

# 山东科技大学留学生学术硕士研究生培养方案

( 学科门类: 工学 一级学科代码: 0802 一级学科名称: 机械工程 )

( 二级学科代码: 二级学科名称: )

## 一、学科简介

机械工程是以相关自然科学理论为基础, 结合生产实践的需要, 研究各类机械在设计、制造、运行和服务等全生命周期中的理论、技术及其应用的工程学科, 是为社会发展提供各类机械装备和生产制造技术以创造物质财富和提高社会文明水准的重要工程领域。机械工程学科是山东科技大学办学历史上最早设立的学科之一, 2016年被列入山东省一流学科首批建设名单, 而且是建设名单中唯一的机械工程学科。该学科具有良好的教学、实验条件和实习、创新基地等学科平台, 拥有一支实力雄厚、结构合理的学术队伍, 已形成虚拟样机与并行设计、特种机器人、矿山机电一体化、运输与提升、高效加工技术等特色突出、优势明显的研究方向, 这些研究方向具有较高的学术水平且在国内外具有一定影响力, 已取得一系列高水平科研成果。

Mechanical engineering is an engineering subject which studies the theory, technology and application of various types of machinery in the whole life cycle of design, manufacture, operation and service based on the relevant natural science theories and the needs of production practice. It is an important engineering field to provide all kinds of mechanical equipment and production manufacturing technology for social development to create material wealth and improve the level of social civilization. Mechanical engineering is one of the earliest disciplines established in the history of Shandong University of Science and Technology. In 2016, it was first placed on the list of first-class disciplines in Shandong Province, and it is the only mechanical engineering discipline in the list. It has good teaching, experimental conditions, internship, innovation bases and other platforms. It has a strong and well-structured academic team. Some directions of the discipline, such as the virtual prototype and parallel design, special-purpose robots, mine electromechanical integration, belt conveyor and hoist, and efficient processing technology, have formed with outstanding features and obvious advantages. These research directions have a high academic level and have a certain influence at home and abroad, and have achieved a series of high-level scientific research achievements.

## 二、培养目标

培养对中国的政治、经济、文化、历史和社会有较为深刻的了解, 掌握本学科的基本理论、基本知识和基本技能, 具备较强的批判思维和创新的能力, 具有一定国际视野, 能从事科学研究工作或者独立承担专门技术或管理工作, 具备进一步在学术领域深造的知识结构和学术能力, 能够参与并促进中国与所在国之间友好合作关系的高素质人才。

To cultivate high-quality talents who can deeply understand China's politics, economy, culture, history and society, master the basic theories, basic knowledge and basic skills of the discipline, have good critical thinking and innovative abilities, have a good international vision, engage in scientific research or undertake specialized technical or management work independently, have the knowledge structure and academic ability for further study in the academic field, participate in and promote friendly and cooperative relations between China and their host countries.

### 三、研究方向及简介

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1. 机械制造及其自动化(080201)

2. 机械电子工程(080202)

3. 机械设计及理论(080203)

4. 矿山机电技术与装备 (99J5)

1. Mechanical Manufacturing and Automation (080201)

2. Mechatronic Engineering (080202)

3. Mechanical Design and Theory (080203)

4. Mine Electromechanical Technology and Equipment (99J5)

### 四、学制与学习年限

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本学科硕士研究生培养年限为3年，其中课程学习时间为1年。

The duration of study for graduates of the discipline is 3 years. The duration of course study is 1 year.

### 五、培养方式

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### 六、课程设置与学分要求

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硕士生课程学习实行学分制，在学期间应修满22学分，其中必修环节3学分。

The total credits should be no less than 22 points, where the required credit points for course study are 19 points, and the required credit points for compulsories are 3 points.

#### 课程设置与学分要求1

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#### 课程设置与学分要求2

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### 七、其他培养环节

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### 八、学术论文发表

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### 九、学位论文

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具体要求参照山东科技大学研究生学位论文的有关规定。

Implement in accordance with the related regulations for master degree thesis of Shandong University

of Science and Technology.

## 十、经典书目

### 课程设置与考试要求

| 课程类别    | 课程编号    | 课程名称  | 学分 | 学时 | 学期 | 分组情况 |
|---------|---------|---|----|----|----|------|
| A公共基础课程 | 9994001 | 基础汉语 (1)  | 2  | 64 | 1  |      |
|         | 9994002 | 基础汉语 (2)  | 2  | 64 | 2  |      |
|         | 9994003 | 中国概况  | 2  | 32 | 1  |      |
|         | 9994004 | 现代数学基础  | 3  | 48 | 1  |      |
| B专业基础课程 | 0054012 | "弹性力学与有限元 Elasticity and Finite Element"        | 2  | 32 | 1  |      |
|         | 0054013 | "现代设计方法 Modern Design Method"                   | 2  | 32 | 2  |      |
| D专业选修课程 | 0054014 | "机器人学 Robotics"                                 | 2  | 32 | 1  |      |
|         | 0054015 | "高等流体力学 Advanced Fluid Mechanics"               | 2  | 32 | 2  |      |
|         | 0054016 | "导师自定课 A Course Chosen by the Supervisor"       | 2  | 32 | 1  |      |
| F必修环节   | 0054017 | "文献综述与开题报告 Literature Review & Thesis Proposal" | 1  | 16 | 3  |      |
|         | 0054018 | "学术活动 Academic Activities"                      | 1  | 16 | 4  |      |
|         | 0054019 | "实践活动 Professional Practice"                    | 1  | 16 | 4  |      |

### 培养环节

| 培养环节代码 | 培养环节名称 | 培养环节类型 | 培养环节学分 | 备注 |
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