**采矿工程专业培养方案**

**Curriculum for Undergraduate of Mining Engineering Major**

**一、培养目标**

本专业培养适应国家经济与科技发展需求，具有较好的沟通合作意识、良好的人文素养和一定的国际化视野，掌握厚实的自然科学知识、专业技能及研究方法，通晓固体矿产开采基本原理，具备矿床开采行政管理、技术管理和技术设计能力，能在金属非金属矿床开采及矿山安全等相关领域从事规划、生产运行与管理、工程设计与施工、技术研究与开发等方面工作，德、智、体、美、劳全面发展、知识结构合理、社会适应能力强、富有实践能力和创新创业精神的高素质应用型人才。期待毕业生五年左右达到以下目标：

1. 具备良好的人文社会科学素养、社会责任感和职业道德，能够在金属非金属矿床开采中注重环境保护、安全生产和可持续发展。

2. 具备厚实的自然科学基础知识、采矿工程专业知识和独立解决复杂工程问题的能力，能够承担金属非金属矿床开采领域的规划与咨询、工艺系统设计与优化、生产施工与管理等工作。

3. 具备开阔的国际视野和创新能力，能够持续关注国内外金属非金属矿床开采及相关领域的前沿动态和发展趋势，并针对工程实际问题开展科学研究。

4. 具备团队合作精神和良好的沟通、协调、领导能力，能够在多学科背景下担任工程项目团队负责人或自主创业。

5. 具备终身学习和不断发展的能力，能够适应水利工程、道路工程和城市地下工程等相关领域的工作。

**I. Training objectives**

This major trains students who adapt the needs of national economic and technological development, and have a good sense of communication and cooperation, good humanistic literacy and a certain international vision. It educates students to master solid natural science knowledge, professional skills and research methods, to be familiar with the basic principle of solid mineral exploitation, and to possess the ability of mineral deposit administration, and technical management and design. Graduates potentially engage in planning, production operation and management, engineering design and construction, technological research and development in the field of metallic and non-metallic deposits mining and mine safety. The major fosters high-quality practical talents with comprehensive development of morality, intelligence, physique, beauty and labor with a rational knowledge structure, strong social adaptability, practical ability and innovative entrepreneurship. Based on their knowledge, abilities and qualities and with five years of social practice after graduation, the graduates are expected to:

1. Possess a good humanities and Social Sciences literacy, social responsibility and professional ethics and can pay attention to environmental protection, safe production and sustainable development in the mining of metallic and non-metallic deposits.

2. Solidly master the fundamental knowledge of natural science and the professional knowledge of mining engineering, and possess the ability to solve complex engineering problems independently, and can undertake planning and consultation, process system design and optimization, production construction and management in the field of metallic and non-metallic deposit mining.

3. Possess a strong scientific research ability and broad international vision, and can become technical experts to solve the complex engineering problems in metallic and non-metallic deposits mining and related fields.

4. Have a good ability of teamwork spirit, innovation and entrepreneurship and are able to act as project team leaders or self-employed in a multi-disciplinary context.

5. Possess the ability of lifelong learning and continuous development, can adapt to the work of water conservancy engineering, road engineering and urban underground engineering and other related fields.

**二、毕业要求**

1. 职业规范：具有良好的人文社会科学素养、社会责任感，能够在金属非金属矿床开采及相关工程实践中理解并遵守职业道德和规范，履行责任。

2. 工程知识与项目管理：能够将数学、自然科学、工程基础、经济决策方法、工程管理原理与采矿工程专业知识相结合，解决金属非金属矿床开采领域中的复杂工程问题。

3. 问题分析与设计解决方案：具有识别、表达和分析金属非金属矿床开采复杂工程问题的能力，能够进行金属非金属矿床开采工艺系统设计、优化和创新。

4. 研究：能够基于科学原理和方法对金属非金属矿床开采复杂工程问题进行研究，包括设计实验、分析与解释数据，并通过信息综合得到合理有效的结论。

5. 使用现代工具：能够应用现代信息技术和系统工程方法对金属非金属矿床开采复杂工程问题进行分析、预测和模拟，并能够理解其局限性。

6. 工程与社会、环境和可持续发展：能够分析和评价金属非金属矿床开采活动与社会、健康、安全、法律、文化、环境以及可持续发展的相互影响，并理解应承担的责任。

7. 个人、团队及有效沟通：具备专业表达、沟通、团队协作和组织管理能力，具有国际视野，能够进行多学科、跨文化交流与合作。

8.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。

**II. Requirements**

1. Professional norms: Graduates have a good humanistic and social scientific literacy, social responsibility, and can understand and abide by professional ethics and norms in the mining of metallic and non-metallic deposits and related engineering practice, and fulfill responsibilities.

2. Engineering knowledge and project management: Graduates can combine the expertise of mathematics, natural sciences, engineering foundation, economic decision-making methods, engineering management principles and mining engineering expertise to solve complex engineering problems in the field of metallic and non-metallic deposit mining.

3. Problem Analysis and Design Solutions: Graduates have the ability to identify, express and analyze complex engineering problems in the mining of metallic and non-metallic deposits, and can design, optimize and reform the mining process system of metallic and non-metallic deposits.

4. Research: Graduates can study the complex engineering problems of metallic and non-metallic deposits based on scientific principles and methods, including designing experiments, analyzing and interpreting data, and obtaining reasonable and effective conclusions through information synthesis.

5. Use modern tools: Graduates have the ability to apply modern information technology and systems engineering methods to analyze, predict and simulate complex engineering problems in metallic and non-metallic deposits, and can understand its limitations.

6. Engineering and Society, Environment and Sustainable Development: Graduates have the ability to analyze and evaluate the interaction of metallic and non-metallic mineral deposits with social, environmental and sustainable development and can understand the responsibilities to be undertaken.

7. Individual, team and effective communication: Graduates have professional communication, teamwork and organizational management skills, possess an international vision, and can conduct cross-cultural exchanges and cooperation.

8. Lifelong learning: Graduates have an awareness of self-directed learning and lifelong learning, the ability to continuously learn, and adapt to development.

**附：培养目标实现矩阵**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 培养目标1  | 培养目标2 | 培养目标3 | 培养目标4 | 培养目标5 |
| 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 |  |  |  | √ | √ |

**三、专业主干课程**

地质学、岩石力学、露天开采、地下开采、矿山爆破、井巷工程、采掘机械、矿井通风与安全、矿山安全与环保、系统工程基础、技术经济与投资分析等。

**III．Core courses**

 Geology, Rock Mechanics, Surface Mining, Underground Mining, Mining Blasting, Shafting and Drifting Engineering, Mining Machinery, Mine Ventilation and Safety, Mine Safety and Environmental Protection, System Engineering Foundation, Technical Economy and Investment Analysis.

**四、基本学制：四年**

**IV. Recommended length of the program: 4 years**

**五、授予学位：工学学士**

**V. Degree: Bachelor of Engineering**

学生修满所规定的最低毕业学分，符合武汉科技大学授予学士学位规定，授予工学学士学位。

**六、毕业学分要求：176学分**

|  |  |  |  |
| --- | --- | --- | --- |
| 课程类型 | 学分要求 | 课程类型 | 学分要求 |
| 1、通识教育平台课程 | 46 | 3、专业课程模块 | 53 |
| 必修课程 | 42 | 必修课程 | 39.5 |
| 选修课程 | 4 | 选修课程 | 13.5 |
| 2、学科基础平台课程 | 45 |
| 必修课程 | 35 | 4、实践教学模块 | 25 |
| 选修课程 | 10 | 5、素质拓展模块 | 7 |

\*通识教育选修课4学分包括：人文社科类1学分、艺术体育类1学分、自然科学类1学分、经济管理类 1学分

**VI. Credits required for graduation：176 credits**

|  |  |  |  |
| --- | --- | --- | --- |
| Type of courses | Academic credits | Type of courses | Academic credits |
| 1.Courses of general education | 46 | 3. Specialized Courses | 53 |
| Required courses | 42 | Core specialized courses | 39.5 |
| Elective courses | 4 | Elective courses | 13.5 |
| 2. General disciplinary courses  | 45 |
| Required Courses | 35 | 4.Practicum and Internship Courses | 25 |
| Elective Courses | 10 | 5.Quality Envelopment Courses | 7 |

**七、学分比例**

**VII. Ratio of Credits**

1. **必修选修学分比例**

**The proportion of compulsory elective credits**

|  |  |  |
| --- | --- | --- |
| 类别 | 学分 | 占总学分比例 |
| 必修 | 148.5 | 84.66% |
| 选修 | 27.5 | 15.63% |

1. **实践教学环节学分比例**

**The Proportion of credits in practice teaching**

|  |  |  |  |
| --- | --- | --- | --- |
| 实践教学环节 | 实验教学学分 | 22 | 30.68% |
| 实践教学模块 | 25 |
| 素质拓展模块 | 7 |

1. **毕业要求实现矩阵**

**VIII. Graduation Realization Matrix**

| **课程名称** | **采矿工程专业毕业要求** |
| --- | --- |
| （1） | （2） | （3） | （4） | （5） | （6） | （7） | （8） |
| 思想道德修养与法律基础 | √ |  |  |  |  | √ |  |  |
| 中国近现代史纲要 | √ |  |  |  |  |  |  |  |
| 马克思主义基本原理 | √ |  |  |  |  |  |  | √ |
| 毛泽东思想与中国特色社会主义理论体系概论 | √ |  |  |  |  |  |  |  |
| 大学计算机基础A |  |  | √ |  | √ |  |  |  |
| 大学英语 |  |  |  |  |  |  | √ |  |
| 体育 | √ |  |  |  |  |  |  |  |
| 大学生心理健康教育 | √ |  |  |  |  |  |  | √ |
| 职业生涯规划与就业指导 | √ |  |  |  |  |  |  | √ |
| 军事课 | √ |  |  |  |  |  |  |  |
| 公益劳动 | √ |  |  |  |  |  |  |  |
| 形势与政策 | √ |  |  |  |  | √ | √ |  |
| 工程制图B |  |  |  |  | √ |  |  |  |
| 理论力学 |  |  | √ | √ |  |  |  |  |
| 材料力学 |  |  | √ | √ |  |  |  |  |
| 概率论与数理统计 A |  | √ |  | √ |  |  |  |  |
| 线性代数 |  | √ |  |  |  |  |  |  |
| 高等数学A |  | √ | √ |  |  |  |  |  |
| 大学物理B |  | √ |  | √ |  |  |  |  |
| 大学物理实验B |  |  |  | √ |  |  |  |  |
| 计算机程序设计基础(C) |  |  |  |  | √ |  |  |  |
| 数据库技术及应用 |  |  |  |  | √ |  |  |  |
| 电工技术 |  | √ |  | √ |  |  |  |  |
| 电子技术 |  | √ |  | √ |  |  |  |  |
| 信息检索与利用 |  |  | √ |  |  |  | √ | √ |
| 地质学 |  | √ | √ |  | √ |  |  |  |
| 工程测量 |  | √ |  | √ |  |  |  |  |
| CAD技术 |  |  |  |  | √ |  |  |  |
| 技术经济与投资分析 |  | √ | √ |  | √ |  |  |  |
| 工程流体力学 |  | √ | √ | √ |  |  |  |  |
| 岩石力学 |  | √ | √ | √ |  |  |  |  |
| 井巷工程 |  | √ | √ |  |  |  |  |  |
| 地理信息系统原理 |  |  |  |  | √ | √ |  |  |
| 露天开采 |  | √ | √ |  |  |  | √ | √ |
| 地下开采 |  | √ | √ |  |  |  | √ | √ |
| 系统工程基础 |  | √ | √ | √ | √ |  |  |  |
| 矿床开采模型实验 |  |  | √ |  | √ |  |  |  |
| 采矿前沿专题 |  |  |  |  |  |  | √ | √ |
| 矿山爆破 | √ | √ | √ |  |  | √ |  |  |
| 岩土工程测试 |  | √ | √ | √ |  |  |  |  |
| 矿井通风与安全 |  | √ | √ | √ |  | √ |  |  |
| 矿山设计基础 |  | √ | √ |  |  | √ |  |  |
| 矿山安全与环保 | √ | √ |  |  |  | √ |  |  |
| 工程项目管理 |  | √ |  |  |  |  | √ |  |
| 弹性力学 |  | √ | √ |  |  |  |  |  |
| 三维数字建模基础 |  | √ |  |  | √ |  |  | √ |
| 矿山数字建模 |  | √ |  |  | √ |  |  |  |
| 房屋建筑学 |  | √ |  |  |  | √ |  |  |
| 总图运输 |  | √ | √ |  |  | √ |  |  |
| 结构力学 |  | √ | √ |  |  |  |  |  |
| 地下空间防排水 |  | √ | √ |  |  |  |  |  |
| 地下空间规划与设计 |  |  | √ |  | √ |  |  |  |
| 采掘机械 |  | √ | √ |  |  |  |  |  |
| 选矿概论 |  | √ | √ |  |  |  |  |  |
| 结构工程 |  | √ |  |  |  | √ |  |  |
| 环境影响评价 | √ |  |  |  |  | √ |  |  |
| 工程训练C |  |  |  | √ |  |  |  |  |
| 认识实习 | √ |  |  |  |  |  | √ | √ |
| 测量实习 |  |  |  | √ |  |  | √ |  |
| CAD课程设计 |  |  |  |  | √ |  |  |  |
| 井巷工程课程设计 |  |  |  |  | √ | √ |  |  |
| 露天开采课程设计 |  |  | √ |  | √ | √ |  |  |
| 矿山爆破课程设计 |  |  | √ |  |  | √ |  |  |
| 矿井通风与安全课程设计 |  |  |  | √ |  | √ |  |  |
| 地下开采课程设计 |  |  | √ |  | √ | √ |  |  |
| 生产实习 | √ |  |  |  |  |  | √ | √ |
| 毕业实习 | √ |  |  |  |  |  | √ | √ |
| 毕业设计(论文) |  |  | √ | √ | √ | √ | √ | √ |

**九、课程修读进程表**



**十、教学环节设置及学分分布表**

X.Offered Course and Distribution of Academic Credits

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **课 程** **类 型** | **课程****性质** | **课 程****编 码** | **课程名称** | **学分** | **合计** | **课内学时** | **实践****学时** | **学期** | **先修课程/备注** |
| **讲课** | **实验** | **上机** |
| 平台 | 通识教育平台课程 | 必修 | 5105001 | 思想道德修养与法律基础Moral Cultivation and Basics of Law | 3 | 48 | 42 | 0 | 0 | 6 | 1 |  |
| 5106001 | 形势与政策World Affairs and State Policy | 2 | 64 | 64 | 0 | 0 | 0 | 1-8 | 分散进行 |
| 5101001 | 毛泽东思想与中国特色社会主义理论体系概论Theoretical system of socialism with Chinese characteristics | 5 | 80 | 64 | 0 | 0 | 16 | 4 |  |
| 5103001 | 中国近现代史纲要An Outline of Modern and Contemporary History of China | 3 | 48 | 42 | 0 | 0 | 6 | 2 |  |
| 5102001 | 马克思主义基本原理Fundamentals of Marxism | 3 | 48 | 44 | 0 | 0 | 4 | 3 |  |
| 1303601 | 大学计算机基础AIntroduction to Computer Science A | 3 | 48 | 30 | 0 | 18 | 0 | 1 |  |
| 1401840 | 大学英语（一）College English (I) | 3 | 48 | 48 | 0 | 0 | 0 | 1 |  |
| 1401841 | 大学英语（二）College English (II) | 3 | 48 | 48 | 0 | 0 | 0 | 2 |  |
| 1401842 | 大学英语（三）College English (III) | 3 | 48 | 48 | 0 | 0 | 0 | 3 |  |
| 1401843 | 大学英语（四）College English (IV) | 3 | 48 | 48 | 0 | 0 | 0 | 4 |  |
| 1501882 | 体育（一）Physical Education(I) | 1 | 26 | 26 | 0 | 0 | 0 | 1 |  |
| 1501883 | 体育（二）Physical Education(II) | 1 | 34 | 34 | 0 | 0 | 0 | 2 |  |
| 1501884 | 体育（三）Physical Education(III) | 1 | 34 | 34 | 0 | 0 | 0 | 3 |  |
| 1501885 | 体育（四）Physical Education(IV) | 1 | 34 | 34 | 0 | 0 | 0 | 4 |  |
| 2501006 | 军事课Military Course | 4 | 148 | 36 | 0 | 0 | 112 | 1,2 |  |
| 2501002 | 公益劳动Community Service | 1 | 16 | 0 | 0 | 0 | 16 | 4 | 分散进行 |
| 2501005 | 职业生涯规划与就业创业指导Career Planning and Employment Entrepreneurial Guidance | 1 | 16 | 16 | 0 | 0 | 0 | 2 |  |
| 2501004 | 大学生心理健康教育Mental Health Education | 1 | 16 | 16 | 0 | 0 | 0 | 1 |  |
| 选修 |  | 人文社科类1学分Humanity and Social Science 1Academic Credits  |
|  | 经济管理类1学分Economic and Management 1Academic Credits |
|  | 自然科学类1学分Natural Science 1 Academic Credit（“Introduction to Metallurgy” is required） |
|  | 艺术体育类1学分Artistic and Sports 1Academic Credits |
| 学科基础平台课程 | 必修 | 0302609 | 工程制图BEngineering Graphics B | 3 | 48 | 48  | 0  | 0 | 0  | 1  |  |
| 0702601  | 高等数学A（一） Advanced Mathematics A(I) | 5  | 80  | 80  | 0  | 0  | 0  | 1  |  |
| 0702602  | 高等数学A（二） Advanced Mathematics A(II) | 6.5  | 104  | 104  | 0  | 0  | 0  | 2  |  |
| 0703605  | 大学物理B（一） College Physics B(I) | 2.5 | 40  | 40 | 0  | 0  | 0  | 2  |  |
| 0701017 | 理论力学Theoretical Mechanics  | 4.5  | 72 | 72  | 0 | 0  | 0  | 2 |  |
| 0703606  | 大学物理B（二） College Physics B(II) | 2  | 32  | 32  | 0  | 0  | 0  | 3  |  |
| 0703607  | 大学物理实验B Experiments of College Physics B | 1.5  | 24  | 0  | 24  | 0  | 0  | 3  |  |
| 0702026  | 线性代数 Linear Algebra | 2  | 32  | 32  | 0  | 0  | 0  | 3  |  |
| 0701007 | 材料力学Material Mechanics  | 5 | 80 | 72 | 8 | 0 | 0 | 3 |  |
| 0702303 | 概率论与数理统计 AProbability and Mathematical Statistics A | 3  | 48  | 48  | 0  | 0  | 0  | 4  |  |
| 选修 | 1303604  | 计算机程序设计基础（C） Basics of Computer Programming(C) | 4  | 64  | 40  | 0  | 24  | 0  | 2  |  |
| 1601004  | 信息检索与利用Information Retrieval  | 1  | 16  | 16  | 0  | 0  | 0  | 2  |  |
| 1303605  | 数据库技术及应用Database Technology and Applications  | 3  | 48  | 24  | 0  | 24 | 0  | 3  |  |
| 0401001  | 电工技术 Electrotechnics | 2  | 32  | 24  | 8  | 0  | 0  | 3  |  |
| 0401004  | 电子技术 Electronic Technology | 3  | 48  | 36  | 12  | 0  | 0  | 4  |  |
| 模块 | 专业课程模块 | 专业核心课程 | 必修 | 0101031  | 地质学 Geology | 3  | 48  | 40  | 0  | 0  | 8 | 4  |  |
| 0101015  | 工程测量 Engineering Surveying | 3  | 48  | 40 | 0  | 0  | 8 | 4  |  |
| 0108001  | CAD技术 CAD | 2  | 32  | 16  | 0  | 16  | 0  | 4  |  |
| 0108025  | 技术经济与投资分析 Technical Economy and Investment Analysis | 2 | 32  | 32  | 0  | 0  | 0  | 4  |  |
| 0101044 | 岩石力学Rock Mechanics | 3  | 48  | 42  | 6  | 0  | 0  | 5  |  |
| 0701076  | 矿山爆破 Mining Blasting | 2.5  | 40  | 36  | 4  | 0  | 0  | 5  |  |
| 0101032  | 井巷工程Shafting and Drifting Engineering | 2.5  | 40  | 40  | 0  | 0  | 0  | 5  |  |
| 0109002  | 地理信息系统原理 Principles of Geographic Information System | 2.5  | 40  | 24  | 0  | 16 | 0  | 5  |  |
| 0101033  | 露天开采Surface Mining | 2.5 | 40 | 40 | 0  | 0  | 0  | 6  |  |
| 0101034  | 地下开采Underground Mining  | 3 | 48 | 48 | 0  | 0  | 0  | 6  |  |
| 0101077 | 系统工程基础System Engineering Foundation | 3  | 48  | 48  | 0  | 0  | 0  | 6  |  |
| 0101045  | 矿床开采模型实验 Deposit Mining Model Test | 1 | 20  | 0  | 20  | 0  | 0  | 6  |  |
| 0105077  | 矿井通风与安全 Mine Ventilation and Safety | 2.5 | 40 | 34 | 6  | 0  | 0  | 6  |  |
| 0101072 | 采矿前沿专题Mining Frontier Theme | 1 | 16 | 16 | 0 | 0 | 0 | 7 | 综合研究讨论课 |
| 0101036  | 矿山设计基础 Mine Design Basis | 2  | 32  | 32  | 0  | 0  | 0  | 7  |  |
| 0101074 | 采掘机械Mining Machinery | 2 | 32 | 32 | 0 | 0 | 0 | 7 |  |
|  0105161 | 矿山安全与环保Mine Safety and Environmental Protection | 2  | 32  | 32  | 0  | 0  | 0  | 7  |  |
| 专业任选课程 | 选修 | 0101068  | 工程流体力学 Engineering Fluid Mechanics | 2 | 32  | 32 | 0  | 0  | 0  | 4  |  |
| 0109017 | 工程项目管理 Project Management | 2.5  | 40  | 40  | 0  | 0  | 0  | 5  | 本专业限选 |
| 0101067  | 弹性力学 Elastic Mechanics | 2.5  | 40  | 40  | 0  | 0  | 0  | 5  |  |
| 0108019  | 房屋建筑学Building Architecture  | 3  | 48  | 48  | 0  | 0  | 0  | 5  |  |
| 0109009 | 三维数字建模基础3D Digital Modeling Foundation | 2.5 | 40 | 24 | 0  | 16 | 0  | 6 |  |
| 0101047 | 总图运输General Layout and Transportation | 2.5  | 40  | 34 | 0 | 0 | 6 | 6  |  |
| 0108030  | 结构力学 Structural Mechanics | 3  | 48  | 48  | 0  | 0  | 0  | 6  |  |
| 0101048 | 地下空间防排水Underground Waterproof and Drainage | 2 | 32 | 32 | 0  | 0  | 0  | 6  |  |
| 0101069  | 岩土工程测试 Geotechnical Testing | 2  | 32  | 24  | 8  | 0  | 0  | 6  |  |
| 0109018 | 矿山数字建模Mine Digital Modeling | 2.5 | 40 | 20 | 0 | 20 | 0 | 7 |  |
| 0101049 | 地下空间规划与设计Underground Planning and Design | 2  | 32  | 32  | 0  | 0  | 0  | 7  |  |
| 0107047  | 选矿概论Beneficiation Overview  | 1.5  | 24  | 24  | 0  | 0  | 0  | 7  |  |
| 0108029  | 结构工程Structure Engineering | 3  | 48  | 48  | 0  | 0  | 0  | 7  |  |
| 0105050  | 环境影响评价 Environmental Impact Assessment | 2.5  | 40  | 34 | 0  | 6 | 0  | 7  |  |
| 实践教学模块 | 必修 | 1701009 | 工程训练C Engineering Training C | 1 | 32 | 0 | 0 | 0 | 32 | 3 |  |
| 0101038  | 认识实习 Cognition Practice | 2 | 2周  | 0  | 0  | 0  | 2周  | 5  |   |
| 0108003  | 测量实习 Surveying Practice | 2 | 2周  | 0  | 0  | 0  | 2周  | 5  | 分散进行 |
| 0108002  | CAD课程设计CAD Course Design  | 1 | 1周  | 0  | 0  | 0  | 1周  | 5  | 分散进行 |
| 0101039  | 井巷工程课程设计Shafting and Drifting Engineering Course Design  | 1 | 2周  | 0  | 0  | 0  | 2周  | 5  |  |
| 0101095 | 矿山爆破课程设计Mining Blasting Course Design | 1 | 1周  | 0  | 0  | 0  | 1周  | 6  |  |
| 0101041  | 露天开采课程设计 Surface Mining Course Design | 1 | 2周  | 0  | 0  | 0  | 2周  | 6 | 1周集中1周分散 |
| 0101073 | 矿井通风与安全课程设计Mine Ventilation and Safety Course Design | 1 | 1周  | 0  | 0  | 0  | 1周  | 6  |  |
| 0101042  | 地下开采课程设计Underground Mining Course Design  | 1 | 2周  | 0  | 0  | 0  | 2周  | 7  |  |
| 0101096  | 生产实习 Production Practice | 3 | 3周  | 0  | 0  | 0  | 3周  | 7  |  |
| 0101097  | 毕业实习 Pre-graduation Practice | 3 | 3周  | 0  | 0  | 0  | 3周  | 8  |  |
| 0101098  | 毕业设计(论文) Graduation Design (Thesis) | 8 | 14周  | 0  | 0  | 0  | 14周  | 8  |  |
| 素质拓展模块 | 必修 | 创新创业教育 | 创新创业课程1学分（创新创业课程群）Innovation Course 1 Academic Credits |
| 创新创业实践2学分Innovation Practices 1 Academic Credits |
| 第二课程 | 第二课堂3学分Second Classroom 3 Academic Credits |
| 心理健康 | 心理健康教育实践1学分Practices of Mental Health Education 1 Academic Credits |

**十一、教学进程安排表**

|  |  |
| --- | --- |
| 学期 | 周 次 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 1 | ♀ | ♀ | ⊙/★ | ★ | ★ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | ● |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 2 | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | ● |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 3 | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | ∕ | ● |  |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 4 | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | ●　 |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 5 | ╬ | ╬ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | × | × | ● |  |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 6 | × | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | × | × | ●　 |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| 7 | ∕ | ∕ | ∕ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | □ | × | × | ● |  |  |  |  |  |  |  |  |  |
| 8 | ＃ | ＃ | ＃ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ┼ | √ |  |  |  |  |  |  |  |  |  |
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符号说明：

1、♀ 入学前机动 2、⊙ 入学教育 3、★ 军训 4、□理论教学 5、√ 机动时间 6、●考试 7、×课程设计 8、Ε专业实验或实习 9、—假期

10、▲ 学年论文 11、Ｇ技能训练 12、※ 毕业设计（论文） 13、┼毕业鉴定 14、＃毕业实习 15、Ｓ写生 16、∕ 生产实习（工程训练）

17、Τ教材教法 18、☆ 教育实习 19、○技能教育实习 20、◎ 专题讲座 21、◆ 公益劳动 22、△ 社会调查 23、╬ 认识实习