地质学专业留学生
本科培养方案

（专业代码：070901　学制：4 年　学位：理学学士学位）

一、培养目标

本专业培养在知识、能力、素质各方面全面发展，系统掌握地质学基本理论、基本知识和基本技能，能够应用地质学理论、方法和技术分析解决地质问题的人才。毕业生具有扎实的地质理论基础、较宽广的专业知识、较强的实践能力以及一定的国际视野，毕业后能够在生产、科研、教学等部门从事地质及相关领域的生产、研究和管理等方面的工作。

二、毕业要求及实现矩阵

1.汉语毕业要求：学生毕业前须通过汉语水平考试（HSK）4 级，具备基本的汉语听、说、读、写能力，能够适应在中国学习、生活及未来职业发展的语言需求。学生须完成以下指定课程并取得合格成绩：《中国概况（2-1）》《中国概况（2-2）》《初级汉语》《中级汉语》《高级汉语》。

2.具有扎实的地质学基础知识和专业知识，掌握必备的研究方法，了解基础地质、资源地质、海洋地质等方面及相关领域最新动态和发展趋势。

3.具有解决复杂地质问题的能力。能够对基础地质、资源地质、海洋地质等专业领域复杂问题进行综合分析和研究，并提出相应对策或解决方案；

4. 具有信息技术应用能力。能够恰当应用现代的信息技术手段和工具解决地质工作中遇到的实际问题。

5. 具备跨文化沟通、中文学习和国际交流能力，能够在国际化环境中开展专业学习与合作。

6. 具有终身学习意识和自我管理、自主学习能力，能够通过不断学习，适应社会和个人可持续发展。

毕业要求指标点分解与实现矩阵

毕业要求	指标点	课程
1.具有扎实的地质学基础知识和专业知识，掌握必备的研究方法，了解基础地质、资源地质、海洋地质等方面及相关领域最新动态和发展趋势	1.1 具备地质学学习和研究所必备的数理化基础知识，并具有将数理化基础知识用于专业的学习和更新、发展能力	大学化学， 大学物理(2-1)， 大学物理(2-2)， 大学物理实验(2-1)， 大学物理实验(2-2)， 高等数学(2-1)， 高等数学(2-2)， 线性代数
	1.2 掌握地质学的基本理论、基本技能和工作方法，并具有将地质学各分支学科的基础理论融会贯通，建立不同学科之间知识网络的思维	沉积学， 大地构造学， 地球科学概论， 地史学， 构造地质学， 古生物学， 矿物岩石学
2.具有解决复杂地质问题的能力。能够对基础地质、资源地质、海洋地质等专业领域复杂问题进行综合分析和研究，并提出相应对策或解决方案	2.1 能够运用地质调查、资料解释和综合评价方法解决资源地质与工程实际问题	地球物理测井，地震资料解释，地球物理勘探，石油地质学， 层序地层学， 油气田地下地质学（选修）
	2.2 能够在野外、岩心和综合实习中采集、描述、整理并解释地质资料	地质认识实习，岩心观察与描述，综合地质实习，油气地质与勘探综合研究
	2.3 具有海洋地质、环境地质的知识和技能，能够综合运用所学理论和方法，进行海洋地质、环境地质的调查、样品及数据的采集和处理	海底矿产资源，宝玉石鉴赏， 油气地球化学（选修）， 有机化学
	2.4 能够在专业知识的应用中，发现、辨析、质疑、评价本专业及相关领域现象和问题	毕业设计， 地质专题实习

毕业要求	指标点	课程
	2.5 具有海洋地质、环境地质的知识和技能，能够综合运用所学理论和方法，进行海洋地质、环境地质的调查、样品及数据的采集和处理	地球化学，海洋地质学
3.具有信息技术应用能力。能够恰当应用现代的信息技术手段和工具解决地质工作中遇到的实际问题	3.1 掌握计算机基础知识及常用计算机软件的应用以及互联网等相关技术手段，并具有将其运用到地质工程领域的能力	程序设计（Python），大学计算机，地学大数据
	3.2 掌握罗盘、放大镜、偏光显微镜等地质基础工具和设备的使用，了解扫描电镜、X射线衍射、激光拉曼光谱等仪器设备的基本原理及使用规范，能够应用相关仪器进行地质工作	沉积学，油气地球化学（选修），地球科学概论，地质认识实习，古生物学，矿物岩石学，综合地质实习
4.具备跨文化沟通、中文学习和国际交流能力，能够在国际化环境中开展专业学习与合作	4.1 具备基础汉语能力，能够借助工具阅读并理解中文专业资料。	初级汉语精读(2-1)，初级汉语精读(2-2)，中级汉语(2-1)，中级汉语(2-2)，中国概况
	4.2 能够用英语完成专业表达、文献阅读、报告交流和毕业论文写作。	国际周课程，学科前沿讲座，毕业设计
	4.3 能与团队其他成员有效沟通，听取意见并对建议做出合理的反应和决策	大学物理实验(2-1),大学物理实验(2-2)，地质认识实习,综合地质实习

毕业要求	指标点	课程
	4.4 具备国际视野，能够了解本专业国际先进研究技术的改进与更新，并能有效应用。在跨文化背景下具有听、说、写、译和开展国际交流的基本能力	国际教育课程，初级汉语口语(2-1)，初级汉语口语(2-2)，高级汉语(2-1)，高级汉语(2-2)
5.具有终身学习意识和自我管理、自主学习能力，能够通过不断学习，适应社会和个人可持续发展	5.1 对于地质工作的职业规范、学术诚信和社会责任有正确的认识	道德与法律
	5.2 关注地质学领域的前沿发展现状和趋势，做到知识的更新和与时俱进	毕业设计，国际教育课程，学科前沿讲座（听 16 次学术报告）
	5.3 能够在团队任务和实践环节中协作完成地质问题分析，形成持续学习能力。	油气地质与勘探综合研究；综合地质实习；毕业设计

三、主干学科、专业核心课程

主干学科：地质学

专业核心课程：地球科学概论,矿物岩石学（含晶体光学）,古生物学,沉积学,构造地质学,大地构造,地史学,地球物理测井,地球物理勘探,石油地质学,层序地层学,地学大数据

四、特色课程

(一)专业特色课程

专创融合课程:地质专题实习

项目式课程:地质专题实习

“人工智能+”课程:地学大数据

(二)在地国际化课程

国际周课程

双语课程:初级汉语精读（2-1）/（2-2）、初级汉语口语（2-1）/（2-2）、中级汉语（2-1）/（2-2）、高级汉语（2-1）/（2-2）

(三)其他课程

课 程 类 别		学分	所占比例	理论学时	实践学时	学时合计
通识教育课	通识必修课程	43	28.2%	696	0	696
	通识选修课程	0.0	0.0%			
专业基础课	大类基础课程	49.5	32.4%	636.0	160+2 周	796
	专业必修课程	51	33.4%	472	21 周	484.0+21 周
	专业选修课程	9	6.0%	114.0	18+1 周	132+1 周
自主发展	跨学科课程	0	0.0%	0	0	0
	辅助学分	10（不计入毕业总学分）				
毕业总学分（总学时）		152.5	100%			
实践教学（含课内实验）		0	0%		0	0
集中性实践教学环节		5	3.3%		5 周	0

劳动教育实践课程:地质认识实习

课程思政示范课程:矿物岩石学

五、学分修读要求

本专业学生在学校规定的修业年限内需修满专业培养方案要求的 152.5 学分，通过 HSK4 级，方可毕业；符合学士学位授予条件的，授予学士学位。

授予学位类型：理学学士学位

学期修读学分建议	学期	1	2	S1	3	4	S2	5	6	S3	7	8
	必修	21.5	27	2	16	18	2	14	8	3	0	18
	专业选修	0	0	0	0	2	0	4	8	0	11	0
	通识选修	0	0	0	0	0	0	0	0	0	0	0
	跨学科选修	0	0	0	0	0	0	0	0	0	0	0
	小计	21.5	27	2	16	18	2	18	16	3	11	18

六、课程设置

课程类别	课程模块	课程编码	课程名称	学分	课内学时					课外学时	学期	备注
					合计	讲授	实验	上机	实践			
通识教育课程	思政类课程	2092099	道德与法律 Ideological Morality and Rule of Law	1	16	16					1	
	基础素养课程	0711299	程序设计（Python） Programming (Python)	3	48	48					1	
		2091199	初级汉语口语(2-1) Primary Oral Chinese (2-1)	4	64	64					1	
		2092199	初级汉语精读(2-1) Primary Chinese reading (2-1)	4	64	64					1	
		2091299	初级汉语口语(2-2) Primary Oral Chinese (2-2)	4	64	64					2	
		2092299	初级汉语精读(2-2) Primary Chinese reading (2-2)	4	64	64					2	
		0711399	大学计算机 College Computer Science	1	24	24					2	
		2095199	中级汉语(2-1) Intermediate Chinese (2-1)	4	64	64					3	
		2094199	中国概况（2-1） Survey of China (2-1)	3	48	48					3	
		2094299	中国概况（2-2） Survey of China (2-2)	3	48	48					4	
		2095299	中级汉语(2-2) Intermediate Chinese (2-2)	4	64	64					4	
		2096199	高级汉语(2-1) Advanced Chinese(2-1)	4	64	64					5	
		2096299	高级汉语(2-2) Advanced Chinese(2-2)	4	64	64					6	
专业教育	大类基础课程	0911199	高等数学(2-1) Advanced Mathematics (2-1)	6	96	96					1	
		0110199	地球科学概论 Introduction to Earth Science	3.5	56	40	16				1	
		0911299	高等数学(2-2) Advanced Mathematics (2-2)	5	80	80					2	
		0110299	矿物岩石学(含晶体光学) Mineral Petrology	4	76	40	36				2	
		0931199	大学物理(2-1) University Physics (2-1)	4	64	64					2	
		0941199	大学物理实验(2-1) College Physics Experiment (2-1)	1	24		24				2	
		0960199	大学化学 College Chemistry	4	64	54	10				2	
		0191199	地质认识实习 Geological Cognition Practice	2	2 周						S1	
		0931299	大学物理(2-2) University Physics (2-2)	3.5	56	56					3	
		0941299	大学物理实验(2-2) College Physics Experiment (2-2)	1	24		24				3	

课程类别	课程模块	课程编码	课程名称	学分	课内学时					课外学时	学期	备注
					合计	讲授	实验	上机	实践			
		0113399	古生物学 Paleontology	2	32	22	10				3	
		0961299	有机化学 Organic Chemistry	2.5	40	40					3	
		0113499	沉积学 Sedimentology	4	64	48	16				3	
		0110399	构造地质学 Structural Geology	4	72	48	24				4	
		0910399	线性代数 Linear Algebra	3	48	48					4	
	专业必修课程	0117899	国际周课程 International Week	2	32	32					S2	
		0118199	岩心观察与描述 Core Observation and Description	2.0	32	32					5	
		0117999	地球物理测井 Geophysical Well Logging	4	64	64					5	
		0113599	大地构造 Geotectonics	2	32	32					5	
		0113699	地史学 Geohistory	2	34	28	6				5	
		0118299	地球物理勘探 Geophysical Exploration	4	64	64					6	
		0195199	综合地质实习	3	3 周						S3	
		0118099	地学大数据 Big Data of Geoscience	2.0	32	32					5	
		0115499	石油地质学 Petroleum Geology	3.0	50	44	6				6	
		0118399	宝玉石鉴赏 Appreciation of Precious Stones	2.0	32	32					6	
		0111899	层序地层学 Sequence Stratigraphy	2.0	32	32					6	
		0118499	非常规油气地质学 Unconventional Petroleum Geology	2.0	32	32					7	
		0118599	海底矿产资源 Seabed Mineral Resources	2.0	32	32					7	
		0118699	学科前沿讲座（听 16 次学术报告） Frontiers in Research Lecture Series	1.0	16	16					7	
		0199999	毕业设计 Graduation Project	18	18 周						8	
	专业选修课程	0114599	油气地球化学 Petroleum Geochemistry	2.0	32	32					5	
		0190599	油气地质与勘探综合研究 Comprehensive Research on Petroleum Geology and Exploration	1.0	1 周		1 周				6	
		0111399	油气田地下地质学 Subsurface Geology of Oil & Gas Fields	3.0	52	40	12				7	
		0211499	油气田开发工程 Oil & Gas Field Development Engineering	3.0	48	42	6				7	

课程类别	课程模块	课程编码	课程名称	学分	课内学时					课外学时	学期	备注
					合计	讲授	实验	上机	实践			
		修读说明	专业选修课程要求修满 9 学分。									
自主发展	跨学科课程	选修本专业所属专业类以外的专业开设的专业教育课程，也可通过修读微专业、辅修等途径替代		≥4							3-8	
	辅助学分	辅助学分不少于 10 个学分，活动设置、学分要求及认定方式见《本科生“第二课堂成绩单”实施细则》		≥10							1-8	

七、课程体系拓扑图


地质学专业留学生本科课程体系
四年课程思维导图 · 16:9 · 按《留学生培养方案》课程设置整理
155.5 学分 + 第二课堂 ≥5 学分
主线：地学基础 → 专业主干 → 资源与数据技术 → 综合实践
语言与通识
数理基础
地质主干
资源与数据
实践研究
选修拓展
一年级
语言适应 · 数理与地学入门
第1学期
道德与法律
初级汉语口语 / 精读(2-1)
程序设计
高等数学(2-1)
地球科学概论
第2学期
初级汉语口语 / 精读(2-2)
大学计算机
高等数学(2-2)
矿物岩石学(含晶体光学)
大学物理(2-1)
大学物理实验(2-1)
大学化学
夏季
地质认识实习
二年级
基础深化 · 地质主干建构
第3学期
中级汉语(2-1) / 中国概况(2-1)
大学物理(2-2)
大学物理实验(2-2)
古生物学
有机化学
第4学期
中国概况(2-2) / 中级汉语(2-2)
沉积学
构造地质学
线性代数
夏季
国际周课程
三年级
技术方法 · 资源地质方向
第5学期
高级汉语(2-1)
岩心观察与描述
地球物理测井
大地构造
地史学
油气地球化学（选修）
地学大数据
第6学期
高级汉语(2-2)
地球物理勘探
石油地质学
油气地质与勘探综合研究（选修）
宝玉石鉴定
层序地层学
夏季
综合地质实习
四年级
方向拓展 · 综合研究与毕业设计
第7学期
油气田地下地质学（选修）
非常规油气地质学
海底矿产资源
学科前沿讲座（16次）
油气田开发工程（选修）
第8学期
毕业设计
贯穿
通识选修课程
跨学科课程 ≥4学分
第二课堂活动 ≥5学分
能力主线
地学基础能力
地球科学概论 → 矿物岩石学 → 古生物学 / 沉积学 / 构造地质学
数理与工具能力
高等数学 → 物理化学基础 → 线性代数 → 地学大数据
资源地质能力
测井 / 勘探 → 石油地质学 → 层序地层学 / 非常规油气
实践研究能力
地质认识实习 → 岩心观察 → 综合地质实习 → 毕业设计
注：专业选修课程按培养方案要求至少修读 18 学分；跨学科课程 ≥4 学分，第二课堂 ≥5 学分不计入毕业总学分。
来源：留学生培养方案课程设置

Undergraduate Training Program for International Students

(Major Code: 070901 Length of Study: 4 Years Degree Awarded: Bachelor of Science)

I. Educational Objectives

This program cultivates students who develop comprehensively in knowledge, ability, and overall quality, systematically master the basic theories, knowledge, and skills of geology, and are able to apply geological theories, methods, and technologies to analyze and solve geological problems. Graduates will have a solid foundation in geological theory, broad professional knowledge, strong practical ability, and an international perspective, have an understanding of China and goodwill towards it, and will be qualified to engage in production, research, teaching, and management in geology and related fields.

II. Graduation Requirements and Achievement Matrix

Graduates should acquire the following knowledge and abilities:

1. Language Requirements: Students must pass the HSK Level 4 prior to graduation and possess basic Chinese listening, speaking, reading and writing skills, so as to meet the language requirements for their study, daily life and future career development in China. Students are required to complete the designated courses listed below and obtain passing grades: Survey of China (2-1), Survey of China (2-2), Elementary Chinese, Intermediate Chinese, Advanced Chinese.

2. Possess solid foundational and professional knowledge of geology, master necessary research methods, and understand the latest developments and trends in basic geology, resource geology, marine geology, and related fields.

3. Possess the ability to solve complex geological problems. Be capable of conducting comprehensive analysis and research on complex issues in professional fields such as basic geology, resource geology, and marine geology, and proposing corresponding measures or solutions

4. Possess information technology application ability and be able to use modern

information technologies and tools appropriately to solve practical problems in geological work.

5. Possess cross-cultural communication, Chinese language learning, and international exchange abilities, and be able to study and collaborate in an international environment.

6. Possess lifelong learning awareness, self-management, and autonomous learning ability, and be able to adapt to sustainable social and personal development through continuous learning.

Graduation Requirement Indicators and Achievement Matrix

Graduation Requirements	Performance Indicators	Courses
1.Possess solid foundational and professional knowledge of geology, master necessary research methods, and understand the latest developments and trends in basic geology, resource geology, marine geology, and related fields.	1.1 Possess the mathematics, physics, and chemistry foundations required for geological study and research, and be able to apply these foundations to professional learning, knowledge renewal, and development.	College Chemistry; College Physics (2-1)/(2-2); College Physics Experiment (2-1)/(2-2); Advanced Mathematics (2-1)/(2-2); Linear Algebra
	1.2 Master the basic theories, skills, and working methods of geology, integrate the basic theories of geological subdisciplines, and build an interdisciplinary knowledge network.	Sedimentology; Geotectonics; Introduction to Geoscience; Historical Geology; Structural Geology; Palaeontology; Mineral Lithology
2.Possess the ability to solve complex geological problems. Be capable of conducting comprehensive analysis and research on complex issues in professional fields such as basic geology, resource geology, and marine geology, and proposing corresponding measures or solutions	2.1 Apply geological survey, data interpretation, and integrated evaluation methods to solve practical problems in resource geology and engineering.	Geophysical Well-Logging; Seismic Data Interpretation; Geophysical Exploration; Petroleum Geology; Sequence Stratigraphy; Subsurface Geology of Oil and Gas Fields (Elective)
	2.2 Collect, describe, organize, and interpret geological data through fieldwork, core observation, and integrated practice.	Geological Cognition Practice; Core Observation and Description; Comprehensive Geological Practice; Comprehensive Research on Oil and Gas Geology and Exploration
	2.3 Possess knowledge and skills in marine geology and environmental geology, and be able to apply relevant theories and methods to investigation, sampling, data collection, and processing in these fields.	Seabed Mineral Resources; Gem Identification; Petroleum Geochemistry (Elective); Organic Chemistry
	2.4 Identify, analyze, question, and evaluate phenomena and problems in this discipline and related fields when applying professional knowledge.	Graduation Design; Geological Special Practice

Graduation Requirements	Performance Indicators	Courses
	2.5 Possess knowledge and skills in marine geology and environmental geology, and be able to conduct investigation, sampling, data collection, and processing.	Geochemistry; Marine Geology
3. Possess information technology application ability and use modern information tools to solve practical problems in geological work.	3.1 Master basic computer knowledge, common software applications, and internet-related technologies, and apply them in geological engineering.	Programming (Python); Computer Fundamentals; Big Data in Geoscience
	3.2 Master the use of basic geological tools and instruments such as compass, magnifier, and polarizing microscope; understand the principles and operation standards of instruments such as scanning electron microscope, X-ray diffraction, and laser Raman spectroscopy, and apply them in geological work.	Sedimentology; Petroleum Geochemistry (Elective); Introduction to Geoscience; Geological Cognition Practice; Palaeontology; Mineral Lithology; Comprehensive Geological Practice
4. Possess cross-cultural communication, Chinese language learning, and international exchange abilities, and be able to study and collaborate in an international environment.	4.1 Possess basic Chinese language skills and be able to read and understand Chinese professional materials with the help of tools.	Primary Chinese Reading (2-1)/(2-2); Intermediate Chinese (2-1)/(2-2); Survey of China
	4.2 Be able to complete professional expression, literature reading, report communication, and graduation thesis writing in English.	International Week Courses; Frontier Lectures; Graduation Design
	4.3 Communicate effectively with team members, listen to opinions, and respond to suggestions with reasonable judgment and decision-making.	College Physics Experiment (2-1)/(2-2)，Geological Cognition Practice，Comprehensive Geological Practice
	4.4 Possess international vision, understand improvements and updates in advanced international research technologies in this discipline, and apply them effectively; possess basic abilities in listening, speaking, writing, translation, and international communication.	International Education Courses; Primary Oral Chinese (2-1)/(2-2); Advanced Chinese (2-1)/(2-2)
5. Possess lifelong learning awareness, self-management, and autonomous learning ability, and adapt to sustainable social and personal development through continuous learning.	5.1 Develop a correct understanding of professional norms, academic integrity, and social responsibility in geological work.	Moral Education and Law
	5.2 Follow frontier developments and trends in geology and keep knowledge up to date.	Graduation Design; International Education Courses; Frontier Lectures (16 academic reports)
	5.3 Collaborate in team tasks and practical activities to complete geological problem analysis and develop continuous learning ability.	Comprehensive Research on Oil and Gas Geology and Exploration; Comprehensive Geological Practice; Graduation Design

III. Main Discipline and Core Courses

Main Discipline: Geology

Core Courses: Introduction to Geoscience, Mineral Lithology (including Crystallography), Palaeontology, Sedimentology, Structural Geology, Geotectonics, Historical Geology, Geophysical Well-Logging, Geophysical Exploration, Petroleum Geology, Sequence Stratigraphy, and Big Data in Geoscience.

IV. Featured Courses

1. Specialized Featured Courses

Innovation and Entrepreneurship Integrated Course: Geological Special Practice

Project-Based Course: Geological Special Practice

"Artificial Intelligence +" Course: Big Data in Geoscience

2. Localized International Courses

Fully English-Taught Course: International Week Courses

Bilingual Courses: Primary Chinese Reading (2-1)/(2-2), Primary Oral Chinese (2-1)/(2-2), Intermediate Chinese (2-1)/(2-2), Advanced Chinese (2-1)/(2-2)

3. Other Courses

Labor Education Practice Course: Geological Cognition Practice

Model Course for Curriculum-Based Ideological and Political Education: Mineral Lithology

V. Credit Requirements

Students are required to complete 152.5 credits within the prescribed period of study. Students meeting the requirements for the bachelor's degree will be awarded a Bachelor of Science degree.

Degree Awarded: Bachelor of Science

Course Category	Module	Credits	Percentage	Theoretical Hours	Practical Hours	Total Hours
General Education Courses	General Required Courses	43	28.2%	696	0	696
General Education Courses	General Elective Courses	0.0	0.0%			
Major Foundation Courses	Discipline Foundation Courses	49.5	32.4%	636.0	160+2 weeks	796
Major Foundation Courses	Major Required Courses	51	33.4%	472	21 weeks	484.0+21 weeks
Major Foundation Courses	Major Elective Courses	9	6.0%	114.0	18+1week	132+1 week
Independent Development	Interdisciplinary Courses	0	0.0%	0	0	0
Independent Development	Auxiliary training program	10				
Total Graduation Credits (Total Hours)		152.5	100%			
Practical Teaching (including in-class experiments)		0	0%		0	0
Intensive Practical Teaching Components		5	3.3%		5 weeks	0

Recommended Credits by Semester

Category	1	2	S1	3	4	S2	5	6	S3	7	8
Required Courses	21.5	27	2	16	18	2	14	8	3	0	18
Major Electives	0	0	0	0	2	0	4	8	0	11	0
General Electives	0	0	0	0	0	0	0	0	0	0	0
Interdisciplinary Electives	0	0	0	0	0	0	0	0	0	0	0
Subtotal	21.5	27	2	16	18	2	18	16	3	11	18

VI. Curriculum Structure

Course Category	Course Module	Course Code	Course Name	Credits	Total	Lecture	Experiment	Computer Lab	Practice	Extracurricular Hours	Semester	Remarks
General Education Courses	Ideological and Political Courses	2092099	Moral Education and Law	1	16	16					1	
	Basic Literacy Courses	0711299	Programming	3	48	48					1	
		2091199	Primary Oral Chinese (2-1)	4	64	64					1	
		2092199	Primary Chinese Reading (2-1)	4	64	64					1	
		2091299	Primary Oral Chinese (2-2)	4	64	64					2	
		2092299	Primary Chinese Reading (2-2)	4	64	64					2	
		0711399	Computer Fundamentals	1	24	24					2	
		2095199	Intermediate Chinese (2-1)	4	64	64					3	
		2094199	Survey of China (2-1)	3	48	48					3	
		2094299	Survey of China (2-2)	3	48	48					4	
		2095299	Intermediate Chinese (2-2)	4	64	64					4	
		2096199	Advanced Chinese (2-1)	4	64	64					5	
		2096299	Advanced Chinese (2-2)	4	64	64					6	
Professional Education	Discipline Foundation Courses	0911199	Advanced Mathematics (2-1)	6	96	96					1	
		0110199	Introduction to Geoscience	3.5	56	40	16				1	
		0911299	Advanced Mathematics (2-2)	5	80	80					2	
		0110299	Mineral Lithology (including Crystallography)	4	76	40	36				2	

Course Category	Course Module	Course Code	Course Name	Credits	Total	Lecture	Experiment	Computer Lab	Practice	Extracurricular Hours	Semester	Remarks
		0931199	College Physics (2-1)	4	64	64					2	
		0941199	College Physics Experiment (2-1)	1	24		24				2	
		0960199	College Chemistry	4	64	54	10				2	
		0191199	Geological Cognition Practice	2	2 weeks				2 weeks		S1	
		0931299	College Physics (2-2)	3.5	56	56					3	
		0941299	College Physics Experiment (2-2)	1	24		24				3	
		0113399	Palaeontology	2	32	22	10				3	
		0961299	Organic Chemistry	2.5	40	40					3	
		0113499	Sedimentology	4	64	48	16				3	
		0110399	Structural Geology	4	72	48	24				4	
		0910399	Linear Algebra	3	48	48					4	
	Major Required Courses	0117899	International Week Courses	2	32	32					S2	
		0118199	Core Observation and Description	2.0	32	32					5	
		0117999	Geophysical Well-Logging	4	64	64					5	
		0113599	Geotectonics	2	32	32					5	
		0113699	Historical Geology	2	34	28	6				5	
		0118299	Geophysical Exploration	4	64	64					6	
		0195199	Comprehensive Geological Practice	3	3 weeks				3 weeks		S3	
		0118099	Big Data in Geoscience	2.0	32	32					5	
		0115499	Petroleum Geology	3.0	50	44	6				6	
		0118399	Gem Identification	2.0	32	32					6	

Course Category	Course Module	Course Code	Course Name	Credits	Total	Lecture	Experiment	Computer Lab	Practice	Extracurricular Hours	Semester	Remarks
		0111899	Sequence Stratigraphy	2.0	32	32					6	
		0118499	Unconventional Petroleum Geology	2.0	32	32					7	
		0118599	Seabed Mineral Resources	2.0	32	32					7	
		0118699	Frontier Lectures (16 academic reports)	1.0	16	16					7	
		0199999	Graduation Design	18	18 weeks				18 weeks		8	
	Major Elective Courses	0114599	Petroleum Geochemistry (Elective)	2.0	32	32					5	
		0190599	Comprehensive Research on Oil and Gas Geology and Exploration (Elective)	1.0	1 week		1 week				6	
		0111399	Subsurface Geology of Oil and Gas Fields (Elective)	3.0	52	40	12				7	
		0211499	Oil and Gas Field Development Engineering (Elective)	3.0	48	42	6				7	
Major Elective Courses	Course Selection Note	Students must complete at least 9 credits of major elective courses.										

Course Category	Course Module	Course Code	Course Name	Credits	Total	Lecture	Experiment	Computer Lab	Practice	Extracurricular Hours	Semester	Remarks
Independent Development	Interdisciplinary Courses		Students may take professional education courses offered outside their own discipline, or substitute them through minors, micro-majors, or other approved pathways.	≥4							3-8	
	Auxiliary training program		Students are required to complete no fewer than 10 credits of auxiliary training program. The activity arrangements, credit requirements, and recognition methods shall follow the Implementation Rules for the Undergraduate ' Auxiliary training program/ Second Classroom Transcript'.	≥10							1-8	