与学术交流的能力。

(5) 使用现代工具：能够针对水、土、气、声、固体废物等污染问题，利用新理论、新技术对其进行有效处理，实时追踪环境监测、评价、规划与管理等方面的新理论、新思想、新举措。

(6) 工程与社会：能够基于工程相关背景知识进行合理分析，评价专业工程实践和水、土、气、声、固体废物等污染防治方案对社会、健康、安全、法律以及文化的影响，并理解应承担的责任。

(7) 环境和可持续发展：能够理解和评价针对水、土、气、声、固体废物等污染防治方案对环境、社会可持续发展的影响。

(8) 职业规范：具有人文社会科学素养、社会责任感，能够在工程实践中理解并遵守工程职业道德和规范，履行责任。

(9) 个人和团队：通过实践教学环节、大学生创新实验计划项目以及毕业设计（论文）等，使学生懂得团队的重要性以及各种角色的责任和义务，培养学生的团队合作与协调意识，能够在多学科背景下的团队中承担个体、团队成员以及负责人的角色。

(10) 沟通：能够就水、土、气、声、固体废物等污染防治方案与业界同行及社会公众进行有效沟通和交流，包括撰写报告和设计文稿、陈述发言、清晰表达或回应指令。较熟练地掌握一门外语，达到国家四级水平，具备一定的国际视野，能够在跨文化背景下进行沟通和交流。

(11) 项目管理：理解并掌握环境工程领域的工程管理原理、经济决策方法，并能在多学科环境中应用。

(12) 终身学习：具有自主学习和终身学习的意识，有不断学习和适应发展的能力。

三、主干学科

环境科学与工程。

四、学制与学位

学制四年。学生修满规定的最低毕业学分，达到毕业后要求后，授予工学学士学位。

五、核心课程

专业核心课程：给水处理工程、水污染控制工程、土壤与地下水污染控制工程、大气污染控制工程、固体废物处理处置工程、物理学污染控制工程、环境学、环境化学、环境微生物学、环境水文地质学、水文与水资源保护、环境评价、环境规划与管理、环境生态学、环境监测、流体力学与流体机械、化工原理、管道工程学、环境工程设计施工与技术经济。

实践课程：环境工程综合实验、《水质工程学》课程设计、《大气污染控制工程》课程设计、《固体废物处理处置工程》课程设计、《环境评价》课程设计、城镇给排水管网设计、建筑给排水设计、泵站设计、测量实习、北戴河地质实习、金工实习、认识实习、生产实习（环境工程综合实习1）、毕业实习（环境工程综合实习2）和毕业论文 / 设计（环境工程）等。

Undergraduate Program in Environmental Engineering

1. Academic Objectives

Focusing on the major needs of ecological civilization construction of China, the major of Environmental Engineering aims to cultivate professionals that has comprehensive development of moral, intellectual, physical, aesthetic and labor; has good humanistic quality, solid mathematical foundation, strong computer and foreign language levels; has knowledge of pollution prevention and control of water, soil, gas, sound and solid waste, environmental planning and resource protection; has the ability of design, construction, R&D and operation management of pollution control projects. Graduates can work in environmental protection-related enterprises and institutions on pollution prevention and control, environmental planning and resource protection. A graduate can become a professional backbone and hold a middle class professional title of engineer after five years of practical work, and can adapt to development through continuous learning.

2. Graduation Requirements

(1) Engineering knowledge: To master basic knowledge, basic principles and basic working methods in mathematics, physics, chemistry, computer, environmental science and engineering; Have the knowledge reserve to analyze and solve complex environmental engineering problems.

(2) Problem analysis: To be able to apply the basic principles of engineering science, identify and express scientific problems, and pass the basic methods of Chinese and foreign literature inquiry and literature retrieval; Understand the development trend of this major; Have the ability to carry out experimental design, create experimental conditions, summarize, sort out and analyze experimental results, and analyze complex engineering problems to obtain effective conclusions.

(3) Design and develop solutions: To be able to design solutions to different environmental problems, and embody innovative consciousness in the design process, considering social, health, safety, legal, cultural and environmental factors.

(4) Research: To be able to study water, soil, gas, sound, solid waste and other pollution problems based on scientific principles and scientific methods, including designing experiments, analyzing and interpreting data, and obtaining reasonable and effective conclusions through information synthesis; Have the ability to write papers and participate in academic exchanges.

(5) Using modern tools: To have the ability to effectively deal with water, soil, gas, sound, solid waste and other pollution problems by using new theories and technologies, and track new theories, ideas and measures in environmental monitoring, evaluation, planning and management in real time.

(6) Engineering and society: To be able to make reasonable analysis based on the relevant background knowledge of the project, evaluate the impact of professional engineering practice and pollution prevention and control schemes of water, soil, gas, sound and solid waste on society, health, safety, law and culture, and understand the responsibilities.

(7) Environment and sustainable development: To be able to understand and evaluate the impact of prevention and control schemes for water, soil, gas, sound, solid waste and other pollution problems on the sustainable development of the environment and society.

(8) Professional norms: To have humanistic and social science literacy, social responsibility, be able to understand and abide by engineering professional ethics and norms in engineering practice, and fulfill responsibilities.

(9) Individuals and teams: To understand the importance of team and the responsibilities and obligations of various roles, cultivate students' awareness of team cooperation and coordination, and undertake the roles of individual, team member and person in charge in the team under multidisciplinary

background through practical teaching, college students' innovative experimental program and graduation design (thesis).

(10) Communication: To be able to effectively communicate and exchange with peers in the industry and the public on the prevention and control schemes of pollution problems such as water, soil, gas, sound and solid waste, including writing reports and design manuscripts, making statements, expressing clearly or responding to instructions. Proficient in mastering a foreign language, reaching the national level 4, having a certain international perspective, and being able to communicate and communicate under the cross-cultural background.

(11) Project management: To understand and master the engineering management principles and economic decision-making methods in the field of environmental engineering, and be able to apply them in multidisciplinary environments.

(12) Lifelong learning: To have the consciousness of autonomous learning and lifelong learning, and have the ability of continuous learning and adapting to development.

3. Main disciplines

Environmental Science and Technology.

4. Length of Schooling and Degree

The length of schooling is four years of full-time study. Students will be awarded the Bachelor Degree of Engineering when they have completed the required minimum credits and have met all other requirements.

5. Core Courses

Core Courses: Feed Water Treatment Engineering, Water Pollution Control Engineering, Soil and Ground Water Pollution Control Engineering, Air Pollution Control Engineering, Solid Waste Treatment and Disposal Engineering, Physics pollution control engineering, Environmentology, Environmental Chemistry, Microbiology for Environmental Engineering, Environmental Hydrogeology, Hydrology and Water Resources Protection, Environmental Assessment, Environmental Planning and Management, Environmental Ecology, Environmental Monitoring, Hydrodynamics and Hydromachine, Principles of Chemical Engineering, Pipeline Engineering, Environmental Engineering Design-Construction and Economy-Technology.

Major Practice Teaching: Environmental Engineering Comprehensive Experiment, Water Quality Engineering Course Design, Air Pollution Control Engineering Course Design, Solid Waste Treatment and Disposal Engineering, Environmental Assessment Course Design, Design of Municipal Mains Network, Design of Water Supply and Drainage Systems for Building, Design of Bump Station, Surveying Practice, Geological Survey Field Trip in Beidaihe, Metalworking Practice, Cognition Practice, Production Practice (Environmental Engineering Comprehensive Practice I), Graduation Practice (Environmental Engineering Comprehensive Practice II), Undergraduate Dissertation or Project (Environmental Engineering), etc.

六、最低毕业总学分要求及学分配 (Minimum Required Credits and Distribution)

课程模块 Course module	课程类别 Course Classification	学时数 Hours	学分 Credits	学期 Semester										
				1	2	3	4	5	6	7	8			
通识教育 Liberal Education	通识教育必修课程 Required Courses of General Education	730	40	11.25	9.25		8.25	5.25	1	3.25	1.25		0.25	0.25
	通识教育选修课程 Selective Courses of General Education	192	12											
专业教育 Professional Education	学科基础课程 Disciplinary Fundamental Courses	872	54.5	12	10		13	9.5		7.5	2.5			
	专业核心课程 Specialized Fundamental Courses	448	28				6			9	9		4	
	专业拓展课程 Specialized Development	160	10		4						6			
实践教育 Practical Education	课程实践 Course Practice	38周 +128学时	38		3	6	1	4	5	2		5	3	9
	课外实践 Extracurricular practice		6											
必修课总学分 Required course credits				160.5										
选修课总学分 Elective course credits				28										
最低毕业总学分 Total Credits				188.5										

七、课程设置 (Curriculum)

1、通识教育必修课程 (Required Courses of General Education): 730 学时 (730 Hours), 40 学分 (40 Credits)

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
GR181009	思想道德与法治 Ideological Morality and Rule of Law	48	3	40	8		考试 Exam	1	
GR181008	中国近现代史纲要 Essentials of Modern Chinese History	48	3	40	8		考试 Exam	2	
GR182014	马克思主义基本原理 Fundamental Principles of Marxism	48	3	40	8		考试 Exam	3	
GR183004	毛泽东思想和中国特色社会主义理论体系概论 Introduction to Mao Zedong Thoughts and Theoretical System of the Chinese Characteristic Socialism	64	4	48	16		考试 Exam	4	
GR181012	习近平新时代中国特色社会主义思想概论 Introduction to Xi Jinping Thoughts on Socialism with Chinese Characteristics in the New Era	32	2	28	4		考试 Exam	5	
GR181013	形势与政策 (1) Situation and Policy(1)	4	0.25	4			考查 Term Paper	1	
GR181014	形势与政策 (2) Situation and Policy(2)	4	0.25	4			考查 Term Paper	2	
GR181015	形势与政策 (3) Situation and Policy(3)	4	0.25	4			考查 Term Paper	3	
GR181016	形势与政策 (4) Situation and Policy(4)	4	0.25	4			考查 Term Paper	4	
GR181017	形势与政策 (5) Situation and Policy(5)	4	0.25	4			考查 Term Paper	5	
GR181018	形势与政策 (6) Situation and Policy(6)	4	0.25	4			考查 Term Paper	6	
GR181019	形势与政策 (7) Situation and Policy(7)	4	0.25	4			考查 Term Paper	7	
GR181020	形势与政策 (8) Situation and Policy(8)	4	0.25	4			考查 Term Paper	8	
GR301004	大学生职业生涯规划与就业指导 (1) Career Planning and Employment Guidance for University Students (1)	20	1	16	4		考试 Exam	2	

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
GR303005	大学生职业生涯规划与就业指导(2) Career Planning and Employment Guidance for University Students (2)	18	1	12	6		考试 Exam	6	
GR301005	大学生心理素质教育(1) Mental Health (1)	16	1	16			考查 Term Paper	1	
GR303005	大学生心理素质教育(2) Mental Health (2)	16	1	16			考查 Term Paper	5	
GR302008	军事理论 Military Theory	36	1	36			考试 Exam	2夏	
GR081071	大学英语(1) College English (1)	64	4	64			考试 Exam	1	
GR081072	大学英语(2) College English (2)	32	2	32			考试 Exam	2	
GR081067	大学英语素质拓展课 Competence-oriented Education for College English	32	2	32			考试 Exam	2	
GR141005	体育(1)(系列课程) Physical Education (1)	32	1		32		考试 Exam	1	
GR141006	体育(2)(系列课程) Physical Education(2)	32	1		32		考试 Exam	2	
GR142007	体育(3)(系列课程) Physical Education (3)	32	1		32		考试 Exam	3	
GR142008	体育(4)(系列课程) Physical Education (4)	32	1		32		考试 Exam	4	
GR041001	大学计算机 College Computer	32	2	16	16		考试 Exam	1	
GR041003	程序设计基础 A Fundamentals of Programming A	64	4	24	24	16	考试 Exam	3	
总计 Total		730	40	492	222	16			

2、通识教育选修 (Selective Courses of General Education): 192 学时 (192Hours), 12 学分 (12 Credits)

序号 No.	课程类别 Courses Classification	课程名称 Courses Name	学分 Credits	考核方式 Assessment	开课学期 Semester	备注 Notes
1	人文社科类 (含在线课程) Humanities and Social Sciences Courses (Inc. Online courses)	见附件 1	7	考查 Term Paper	2-8	4个类别中选修7个学分,其中,《大学生安全教育》(1学分) 必选。
2	自然科学类 (含在线课程) Natural Science Courses (Inc. Online Courses)	见附件 2		考查 Term Paper	2-8	
3	自然文化类 Natural Culture Courses	见附件 3		考查 Term Paper	2-8	
4	体育与健康类 Sports and Health Courses	见附件 4		考查 Term Paper	5-8	
5	创新创业教育类 (含在线课程) Innovation and Entrepreneurship Courses (Inc. Online Courses)	见附件 5-6	3	考查 Term Paper	2-8	选修3个学分,其中《新生研讨课》(1学分) 必选。
6	审美与艺术类 Aesthetics and Art Courses	见附件 7	2	考查 Term Paper	2-4	
总计 Total			12			

3、学科基础课程 (Disciplinary Fundamental Courses): 872 学时 (872 Hours), 54.5 学分 (54.5 Credits)

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
DR191003	高等数学 B (1) Advanced Mathematics B (1)	96	6	96			考试 Exam	1	
DR191011	无机化学 Inorganic Chemistry	48	3	48			考试 Exam	1	
DR021002	工程图学 Engineering Graphics	48	3	48			考试 Exam	1	
DR191002	高等数学 A (2) Advanced Mathematics A (2)	96	6	96			考试 Exam	2	
DR191008	大学物理 (1) College Physics (1)	48	3	48			考试 Exam	2	
DR050018	环境工程专业导论 Introduction to Environmental Engineering	16	1	16			考查 Term Paper	2	必选 1 学分
DR192005	线性代数 Linear Algebra	32	2	32			考试 Exam	3	
DR192017	物理化学 B Physical Chemistry B	48	3	48			考试 Exam	3	
DR042127	电工电子技术 B Electrical and Electronic Technology B	48	3	18	14	16	考试 Exam	3	16 学时线上
DR192009	大学物理 (2) College Physics (2)	48	3	48			考试 Exam	3	
DR052004	流体力学与流体机械 Hydrodynamics and Hydromachine	32	2	32			考试 Exam	3	
DR192006	概率论与数理统计 Probability and Mathematics Statistics	48	3	48			考试 Exam	4	
DR052001	分析化学 (环境工程类) Analytical Chemistry (For Environmental Engineering)	32	2	24	8		考试 Exam	4	
DR122001	测量学 A Surveying A	40	2.5	24	16		考试 Exam	4	
DR052091	环境工程原理 Principles of Environmental Engineering	32	2	32			考试 Exam	4	

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
DR052002	有机化学(环境工程类) Organic Chemistry (For Environmental Engineering)	32	2	32			考试 Exam	5	
DR053006	环境生态学 Environmental Ecology	32	2	32			考试 Exam	5	
DR021029	工程力学 Engineering Mechanics	56	3.5	52	4		考试 Exam	5	
DR053092	土建项目管理与技术经济 Civil engineering project management and Economy-Technology	40	2.5	40			考试 Exam	6	
总计 Total		872	54.5	814	42				

4、专业核心课程 (Specialized Core Courses): 448 学时 (448 Hours), 28 学分 (28 Credits)

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
SR052017	管道工程学 Pipeline Engineering	32	2	32			考试 Exam	4	
SR052024	环境监测 Environmental Monitoring	32	2	32			考试 Exam	4	
SR053020	环境学 Environmentalology	32	2	32			考试 Exam	4	
SR053021	环境化学 Environmental Chemistry	32	2	32			考试 Exam	5	
SR053014	给水处理工程 Water Supply Treatment Engineering	32	2	32			考试 Exam	5	
SR053026	环境管理 Environmental Management	32	2	32			考试 Exam	5	
SR053093	环境科学与工程前沿 Frontiers of Environmental Science and Engineering	16	1	16			考查 Term Paper	5	

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
SR053029	环境工程专业英语 Specialized English for Environmental Engineering	32	2	32			考试 Exam	5	
SR053028	物理性污染控制 Physical Pollution Control	32	2	32			考试 Exam	6	
SR053015	水污染控制工程 Water Pollution Control Engineering	48	3	48			考试 Exam	6	在环境微生物学后开课
SR053018	大气污染控制工程 Air Pollution Control Engineering	32	2	32			考试 Exam	6	
SR053022	环境微生物学 Microbiology for Environmental Engineering	32	2	32			考试 Exam	6	
SR054025	环境评价 Environmental Assessment	32	2	32			考试 Exam	7	
SR054019	固体废物处理处置工程 Solid Waste Treatment and Disposal Engineering	32	2	32			考试 Exam	7	
总计 Total		448	28	448					

5、专业拓展课程 (Specialized Development Courses): 160 学时 (160 Hours), 10 学分 (10 Credits)

课程代码 Course Code	课程名称 Course Name	总学时 Hours	学分 Credits	讲课学时 Lecture	实验学时 Experiment	线上学时 Online	考核方式 Assessment	开课学期 Semester	备注 Notes
DR011036	地球科学概论 Introduction to Earth Science	64	4	32	32		考试 Exam	2	必选
SS053094	水文地质学 (环境工程类) Hydrogeology (For Environmental Engineering)	64	4	64			考试 Exam	6	必选
SR053016	土壤与地下水污染控制工程 Soil and Groundwater Pollution Control Engineering	32	2	32			考试 Exam	6	在水质工程学 II 后开课, 必选
总计 Total		160	10	128	32				

6、课程实践 (Course Practice): 38 周 +128 学时 (38 weeks and 128 hours), 38 学分 (38 Credits)

课程代码 Course Code	课程名称 Course Name	周数 (学时) Week(hour)	学分 Credits	考核方式 Assessment	开课学期 Semester	备注 Notes
PR311003	军事技能训练 Military Theory and Practice	2 周	2	考查 Term Paper	1 夏	
PR181010	思想政治社会实践 Political Social Practice	32 学时	2	考试 Exam	1 夏	
PR011044	北戴河地质实习 Geological Survey Field Trip in Beidaihe	2 周	2	考查 Term Paper	1 夏	
PR051095	专业认识实习 Major Introductory Practice	2 周	2	考查 Term Paper	1 夏	
PR022152	金工实习 (2) Metalworking Practice	1 周	1	考查 Term Paper	2 夏	
PR052096	环境工程基础实验 Environmental Engineering basic Experiment	2 周	2	考查 Term Paper	2 夏	
PR191045	实验物理 (1) Physics Experiments (1)	24 学时	1	考试 Exam	2	
PR191047	实验化学 Chemistry Experiments	48 学时	2	考试 Exam	2	
PR192046	实验物理 (2) Physics Experiments (2)	24 学时	1	考试 Exam	3	
PR053097	环境工程专业实验 Environmental Engineering Professional Experiment	2 周	2	考查 Term Paper	3 夏	
PR053098	环境工程特色实验 Environmental Engineering characteristic Experiment	1 周	1	考查 Term Paper	3 夏	
PR053099	生产实习 (环境工程综合实习 1) Production Practice (Environmental Engineering Comprehensive Practice 1)	2 周	2	考查 Term Paper	3 夏	
PR052054	建筑给排水设计 Building Water Supply and Drainage Design	1 周	1	考查 Term Paper	4	
PR052055	城镇给排水管网设计 Design of Municipal Mains Network	1 周	1	考查 Term Paper	4	
PR052056	泵站设计 Design of Bump Station	1 周	1	考查 Term Paper	4	

课程代码 Course Code	课程名称 Course Name	周数(学时) Week(hour)	学分 Credits	考核方式 Assessment	开课学期 Semester	备注 Notes
PR122059	测量实习 Surveying Practice	1周	1	考查 Term Paper	4	
PR053057	《给水处理工程》课程设计 Water Supply and Treatment Course Design	2周	2	考查 Term Paper	5	
PR054058	《大气污染控制工程》课程设计 Air Pollution Control Engineering Course Design	1周	1	考查 Term Paper	7	
PR054059	《固体废弃物处理处置工程》课程设计 Solid Waste Treatment and Disposal Engineering Course Design	1周	1	考查 Term Paper	7	
PR054060	《环境影响评价》课程设计 Environmental Assessment Course Design	1周	1	考查 Term Paper	7	
PR054063	毕业实习(环境工程综合实习2) Graduation Practice (Environmental Engineering Comprehensive Practice II)	3周	3	考查 Term Paper	8	
PR054064	毕业设计(论文) Graduation Design (Thesis)	12周	6	考查 Term Paper	8	
总计 Total		38周 +128学时	38			

7、课外实践 (Extracurricular practice): 6 学分 (6 Credits)

包括主题教育活动、社会实践、志愿服务、勤工助学、学科竞赛、文体活动、创新创业活动、劳动实践等,其学分的认定按照教务处相关规定执行。

Extracurricular practice include Theme Education, Social Practice, Volunteer Service, Work-study Program, Discipline Competition, Cultural and Sports Activities, Innovative and Entrepreneurial Activities, Labor Practice and so on. The recognition of the credits for extracurricular practice shall be implemented according to the regulations of Academic Affairs Office.

八、毕业要求与培养目标矩阵

毕业要求	培养目标				专业能力：具备污染控制工程的设计、施工、研发及运营管理的能力，并能通过不断学习适应发展
	人文素养：德、智、体、美、劳全面发展，具备较好的人文素质	基础知识：具备扎实的数理化学与工程基础和较强的计算机、外语水平	专业知识：掌握水、土、气、声、固体废物等污染防治和环境规划与资源保护等方面的知识		
1. 工程知识		√	√	√	
2. 问题分析		√	√	√	√
3. 设计 / 开发		√	√	√	√
4. 研究		√	√	√	√
5. 使用现代工具		√	√	√	√
6. 工程与社会		√	√	√	√
7. 环境和可持续发展		√	√	√	√
8. 职业规范	√	√	√	√	√
9. 个人与团队	√	√	√	√	√
10. 沟通	√		√	√	√
11. 项目管理					√
12. 终身学习					√

九、课程与毕业要求关系矩阵

课程名称 \ 毕业要求	(1) 工程知识	(2) 问题分析	(3) 设计 / 开发 解决方案	(4) 研究	(5) 使用现代 工具	(6) 工程与社会	(7) 环境和可 持续发展	(8) 职业规范	(9) 个人和团 队	(10) 沟通	(11) 项目管理	(12) 终身学习
思想道德与法治								H		L		H
毛泽东思想和中国特色社会主义理论体系概论								H				H
中国近现代史纲要								L				L
马克思主义基本原理								M			L	M
习近平新时代中国特色社会主义思想概论							H					H
思想政治社会实践				H						M		
形势与政策								M		M		
大学生心理素质教育									H	L		L
大学英语										H		L
大学英语素质拓展课										H		L
体育									L			H
大学计算机		H	M		H					M	H	
程序设计基础		M	H		L							
大学生职业发展与就业指导									M			M
新生研讨课									L			
军事技能训练									H			
军事理论						M			M			
高等数学		H		L								
线性代数		M		L								
概率论与数理统计		H		L								

课程名称	毕业要求	(1) 工程知识	(2) 问题分析	(3) 设计 / 开发 解决方案	(4) 研究	(5) 使用现代 工具	(6) 工程与社 会	(7) 环境和可 持续发展	(8) 职业规范	(9) 个人和团 队	(10) 沟通	(11) 项目管理	(12) 终身学习
大学物理			M		L								
无机化学	H												
分析化学 (环境工程 类)	H												
有机化学 (环境工程 类)	H												
物理化学	H												
工程图学						M							
电工电子技术					L								
测量学	L					H							
工程力学					M								
环境工程原理	H				M								
流体力学与流体机械	M												
环境生态学	M							M					
专业导论课										L			
土建项目管理与技术 经济				M									
给水处理工程	H			H			L	L					
水污染控制工程	H			H			H	M					
管道工程学	M						M						
大气污染控制工程	H			M			H	M					
固体废物处理处置工 程	M			M				M					
环境学	M						L						
环境化学	M						L						

课程名称	毕业要求	(1) 工程知识	(2) 问题分析	(3) 设计/开发解决方案	(4) 研究	(5) 使用现代工具	(6) 工程与社会	(7) 环境和可持续发展	(8) 职业规范	(9) 个人和团队	(10) 沟通	(11) 项目管理	(12) 终身学习
环境微生物学		M					L						
环境监测		M					L						
环境影响评价		M					L						
环境管理		M					L						
物理性污染控制		M					L						
环境科学与工程前沿		L											
环境工程专业英语											M		M
水文地质学(环境工程类)		H											
地球科学概论		H											
土壤与地下水污染控制工程		H											
金工实习							L			L			
环境工程基础实验、专业实验、特色实验		H					H						
建筑给排水设计						M	H			L			
城镇给排水管网设计		H				M	H						
泵站设计		M				M	M						
《给水处理工程》课程设计		M		H									
《大气污染控制工程》课程设计		M		H									
《固体废弃物处理处置工程》课程设计		M		H									
《环境影响评价》课程设计		M		H									

课程名称 毕业要求	(1) 工程知识	(2) 问题分析	(3) 设计 / 开 发解决方案	(4) 研究	(5) 使用现代 工具	(6) 工程与社 会	(7) 环境和可 持续发展	(8) 职业规范	(9) 个人和团 队	(10) 沟通	(11) 项目管理	(12) 终身学习
军事理论及训练									L			
北戴河地质实习						M			L			
专业认识实习						L			L			
测量实习						L			L			
生产实习（环境工程 综合实习 I）									L			
毕业实习（环境工程 综合实习 II）									L			
毕业论文 / 设计（环境 工程）	M											
思想政治社会实践						H		L				L
实验物理	L											
实验化学	L											
通识教育选修课程						H	H	H	H	H	H	H

注：H 表示课程对毕业要求指标支撑度高；M 表示课程对毕业要求指标支撑度中等；L 表示课程对毕业要求指标支撑度低。