

# 机械工程（全英语） 留学生本科培养方案

（专业代码：08020199 学制：4年 学位：工学学士）

## 一、培养目标

本专业培养适应现代机械工程发展需要，知华、友华、能够参与国际交流与合作，具备宽广国际视野和开拓创新意识、良好的机械设计制造理论基础和实践操作技能，毕业后成为能进行机械设计制造技术相关工作的技术人才。

## 二、毕业要求及实现矩阵

毕业生应获得以下几方面的知识和能力：

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. 掌握本专业所必需的基本理论、基本技能和专业知识，具有应用基础理论和基础知识进行机械设计和制造方面的初步能力。

3. 具有综合利用所学知识从事机械产品开发、制造、使用与维护等工程实践的能力、初步的科学研究能力和组织管理能力。

4. 具有基本的实验测试、运算和表达能力，掌握文献检索和其它获取科技信息的方法。

5. 具有基本的团队协作能力和工程意识、创新意识和终生学习意识，具有一定的国际视野和跨文化交流能力。

毕业要求指标点分解与实现矩阵

毕业要求	指标点	课程
1.具有数学、物理、化学和力学的扎实基础，基本掌握汉语，能够较顺利阅读本专业的中文书刊、具有听、说、读、写、译的技能。	1.1 能系统理解数学、自然科学、计算、工程科学理论基础并用于机械工程问题的表述	大学物理(2-1)/(2-2) 大学物理实验(2-1)/(2-2) 高等数学(2-1)/(2-2) 理论力学 材料力学
	1.2 具备基础汉语能力，能够借助工具阅读和理解中文专业资料	初级汉语精读（2-1） / （2-2） 初级汉语口语（2-1） 中级汉语（2-1） / （2-2） 高级汉语（2-1） / （2-2）

毕业要求	指标点	课程
		中国概况 (2-1) / (2-2)
2.掌握本专业所必需的基本理论、基本技能和专业知识,具有应用基础理论和基础知识进行机械设计和制造方面的初步能力。	2.1 掌握本专业所必需的基本理论、基本技能和专业知识	电工电子学 (一) / (二) 程序设计 工程制图 大学计算机
	2.2 具有应用基础理论和基础知识进行机械设计和制造方面的初步能力。	机械原理 机械设计 控制工程基础 机械设计课程设计
3.具有综合利用所学知识从事机械产品开发、制造、使用与维护等工程实践的能力、初步的科学研究能力和组织管理能力。	3.1 具有综合利用所学知识从事机械产品开发、制造、使用与维护等工程实践的能力。	互换性与测量技术基础 机械制造工程基础 控制工程基础 机械设计课程设计
	3.2 掌握初步的科学研究能力和组织管理能力。	油气装备工程 机电信息检测与处理技术 机电系统设计 专业综合设计
4.具有基本的实验测试、运算和表达能力,掌握文献检索和其它获取科技信息的方法。	4.1 具有基本的实验测试、运算和表达能力	金工实习 工程测绘 电工电子学实习 大学物理实验(2-1)/(2-2) 互换性与测量技术基础
	4.2 掌握文献检索和其它获取科技信息的方法。	机电系统设计 专业综合设计 毕业设计 机械设计课程设计
5.具有基本的团队协作能力和工程意识、创新意识和终生学习意识,具有一定的国际视野和跨文化交流能力。	5.1 具有基本的团队协作能力和工程意识、创新意识和终生学习意识	道德与法律 专业综合设计 机电一体化技术 毕业设计
	5.2 具有一定的国际视野和跨文化交流能力。	初级汉语精读 (2-1) / (2-2) 初级汉语口语 (2-1) 中级汉语 (2-1) / (2-2) 高级汉语 (2-1) / (2-2) 中国概况 (2-1) / (2-2) 毕业设计

### 三、主干学科、专业核心课程

主干学科：机械工程

专业核心课程：理论力学、材料力学、机械原理、机械设计、机械制造工程基础、控制工程基础、机电信息检测与处理技术、油气装备工程、机电系统设计

### 四、特色课程

(一) 专业特色课程

专创融合课：机械设计

项目式课程：互换性与测量技术基础, 专业综合设计

“人工智能+”课程：机电系统设计

产教融合课：毕业设计

校企共建课程： 毕业设计

(二) 在地国际化课程

全英语课程： 机电系统设计

双语课程： 机电信息检测与处理技术

(三) 其他课程

劳动教育实践课程： 电工电子学实习

课程思政示范课程： 机电信息检测与处理技术, 机械制造工程基础

## 五、学分修读要求

1. 本专业学生需修满教学计划要求的必修及选修课程，并取得辅助培养计划要求的10学分，且通过HSK4级，方可毕业。

2. 符合条件，授予工学学士学位。

3. 本专业学生应使用英语撰写毕业论文，但需有汉语论文摘要。

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	39.5	27.5%	632	24	656						
	通识选修课程	10	7.0%									
专业基础课	大类基础课程	20.5	14.3%	296	48	344						
	专业必修课程	57.5	34.8%	524	62+24周	586+24周						
	专业选修课程	12	8.4%									
自主发展	跨学科课程	4	2.8%									
	辅助学分	10	10（不计入毕业总学分）									
毕业总学分（总学时）		143.5	100%	1740	134+24周	1874+24周						
实践教学（含课内实验）		25.5	17.8%	——								
集中性实践教学环节		18	12.5%	——								
学期修读学分建议	学期	1	2	S1	3	4	S2	5	6	S3	7	8
	必修	18	21.5	1	17	17.5	2	10.5	13	3	4	10
	通识选修	0	2	0	2	4	0	2	0	0	0	0
	专业选修	0	0	0	2	0	0	4	4	0	2	0
	跨学科选修	0	0	0	0	0	0	0	2	0	2	0
	小计	18	23.5	1	21	21.5	2	16.5	19	3	8	10

## 六、课程设置

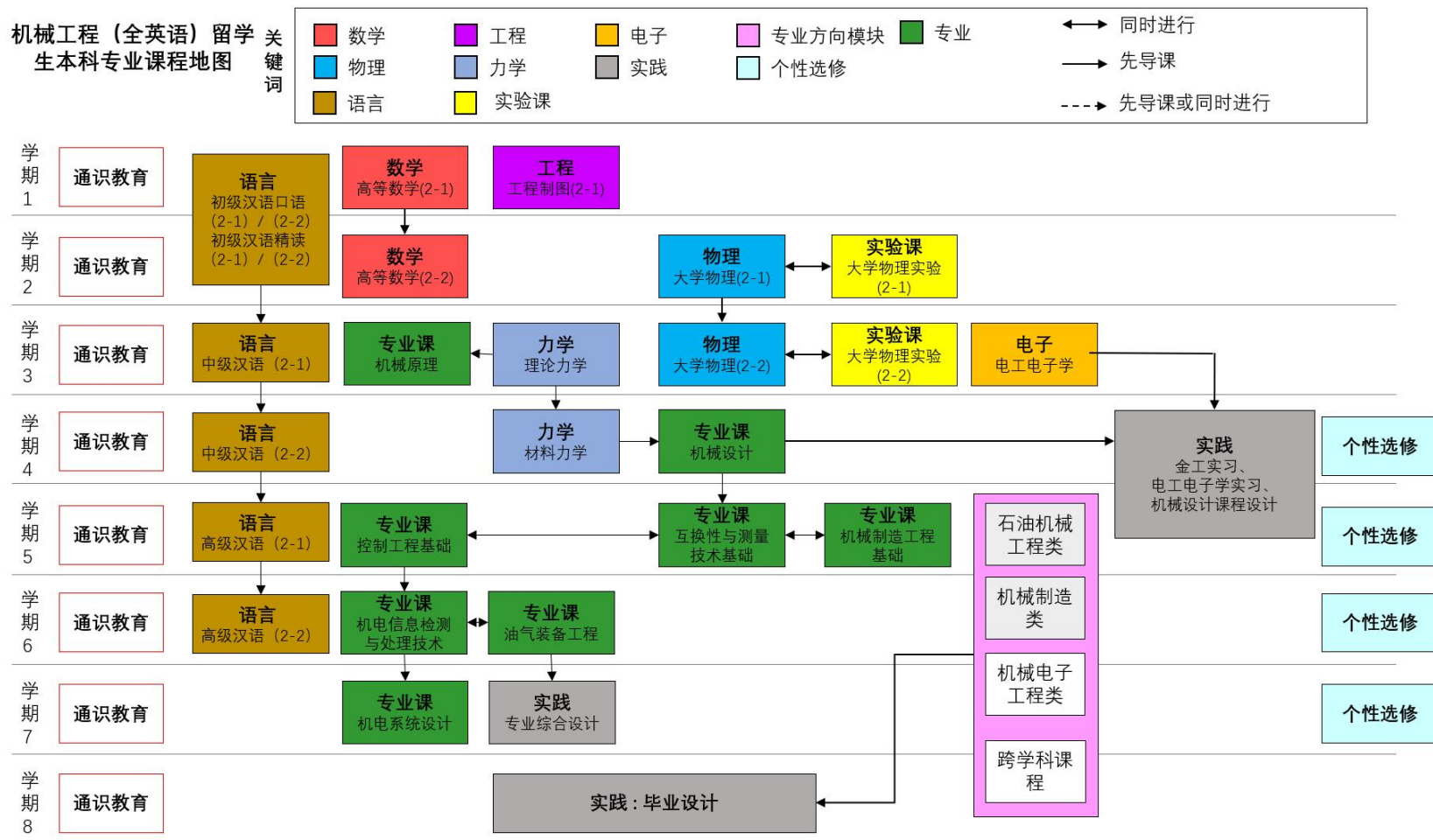
(说明: 基础课程按照课程设置方案确定课程名称、学分、开课学期)

课程类别	课程模块	课程编码 (初稿只需填写 开课单位代码)	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 Moral Education and Jurisprudence Fundamentals	1.0	16	16				40	1		
		2094199	中国概况(2-1) Survey of China (2-1)	3.0	48	48				48	3		
		2094299	中国概况(2-2) Survey of China (2-2)	3.0	48	48				48	4		
	基础素养课程	2091199	初级汉语口语(2-1) Primary Oral Chinese (2-1)	4.0	64	64				64	1		
		2092199	初级汉语精读(2-1) Primary Chinese reading (2-1)	4.0	64	64				64	1		
		0711399	大学计算机 Computer technology	1.5	24	24					2		
		2092299	初级汉语精读(2-2) Primary Chinese reading (2-2)	4.0	64	64				64	2		
		0711299	程序设计 Program Design Language	3.0	48	48		24			2		
		2095199	中级汉语(2-1) Intermediate Chinese (2-1)	4.0	64	64				64	3		
		2095299	中级汉语(2-2) Intermediate Chinese (2-2)	4.0	64	64				64	4		
		2096199	高级汉语(2-1) Advanced Chinese (2-1)	4.0	64	64				64	5		
	2096299	高级汉语(2-2) Advanced Chinese (2-2)	4.0	64	64				64	6			
	通识选修课程	至少修读 10 学分通识教育选修课程, 其中通识教育核心课程不少于 4 学分(应分布于不同模块, 且全球视野与思维表达模块不少于 2 学分); 非艺术类学生修读艺术类课程不少于 2 个学分。			10.0							1-8	
	专业教育	大类基础课程	0911199	高等数学(2-1) Advanced Math (2-1)	6.0	96	96				96	1	
			0911299	高等数学(2-2) Advanced Math (2-2)	5.0	80	80				80	2	
0931199			大学物理(2-1) Physics(2-1)	4.0	64	64					2		
0941199			大学物理实验(2-1) Physics Experiment (2-1)	1.0	24		24				2		
0931299			大学物理(2-2) Physics(2-2)	3.5	56	56					3		
0941299			大学物理实验(2-2) Physics Experiment (2-2)	1.0	24		24				3		
专业必修课程		2010199	金工实习 Metalworking Practice	2.0	2.0周							2	
		0434199	工程制图 Engineering Drawing	4.0	64	64						2	
		0494499	工程测绘 Engineering Mapping	1.0	1周							S1	
		0540399	电工电子学(一) Electrical Engineering and Electronics I	2.5	40	30	10					3	
		0641199	理论力学 Theory Mechanic	3.0	48	48						3	
0540499	电工电子学(二) Electrical Engineering and Electronics II	2.5	40	30	10					4			

课程类别	课程模块	课程编码 (初稿只需填写 开课单位代码)	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			
		0641299	材料力学 Material Mechanics	4.0	64	60	4				4	
		0435199	机械原理 Mechanical Principles	4.0	64	64					4	
		0594199	电工电子学实习 Electronic and electrical engineering practice	2.0	2周						S 2	
		0419599	机械制造工程基础 Fundamentals of Mechanical Manufacturing Engineering	2.5	42	38	4				5	
		0417799	互换性与测量技术基础 Interchangeability and Measurement Technology Foundation	2.0	36	24	12				5	
		0413599	控制工程基础 Control Engineering Foundation	2.0	34	28	6				5	
		0435299	机械设计 Mechanical Design	4.0	64	64					6	
		MEE122411026	油气装备工程 Oil and Gas Equipment Engineering	3.0	50	46	4				6	
		MEE110911020	机电信息检测与处理技术 Electromechanical Information Detection and Processing Technology	2.0	34	28	6				6	
		0494699	机械设计课程设计 Course Design of Mechanical Design	3.0	3周						S 3	
		0413499	机电系统设计 Electromechanical System Design	2.0	32						7	
		0419899	机电一体化技术 Mechatronics Technology	2.0	34		6				7	
		MEE113611020	专业综合设计 Professional Integrated Design	2	2周						8	
		0499999	毕业设计 Graduation Design	8.0	14周						8	
	专业选修课程	MEE310621020	机械 CAD 基础 Foundation of Mechanical Computer Aided Design	2	32	32				32	3	
		MEE329321020	先进成图技术 Advanced drawing technology	2	32	32				32	3	
		MEE323921020	智能工程 Intelligent engineering	2	32	32				32	5	
		PLC310721020	实验应力分析 Experimental Stress Analysis	2	32	32				32	5	
		MEE527821020	海洋工程结构可靠性 Reliability of Ocean Engineering Structures	2	32	32				32	6	
		MEE210921020	机械优化设计 Mechanical Optimization Design	2	32	32				32	6	
		PLC310821020	有限元法 Finite Element Method	2	32	32				32	6	
		SCC252721020	最优化原理 Optimization Principle	2	32	32				32	6	
		MEE211221020	人机工程学 Ergonomics	2	32	32				32	7	
			修读说明	修读说明：至少修读 12 学分专业选修课程。								

课程类别	课程模块	课程编码 (初稿只需填写 开课单位代码)	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			
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 (如本专业有修读建议可予以写明)		≥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“辅助学分成绩单”实施细则》		≥10							1-8	

## 七、课程体系拓扑图



# **Undergraduate Training Program for International Students Mechanical Engineering**

**(Major Code: 08020199 Length of Study: 4 Years Degree Awarded: Bachelor of Engineering)**

## **I. Educational Objectives**

This program cultivates technical talents who meet the development needs of modern mechanical engineering, have an understanding of China and goodwill towards it, possess a broad international perspective and a pioneering, innovative spirit, as well as a solid theoretical foundation and practical skills in mechanical design and manufacturing. Upon graduation, they are capable of engaging in work related to mechanical design and manufacturing technology.

## **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. A solid foundation in mathematics, physics, chemistry, and mechanics; a basic command of the Chinese language, enabling them to read Chinese books and periodicals in the field with relative ease, and possessing skills in listening, speaking, reading, writing, and translation.

3. Mastery of the essential theories, fundamental skills, and specialized knowledge required for the program, along with a preliminary ability to apply basic theories and fundamental knowledge in mechanical design and manufacturing.

4. The ability to comprehensively utilize acquired knowledge to engage in engineering practices such as mechanical product development, manufacturing, use, and maintenance; a

preliminary capacity for scientific research; and organizational and management skills.

5. Basic competencies in experimental testing, computation, and expression; proficiency in literature retrieval and other methods of accessing scientific and technical information.

6. Fundamental teamwork skills, along with an engineering mindset, a sense of innovation, a commitment to lifelong learning, as well as a certain international perspective and cross-cultural communication ability.

**Graduation Requirement Indicators and Achievement Matrix**

<b>Graduation Requirements</b>	<b>Performance Indicators</b>	<b>Courses</b>
1. Solid foundation in math, physics, chemistry, and mechanics; a basic command of the Chinese language, enabling them to read Chinese books and periodicals in the field with relative ease, and possessing skills in listening, speaking, reading, writing, and translation.	1.1 A solid foundation in mathematics, physics, chemistry, and mechanics.	Physics (2-1)/(2-2) Physics Experiment (2-1)/(2-2) Advanced Math (2-1)/(2-2) Theory Mechanic Material Mechanics
	1.2 A basic command of the Chinese language, enabling them to read Chinese books and periodicals in the field with relative ease, and possessing skills in listening, speaking, reading, writing, and translation.	Primary Chinese reading ( 2-1 ) / ( 2-2 ) Primary Oral Chinese (2-1) Intermediate Chinese (2-1) / (2-2) Advanced Chinese (2-1) / (2-2) Survey of China (2-1) / (2-2)
2. Mastery of the essential theories, fundamental skills, and specialized knowledge required for the program, along with a preliminary ability to apply basic theories and fundamental knowledge in mechanical design and manufacturing.	2.1 Mastery of the essential theories, fundamental skills, and specialized knowledge required for the program.	Electrical Engineering and Electronics Program Design Language Engineering Drawing Computer technology
	2.2 Preliminary ability to apply basic theories and fundamental knowledge in mechanical design and manufacturing.	Mechanical Principles Mechanical Design Control Engineering Foundation Course Design of Mechanical Design
3. The ability to comprehensively utilize acquired knowledge to engage in engineering practices such as mechanical product development, manufacturing, use, and maintenance; a preliminary capacity for scientific research; and organizational and management skills.	3.1 Comprehensively utilize acquired knowledge to engage in engineering practices such as mechanical product development, manufacturing, use, and maintenance.	Interchangeability and Measurement Technology Foundation Fundamentals of Mechanical Manufacturing Engineering Control Engineering Foundation Course Design of Mechanical Design
	3.2 Preliminary capacity for scientific research; and organizational and management skills.	Oil and Gas Equipment Engineering Electromechanical Information Detection and Processing Technology Electromechanical System Design Professional Integrated Design
4. Basic competencies in experimental testing, computation, and expression; proficiency in literature retrieval and other methods of accessing scientific and technical information.	4.1 Basic competencies in experimental testing, computation, and expression.	Metalworking Practice Engineering Mapping Electronic and electrical engineering practice Physics Experiment (2-1)/(2-2) Interchangeability and Measurement Technology Foundation
	4.2 Proficiency in literature retrieval and other methods of accessing scientific and technical information.	Electromechanical System Design Professional Integrated Design Graduation Design Course Design of Mechanical Design

<b>Graduation Requirements</b>	<b>Performance Indicators</b>	<b>Courses</b>
5. Fundamental teamwork skills, along with an engineering mindset, a sense of innovation, a commitment to lifelong learning, as well as a certain international perspective and cross-cultural communication ability.	5.1 Fundamental teamwork skills, along with an engineering mindset, a sense of innovation, a commitment to lifelong learning.	Moral Education and Jurisprudence Fundamentals Professional Integrated Design Mechatronics Technology Graduation Design
	5.2 Certain international perspective and cross-cultural communication ability.	Primary Chinese reading (2-1) / (2-2) Primary Oral Chinese (2-1) Intermediate Chinese (2-1) / (2-2) Advanced Chinese (2-1) / (2-2) Survey of China (2-1) / (2-2) Graduation Design

### **III. Main Disciplines and Core Courses**

**Main Discipline: Mechanical Design**

**Core Courses: Mechanical Principles, Mechanical Design, Control Engineering Foundation, Interchangeability and Measurement Technology Foundation, Fundamentals of Mechanical Manufacturing Engineering, Oil and Gas Equipment Engineering, Electromechanical Information Detection and Processing Technology, Electromechanical System Design**

### **IV. Featured Courses**

1. Specialized Featured Courses

**Innovation and Entrepreneurship Integrated Course: Interchangeability and Measurement Technology Foundation,**

**Project-Based Courses: Professional Integrated Design**

**“Artificial Intelligence +” Courses: Electromechanical System Design**

**Industry-Education Integration Course: Graduation Design**

**University-Enterprise Co-developed Course: Graduation Design**

2. Localized International Courses

**Fully English-Taught Course: Electromechanical System Design**

**Bilingual Courses: Electromechanical Information Detection and Processing Technology**

3. Other Courses

**Labor Education Practice Courses: Electronic and electrical engineering practice**

**Model Courses for Curriculum-Based Ideological and Political Education:**

## Electromechanical Information Detection and Processing Technology, Fundamentals of Mechanical Manufacturing Engineering

### V. Credit Requirements

1. To graduate, students in this program are required to complete all compulsory and elective courses as stipulated in the teaching plan, earn the 10 credits specified in the auxiliary training program, and pass the HSK Level 4.

2. Eligible students will be awarded the Bachelor of Engineering degree.

3. Students in this program shall write their graduation thesis in English, but must include a Chinese abstract.

Course Category		Credits		Percentage		Theoretical Hours		Practical Hours		Total Hours		
General Education Courses	General Required Courses	39.5		27.5%		632		24		656		
	General Elective Courses	10		7.0%								
Major Foundation Courses	Discipline Foundation Courses	20.5		14.3%		296		48		344		
	Major Required Courses	57.5		34.8%		524		62+24weeks		586+24weeks		
	Major Elective Courses	12		8.4%								
Independent Development	Interdisciplinary Courses	4		2.8%								
	Auxiliary training program	10		10 (Not included in total graduation credits)								
Total Graduation Credits (Total Hours)		143.5		100%		1740		134+24weeks		1874+24weeks		
Practical Teaching (including in-class experiments)		25.5		17.8%		—						
Intensive Practical Teaching Components		18		12.5%		—						
Recommended Credits by Semester	Category	1	2	S1	3	4	S2	5	6	S3	7	8
	Required Courses	18	21.5	1	17	17.5	2	10.5	13	3	4	10
	General Electives	0	2	0	2	4	0	2	0	0	0	0
	Major Electives	0	0	0	2	0	0	4	4	0	2	0
	Interdisciplinary Electives	0	0	0	0	0	0	0	2	0	2	0
	Subtotal	18	23.5	1	21	21.5	2	16.5	19	3	8	10

## VI. Curriculum Structure

(Note: Foundation courses shall follow the curriculum plan regarding course names, credits, and semester offerings.)

Course Category	Course Module	Course Code (初稿只需填写开课单位代码)	Course Name	Credits	In-Class Hours					Extra curricular Hours	Semester	Remarks
					Total Hours	Lecture	Experiment	Computer Lab	Practice			
General Education Courses	Ideological and Political Courses	2092099	道德与法律 Moral Education and Jurisprudence Fundamentals	1.0	16	16				40	1	
		2094199	中国概况(2-1) Survey of China (2-1)	3.0	48	48				48	3	
		2094299	中国概况(2-2) Survey of China (2-2)	3.0	48	48				48	4	
	Basic Literacy Courses	2091199	初级汉语口语(2-1) Primary Oral Chinese (2-1)	4.0	64	64				64	1	
		2092199	初级汉语精读(2-1) Primary Chinese reading (2-1)	4.0	64	64				64	1	
		0711399	大学计算机 Computer technology	1.5	24	24					2	
		2092299	初级汉语精读(2-2) Primary Chinese reading (2-2)	4.0	64	64				64	2	
		0711299	程序设计 Program Design Language	3.0	48	48		24			2	
		2095199	中级汉语(2-1) Intermediate Chinese (2-1)	4.0	64	64				64	3	
		2095299	中级汉语(2-2) Intermediate Chinese (2-2)	4.0	64	64				64	4	
		2096199	高级汉语(2-1) Advanced Chinese (2-1)	4.0	64	64				64	5	
		2096299	高级汉语(2-2) Advanced Chinese (2-2)	4.0	64	64				64	6	
	2091199	初级汉语口语(2-1) Primary Oral Chinese (2-1)	4.0	64	64				64	1		
	General Elective Courses	Students must complete at least 10 credits of general elective courses, including at least 4 credits of core general education courses distributed across different modules, with at least 2 credits from the Global Vision and Critical Thinking module. Non-art students must complete at least 2 credits of art courses.			10.0							1-8
Professional Education	Discipline Foundation Courses	0911199	高等数学(2-1) Advanced Math (2-1)	6.0	96	96				96	1	
		0911299	高等数学(2-2) Advanced Math (2-2)	5.0	80	80				80	2	
		0931199	大学物理(2-1) Physics(2-1)	4.0	64	64					2	
		0941199	大学物理实验(2-1) Physics Experiment (2-1)	1.0	24		24				2	
		0931299	大学物理(2-2) Physics(2-2)	3.5	56	56					3	
		0941299	大学物理实验(2-2) Physics Experiment (2-2)	1.0	24		24				3	
	Major Required Courses	2010199	金工实习 Metalworking Practice	2.0	2.0周						2	
		0434199	工程制图 Engineering Drawing	4.0	64	64					2	
		0494499	工程测绘 Engineering Mapping	1.0	1周						S1	

Course Category	Course Module	Course Code (初稿只需填写开课单位代码)	Course Name	Credits	In-Class Hours					Extra curricular Hours	Semester	Remarks
					Total Hours	Lecture	Experiment	Computer Lab	Practice			
		0540399	电工电子学(一) Electrical Engineering and Electronics I	2.5	40	30	10				3	
		0641199	理论力学 Theory Mechanic	3.0	48	48					3	
		0540499	电工电子学(二) Electrical Engineering and Electronics II	2.5	40	30	10				4	
		0641299	材料力学 Material Mechanics	4.0	64	60	4				4	
		0435199	机械原理 Mechanical Principles	4.0	64	64					4	
		0594199	电工电子学实习 Electronic and electrical engineering practice	2.0	2 周						S2	
		0419599	机械制造工程基础 Fundamentals of Mechanical Manufacturing Engineering	2.5	42	38	4				5	
		0417799	互换性与测量技术基础 Interchangeability and Measurement Technology Foundation	2.0	36	24	12				5	
		0413599	控制工程基础 Control Engineering Foundation	2.0	34	28	6				5	
		0435299	机械设计 Mechanical Design	4.0	64	64					6	
		MEE122411026	油气装备工程 Oil and Gas Equipment Engineering	3.0	50	46	4				6	
		MEE110911020	机电信息检测与处理技术 Electromechanical Information Detection and Processing Technology	2.0	34	28	6				6	
		0494699	机械设计课程设计 Course Design of Mechanical Design	3.0	3 周						S3	
		0413499	机电系统设计 Electromechanical System Design	2.0	32						7	
		0419899	机电一体化技术 Mechatronics Technology	2.0	34		6				7	
		MEE113611020	专业综合设计 Professional Integrated Design	2	2 周						8	
		0499999	毕业设计 Graduation Design	8.0	14 周						8	
	Major Elective Courses	MEE310621020	机械 CAD 基础 Foundation of Mechanical Computer Aided Design	2	32	32				32	3	
		MEE329321020	先进成图技术 Advanced drawing technology	2	32	32				32	3	
		MEE323921020	智能工程 Intelligent engineering	2	32	32				32	5	

Course Category	Course Module	Course Code (初稿只需填写开课单位代码)	Course Name	Credits	In-Class Hours					Extra curricular Hours	Semester	Remarks
					Total Hours	Lecture	Experiment	Computer Lab	Practice			
		PLC310721 020	实验应力分析 Experimental Stress Analysis	2	32	32				32	5	
		MEE527821 020	海洋工程结构可靠性 Reliability of Ocean Engineering Structures	2	32	32				32	6	
		MEE210921 020	机械优化设计 Mechanical Optimization Design	2	32	32				32	6	
		PLC310821 020	有限元法 Finite Element Method	2	32	32				32	6	
		SCC252721 020	最优化原理 Optimization Principle	2	32	32				32	6	
		MEE211221 020	人机工程学 Ergonomics	2	32	32				32	7	
		Course Selection Note	Course Selection Note: Students must complete at least 12 credits of major elective courses.									
Independent Development	Interdisciplinary Courses	Interdisciplinary Courses: Students may take professional education courses offered outside their own discipline, or substitute them through minors, micro-majors, or other approved pathways. (If applicable, recommended courses may be specified by the program.)		≥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	