

## Undergraduate Program for Materials Science and Engineering of Jiangsu University

### Type A Courses

No.	School	Name of Course	Term	Credit	Total Hours	Theory Hours	Practice Hours	Required Elective
A1	IIEEC	Chinese- I 汉语- I	1	18	270	270	0	Required
A2	IIEEC	Chinese- II 汉语- II	2	4	60	45	15	Required
A3	IIEEC	Chinese- III 汉语- III	3	4	60	45	15	Required
A4	IIEEC	Chinese- IV 汉语- IV	4	4	60	45	15	Required
A5	IIEEC	Overview of China 中国概论	1	4	60	45	15	Required
A6	PED	Sports - I 体育- I	1	2	30	10	20	Required
A7	PED	Sports- II 体育- II	2	2	30	10	20	Required
A8	PED	Sports- III 体育- III	3	2	30	10	20	Required
A9	PED	Sports- IV 体育- IV	4	2	30	10	20	Required
A10	FOS	Advanced Mathematics 高等数学 (理学院)	2,3	11	165	165	0	Required
A11	FOS	Linear Algebra 线性代数 (理学院)	3	2	30	30	0	Required
A12	FOS	Probability Theory and Mathematical Statistics (C) 概率论与数理统计 (C) (理学院)	5	3	45	45	0	Required
A13	FOS	College Physics 大学物理	2	6	90	70	20	Required
A14	EI	Electrotechnics 电工电子学	4	6	90	70	20	Required
A15		Information Retrieval 文献检索	4	1	15	15	0	Elective
A16	SA	Chinese Fine Arts 中国美术	2	2	30	30	0	Elective
A17	SA	Chinese Music 中国音乐	3	2	30	30	0	Elective
		<b>Total A</b>		<b>75</b>	<b>1125</b>	<b>945</b>	<b>180</b>	

### Type B Courses

## Curriculum Schedule for the MS&E of Jiangsu University

No.	School	Name of Course	Term	Credit	Total Hours	Theory Hours	Practice Hours	Required Elective
B1	SME	工程图学 (Engineering Graphics)	2	4	60	50	10	Required
B2	SCEM	工程力学 (Engineering Mechanics)	4	5	75	69	6	Required
B3	SCCE	无机化学 Inorganic Chemistry	1	4	60	45	15	Required
B4	SCCE	分析化学 Analytical Chemistry	2	3	45	30	15	Required
B5	SCCE	物理化学 Physical Chemistry	3	4	60	45	15	Required
B6	SME	机械设计基础 Fundamental of Machinery Design	3	3	45	45		Required
B7	SMSE	材料科学与工程导论 Introduction of Materials Science & Engineering	3	3	45	45		Required
B8	SMSE	材料科学基础 I (Fundamental of Material Science I)	4	6	90	90		Required
B9	SMSE	材料科学基础 II (Fundamental of Material Science II)	5	6	90	90		Required
B10	SMSE	材料科学研究方法 Analytical method of materials science	4	2	30	30		Required
B13	SMSE	材料化学 Material Chemistry	4	3	45	45		Required
B14	SMSE	计算机在材料科学与工程中应用 Computer in Materials Science & Engineering	5	4	45	45	15	Required
B15	SMSE	材料测试方法 Methods of Materials Testing	5	3	45	39	6	Required
B16	SMSE	材料热力学 Thermodynamics of Materials	5	2	30	30		Required
		<b>Total B</b>		<b>52</b>	<b>780</b>	<b>698</b>	<b>82</b>	

### Type D Courses: Elective 34 Credit

D1	SMSE	材料与环境 Materials and Environment	5	2	30	30		Elective
D2	SMSE	高分子材料 Polymer Materials	6	6	90	75	15	Elective
D3	SMSE	无机材料 Introduction to Ceramics	6	6	90	75	15	Elective
D4	SMSE	物理冶金 Physical Metallurgy	6	6	90	75	15	Elective
D5	SMSE	金属材料学 Metallic Engineering Materials Science	6	6	90	75	15	Elective
D6	SMSE	复合材料 Composites Materials	6	6	90	75	15	Elective
D7	SMSE	新能源材料 New Energy Materials	6	6	90	75	15	Elective

## Curriculum Schedule for the MS&E of Jiangsu University

D8	SMSE	先进材料加工 Advanced Materials Processing	7	4	60	60		Elective
D9	SMSE	材料工艺与设备 Gelatin Material Equipment &Technology	5	2	30	30		Elective
D10	SMSE	材料质量分析与失效分析 Material Quality and Failure Analysis	6	2	30	30		Elective
D11	SMSE	材料模拟与仿真 Introduction to Modeling and Simulation	6	3	45	30	15	Elective
D12	SMSE	生物医用材料 Materials for Biomedical Applications	7	2	30	30		Elective
D13	SMSE	材料表面与强化技术 Surface Hardening	6	2	45	30	15	Elective
D14	SMSE	材料及生物材料的纳米力学 Nanomechanics of Materials and Biomaterials	7	2	30	30		Elective
D15	SMSE	材料成像技术 Imaging of Materials	7	2	30	30		Elective
D16	SMSE	材料的经济与环境效益 Economic and Environmental Materials Selection	7	2	30	30		Elective
D17	SMSE	光电磁材料及器件 Electrical, Optical, and Magnetic Materials and Devices	7	3	45	45		Elective
D18	SMSE	纳米材料 Nanoscale Materials	7	2	30	30		Elective
D19	SMSE	微纳米加工技术 Micro/Nano Processing Technology	7	2	30	30		Elective
D20	SMSE	薄膜光学与技术 Thin Film Materials and Technologies	7	3	45	45		Elective
D21	SMSE	材料腐蚀与防护 Materials Corrosion and Protection	7	3	45	45		Elective
		<b>Total D</b>		<b>34</b>	<b>510</b>	<b>510</b>		

### Type E Courses: Practice

No.	Name of Course	Term	Credit	Weeks	Remark
E1	orientation 入学教育	1	1	1	
E2	金工实习 A Metal Techniques Practice A	1	2	2	
E3	金工实习 B Metal Techniques Practice B	2	3	3	
E4	认识实习 Cognition practice	4	2	2	Other city
E5	生产实习 productive practice	6	3	3	Other city

## Curriculum Schedule for the MS&E of Jiangsu University

E6	机械设计基础课程设计 Practice of Fundamental Mechanical Design	3	2	2	
E7	专业方向课程设计一 Course Project A	5	3	3	
E8	专业方向课程设计二 Course Project B	7	3	3	
E9	材料进展与科技创新 Materials advancement and technological innovation	5	1	1	
	Graduation Design (Thesis, Dissertation 专指博士论文) 毕业设计(论文)	8	16	16	
	<b>Total E</b>		<b>36</b>	<b>36</b>	

### The Allocation of Credits and course

Term	Name of Course	Credit	Required Credit	Elective Credit	Practice Credit
1	Chinese- I 汉语- I	18	28	0	3
	Overview of China 中国概论	4			
	Sports - I 体育- I	2			
	无机化学 Inorganic Chemistry	4			
	orientation 入学教育	1			
	金工实习 A Metal Techniques Practice A	2			
2	Chinese- II 汉语- II	4	25	2	3
	Sports- II 体育- II	2			
	Advanced Mathematics 高等数学	6			
	College Physics 大学物理	6			
	工程图学 (Engineering Graphics)	4			
	分析化学 Analytical Chemistry	3			
	Chinese Fine Arts 中国美术	2			
	金工实习 B Metal Techniques Practice B	3			
3	Chinese-III 汉语-III 4	4	23	2	2
	Sports-III 体育-III 2	2			
	Advanced Mathematics	5			

**Curriculum Schedule for the MS&E of Jiangsu University**

	高等数学 5 Linear Algebra 线性代数 (理学院) 2	2			
	物理化学 Physical Chemistry 4	4			
	机械设计基础 Fundamental of Machinery Design 3	3			
	材料科学与工程导论 Introduction of Materials Science & Engineering 3	3			
	Chinese Music 中国音乐 2	2			
	机械设计基础课程设计 Practice of Fundamental Mechanical Design	2			
4	Chinese-IV 汉语-IV	4	22	1	2
	Sports-IV 体育-IV	2			
	Electrotechnics 电工电子学	6			
	工程力学(Engineering Mechanics)	5			
	材料科学研究方法 Analytical method of materials science	2			
	材料化学 Material Chemistry	3			
	Information Retrieval 文献检索	1			
	Cognition practice 认识实习	2			
5	Probability Theory and Mathematical Statistics (C) 概率论与数理统计	3	20	2	4
	材料科学基础 I (Fundamental of Material Science I)	6			
	计算机在材料科学与工 程中应用 Computer in Materials Science & Engineering 3	4			
	材料测试方法 Analytical method of materials 3	3			
	材料热力学 Thermodynamics of Materials	2			
	材料与环境 Materials and Environment 2	2			
	材料工艺与设备 Gelatin Material Equipment & Technology	2			

**Curriculum Schedule for the MS&E of Jiangsu University**

	2				
	材料进展与科技创新 Materials advancement and technological innovation	1			
	专业方向课程设计一 Course Project A	3			
6	材料科学基础 II (Fundamental of Material Science II)	6			
	材料表面与强化技术 Surface Hardening	2			
	材料质量分析与失效分析 Material Quality and Failure Analysis	2			
	材料模拟与仿真 Introduction to Modeling and Simulation	3			
	高分子材料 Polymer Materials	6	6	37	3
	无机材料 Introduction to Ceramics	6			
	物理冶金 Physical Metallurgy	6			
	金属材料学 Metallic Engineering Materials Science	6			
	复合材料 Composites Materials	6			
	新能源材料 New Energy Materials	6			
	生产实习 productive practice	3			
7	先进材料加工 Advanced Materials Processing	4			
	生物医用材料 Materials for Biomedical Applications	2			
	材料及生物材料的纳米力学 Nanomechanics of Materials and Biomaterials	2			
	材料成像技术 Imaging of Materials	2			
	材料的经济与环境效益 Economic and Environmental Materials Selection	2	0	25	3
	光电磁材料及器件 Electrical, Optical, and Magnetic Materials and Devices	3			
	纳米材料 Nanoscale Materials	2			
	微纳米加工技术 Micro/Nano Processing	2			

## Curriculum Schedule for the MS&E of Jiangsu University

---

	Technology				
	薄膜光学与技术 Thin Film Materials and Technologies	3			
	材料腐蚀与防护 Materials Corrosion and Protection	3			
	专业方向课程设计二 Course Project B	3			
8	Graduation Design (Dissertation) 毕业设计(论文)	16	0	0	16
<b>Total</b>		229	124	69	36