

水资源与环境学院

School of Water Resources and Environment



水文与水资源工程专业培养方案

一、专业培养目标

本专业面向国家水资源开发利用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、扎实的自然科学基础和较强的计算机、外语水平，掌握水文水资源、岩土工程及其赋存地质环境方面的专业知识，具备分析与解决问题能力的专业人才。毕业后可在水利、自然资源、城建、环保等部门从事勘查、规划、设计、预报、监测、评价及科研、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、计算机以及地球科学等方面的基础知识、基本原理和基本野外工作方法，掌握解决复杂工程问题的专业 and 基础知识；能够将数学、自然科学、工程基础和专业知识用于解决复杂水文水资源以及相关工程问题；

(2) 问题分析：能够应用数学、自然科学和工程科学的基本知识和原理，识别、表达水文水资源以及相关领域的复杂工程问题，能通过文献研究分析复杂工程问题，以获得有效结论；

(3) 设计 / 开发解决方案：能够针对水文水资源及相关领域复杂工程问题设计满足特定需求的解决方案，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文水资源及相关领域复杂工程问题进行研究，能够设计实验、分析与解释相关研究数据、并通过对信息的综合分析得到合理有效的结论；

(5) 使用现代工具：能够针对水文水资源及相关领域复杂工程问题，开发、选择与使用恰当的技术、资源、现代工程工具、信息技术工具和专业软件，包括对复杂工程问题的预测与模拟，并能够理解其局限性；

(6) 工程与社会：能够基于工程相关背景知识对水文水资源及相关领域具体工程问题进行合理分析，评价专业工程实践和复杂工程问题解决方案对社会、健康、安全、法律以及文化的影响；

(7) 环境和可持续发展：能够理解和评价针对复杂工程问题的工程实践对环境、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，热爱祖国，了解中国国情，自觉树立和践行社会主义核心价值观；了解与水文水资源以及相关行业和职业有关的法律、法规、国家和行业标准，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：能够理解团队的重要性以及各种角色的责任和义务，具有团队合作意识和协调能力，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：能够就复杂工程问题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，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：理解并掌握工程管理原理与经济决策方法，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

水利工程。

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：水文学原理、水力学、水利水电工程概论、水文统计与水文预报、水资源评价与开发利用、水文地质学基础、地下水水力学、气象与气候学、工程岩土学及实验、土力学与地基基础、工程岩体力学、水生态与水环境保护、水文地球化学基础、生态与环境水文地质学、学科前沿课程、水文与水资源工程专业英语。

实践课程：北戴河地质认识实习、周口店地质教学实习、水文与水资源工程专业实习、综合课程设计等。

Undergraduate Programme in Hydrology and Water Resources Engineering

1. Academic Objectives

Focusing on the needs of water resources development and ecological civilization construction of China, the major of Hydrology and Water Resources Engineering aims to cultivate professionals that has comprehensive development of moral, intellectual, physical, aesthetic and labor; has good humanistic quality, solid foundation of natural sciences, strong computer skills and foreign language levels; to acquire the professional knowledge in hydrology and water resources, geotechnical engineering and its geological environment; has the ability to analyze and solve problems. Graduates will be qualified for working in exploration, planning, design, forecast, monitoring, evaluation, scientific research and management in hydraulic engineering, natural resources, urban construction, environmental protection and other departments. 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) To acquire the basic theories and knowledge of mathematics, physics, chemistry and geosciences; and have the ability using these professional and basic knowledges in solving complex engineering problems; To use mathematics, natural science, engineering foundation and professional knowledges to solve complex hydrological and water resources issues and related engineering problems;

(2) To apply the basic knowledge and principles of mathematics, natural science and engineering science to identify and express complex engineering problems in hydrology and water resources and related fields, and have the ability to get effective conclusions through literature research and analysis of complex engineering problems;

(3) To be able to design solutions for complex engineering problems in hydrology and water resources and related fields with specific needs, and show creative thinking in the process of design, considering social, health, safety, legal, cultural and environmental factors;

(4) To be able to study complex engineering problems in hydrology, water resources and related fields using the scientific principles and methods, and can design experiments, analyze and interpret relevant research data, and get reasonable and effective conclusions through comprehensive analysis of the information;

(5) To be able to develop, select and apply appropriate technologies, resources, modern engineering tools, information technology tools and professional software for solving complex engineering problems in hydrology and water resources and related fields, including the prediction and simulation of complex engineering problems considering their limitations;

(6) To be able to analyze specific engineering problems in hydrology and water resources and related fields reasonably, based on basic engineering knowledges, and to evaluate the impact of engineering practice and complex engineering problem solutions on the society, health, safety, law and culture;

(7) To be able to understand and evaluate the impact of engineering practice on environmental and social sustainable development;

(8) To get the quality of humanities and social sciences and love the motherland with the understanding of the China's national conditions, and to establish and practice the core socialist values; To be able to understand the laws, regulations, national and industrial standards related to hydrology and water resources and related industries and professions, to understand and abide by engineering professional ethics and norms in engineering practice, and take the responsibilities;

(9) To be able to understand the importance of the teamwork, and the responsibilities and obligations of various roles, and to have the ability of cooperation and coordination in the team. To be able to play the roles of individual, team member and leader in a multidisciplinary team;

(10) To be able to effectively communicate with peers in the industry and the public on complex engineering problems, including writing reports and design manuscripts, making statements, clearly expressing or responding to instructions. To grasp a foreign language, with a certain international vision, and able to communicate in a cross-cultural context;

(11) To understand and grasp the engineering management principles and economic decision-making methods, and be able to apply them in a multidisciplinary environment;

(12) To have the consciousness of self-learning and lifelong learning, and to be able to continuous learn and adapt to development.

3. Main disciplines

Hydraulic Engineering.

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

The core courses include Introduction to Hydrology, Hydraulics, Introduction to Hydraulic Engineering, Hydrological statistics and hydrological forecast, Water Resources Assessment and Development, Fundamentals of Hydrogeology, Groundwater Hydraulics, Meteorology and climatology, Engineering geotechnical and experiment, Soil Mechanics and Foundation Engineering, Engineering Rockmass Mechanics, Hydroecology and Water Environment, Introduction to Hydrogeochemistry, Ecological and Environmental Hydrogeology, Frontiers of Hydrology and Water Resources Engineering, and English for Hydrology and Water Resources Engineering.

The main practice teaching includes Geological Survey Field Trip in Beidaihe, Geological Survey Field Trip in Zhoukoudian, Practice of Hydrology and Water Resources Engineering, and Integrated Course Design, 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	1 夏	3	4	2 夏	5	6	3 夏	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	1										
专业教育 Professional Education	学科基础课程 Disciplinary Fundamental Courses	928	58	10	13		11.5	15.5		8				
	专业核心课程 Specialized Fundamental Courses	384	24					3.5		7	11.5		2	
	专业拓展课程 Specialized Development	128	8							2	3.5		2.5	
实践教育 Practical Education	课程实践 Course Practice	29周 +232学 时	35.5		3	4	1	1	1	7	1	5.5	7	6
	课外实践 Extracurricular practice	96	6											
必修课总学分 Required course credits				157.5										
选修课总学分 Elective course credits				26										
最低毕业总学分 Total Credits				183.5										

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): 928 学时 (928 Hours), 58 学分 (58 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
DR050017	水文与水资源工程专业导论 Introduction to Hydrology and Water Resource Engineering	16	1	16			考查 Term paper	1	必选
DR191001	高等数学 A (1) Advanced Mathematics A (1)	96	6	96			考试 Exam	1	
DR191010	大学化学 College Chemistry	48	3	48			考试 Exam	1	
DR191008	大学物理 (1) College Physics (1)	48	3	48			考试 Exam	2	
DR011036	地球科学概论 Geosciences	64	4	32	32		考试 Exam	2	
DR191002	高等数学 A (2) Advanced Mathematics A (2)	96	6	96			考试 Exam	2	
DR192005	线性代数 Linear Algebra	32	2	32			考试 Exam	3	
DR192009	大学物理 (2) College Physics (2)	48	3	48			考试 Exam	3	
DR052008	水力学 Hydraulics	40	2.5	36	4		考试 Exam	3	
DR012081	综合地质学 Synthetic Geology	64	4	32	32		考试 Exam	3	
DR192006	概率论与数理统计 Probability and Mathematics Statistic	48	3	48			考试 Exam	4	
DR122001	测量学 A Surveying A	40	2.5	24	16		考试 Exam	4	
DR053007	水文地质学基础 Fundamentals of Hydrogeology	56	3.5	48	8		考试 Exam	4	
DR052075	地下水运动方程 Groundwater movement equation	56	3.5	56			考试 Exam	4	
SR013025	第四纪地质与地貌学 Quaternary Geology and Geomorphology	48	3	24	24		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
DR053011	水利水电工程概论 Introduction to Hydraulic Engineering	40	2.5	40			考试 Exam	5	
SR053076	水文地球化学基础 Introduction to Hydrogeochemistry	48	3	40	8		考试 Exam	5	
DR052010	水文学原理 Introduction to Hydrology	40	2.5	36	4		考试 Exam	5	
总计 Total		928	58	800	128		考试 Exam		

4、专业核心课程 (Specialized Core Courses): 384 学时 (384 Hours), 24 学分 (24 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
SR052077	工程岩土学及实验 Engineering Petrology	56	3.5	34	22		考试 Exam	4	
SR053078	土力学与地基基础 Soil Mechanics and Foundation Engineering	48	3	48			考试 Exam	5	
SR052041	气象与气候学 Meteorology and climatology	32	2	32			考试 Exam	5	
SR053079	水生态与水环境保护 Hydroecology and Water Environment	32	2	32			考试 Exam	5	
SR053082	工程岩体力学 Engineering Rockmass Mechanics	32	2	32			考试 Exam	6	
SR053080	水文统计与水文预报 Hydrological statistics and hydrological forecast	56	3.5	40	16		考试 Exam	6	
SR053081	水资源评价与开发利用 Water Resources Assessment and Development	48	3	48			考试 Exam	6	
SR053040	地下水水力学 Groundwater Hydraulics	48	3	44		4	考试 Exam	6	
SR054030	水文与水资源工程专业英语 English for Hydrology and Water Resources Engineering	32	2	32			考试 Exam	7	
总计 Total		384	24	342	38	4	考试 Exam		

5、专业拓展课程 (Specialized Development Courses): 128 学时 (128 Hours), 8 学分 (8 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
SS053083	生态与环境水文地质学 Ecological and Environmental Hydrogeology	32	2	28	4		考试 Exam	5	
SS053085	学科前沿课程 Frontiers of Hydrology and Water Resources Engineering	16	1	16			考查 Term Paper	6	
SR053037	地质灾害与防治 Geological Hazard and Control	40	2.5	36	4		考试 Exam	6	
SS054084	工程经济与项目管理 Engineering Economics and Project Management	40	2.5	40			考试 Exam	7	
总计 Total		128	8	120	8				

6、课程实践 (Course Practice): 29 周 +232 学时 (29 weeks and 232 hours), 35.5 学分 (35.5 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	北戴河地质认识实习 Geological Survey Field Trip in Beidaihe	2 周	2	考查 Term Paper	1 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	
PR012046	周口店地质教学实习 Geological Survey Field Trip in Zhoukoudian	5 周	5	考查 Term Paper	2 夏	
PR191046	实验物理 (2) Physics Experiments (2)	24 学时	1	考试 Exam	3	

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 Instructive Practice for Engineering Surveying	1 周	1	考查 Term Paper	4	
PR052069	综合课程设计(1) Integrated Course Design (1)	16 学时	1	考查 Term Paper	5	
PR053067	AutoCAD 与水工环制图 AutoCAD and Mapping for Hydrogeology	32 学时	2	考试 Exam	6	
PR053086	GIS 基础及水工环应用 GIS and Application in Geosciences	40 学时	2.5	考查 Term Paper	6	
PR053070	综合课程设计(2) Integrated Course Design (2)	16 学时	1	考查 Term Paper	6	
PR052087	水文与水资源工程专业实习 Practice of Hydrology and Water Resources Engineering	7 周	7	考查 Term Paper	3 夏	
PR054066	毕业论文(论文) Graduation Design (Thesis)	12 周	6	考查 Term Paper	8	
总计 Total		29 周 +232 学时	35.5			

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（工程教育认证类专业）

毕业要求	培养目标				专业能力：具备分析与解决问题能力,毕业后可在水利自然资源、城建环保等部门从事勘查规划、设计、预报、监测、评价及科研、管理等工作
	人文素养：德、智、体、美、劳全面发展，具备较好的人文素质	基础知识具备较好的人文素质、扎实的自然科学基础和较强的计算机、外语水平	专业知识：掌握水文水资源、岩土工程及其赋存地质环境方面的专业知识	专业目标	
毕业要求 1		√		√	
毕业要求 2		√		√	√
毕业要求 3				√	√
毕业要求 4				√	√
毕业要求 5				√	√
毕业要求 6				√	√
毕业要求 7				√	√
毕业要求 8	√			√	√
毕业要求 9	√				√
毕业要求 10	√				√
毕业要求 11					√
毕业要求 12					√

九、课程与毕业要求关系矩阵（工程教育认证类专业）

课程名称	(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
毕业要求												
思想道德与法治								H		L		
毛泽东思想和中国特 色社会主义理论体系 概论								H				
中国近现代史纲要								M				
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								M			L	M
形势与政策								H				
大学生心理素质教育								M		H	M	
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			M		H							M
程序设计基础 A			L	M	H							M
大学生职业生涯规划 与就业指导									M	L		H
高等数学	M	H		L								
线性代数	M	H		L								
概率论与数理统计	M	H		L								
大学物理	H	M	L	M								
大学化学	H	M		M			L					
地球科学概论						M	M					
测量学 A		M		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
水文地质学基础		M	H	M	M		M	M					
水力学		H	H	M	M	L	L			L			
地下水运动方程		H	H	M	H	L		L					
综合地质学		M	H		M			L					
第四纪地质与地貌		M	H		M			L					
水利水电工程概论		H	H	L	L		M	L	M				
水文地球化学基础		M	H		M	M	L	M	L				
气象学与气候学			H	M	H	M		M					
新生研讨课		L	L	L	H	L	M	M		M	M		
专业导论课		H	H	H	H	H	H	H		M	M		
水文与水资源工程专业 业英语		H	H					M			H		
水文学原理		H	H	H	M	L	L	L		L			
工程岩土学及实验		H	H	H	M	M	M	L		M			
土力学与地基基础		H	H	H	M		M	L		M			
工程岩体力学		H	H	H	M	M	L	L		M			
水文统计与水文预报		H	H	H	M	M	M	L		L			
水资源评价与开发利 用		H	H	H	M	M	H	H		M			
水生态与水环境保护		H	H	H	M	M	H	H	H	M		M	
地下水水力学		M	H	H	H	M	H	H		M			
学科前沿课程		H	H	H	H	M	H	H		M	M		
地质灾害与防治		H	H	H	M	L	H	H		L	L		
生态与环境水文地质 学		H	H	H	M	M	H	H	H	M			

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							M			H			
军事技能训练										H			
思想政治社会实践									H			M	M
实验物理			H		H								
实验化学			H		H			L					
北戴河地质认识实习		H	H	H	M	M	H	M					
周口店地质教学实习		H	H	H	M	M	H	M					
测量实习			H		M	M							
水文与水资源工程专业实习		H	H	H	H	M	H	H					
毕业论文/设计(水文)		H	H	H	H	M	H	H					
AutoCAD 与水工环制图						H							
工程经济与项目管理		H	H		M		H	H	M	M		H	
综合课程设计 I		H	H	H	M			M		M			
综合课程设计 II		H	H	H	M			M		M			
GIS 基础与水工环应用		H	H	M	M	H	L	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。