

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007079	Freshmen Seminar Course	General Assessment	1	16	16	0	0		1															College of Materials Science and Engineering
0000066	Engineering Graphics V	Exam	3	48	48	0	0		3															College of Mechanical Engineering & Applied Electronics Technology
0000158	Organic Chemistry III	Exam	2	32	22	10	0				2													College of Environmental and Energy Engineering
0000274	Introduction to Materials Science and Engineering	Exam	2	32	32	0	0				2													College of Materials Science and Engineering
0003811	Engineering Materials and Mechanical Manufacturing	General Assessment	2	32	30	2	0						2											College of Mechanical Engineering & Applied Electronics Technology
0005223	Engineering Mechanics II	Exam	4	64	58	6	0						4											College of Mechanical Engineering & Applied Electronics Technology
0000106	Electrical Engineering I	Exam	3.5	56	42	14	0								3.5									College of Electronic Information and Control Engineering
0000064	Physical Chemistry II	Exam	3.5	56	40	16	0						3.5											College of Environmental and Energy Engineering
0006177	Fundamentals of Mechanical Design I	Exam	3	48	48	0	0								3									College of Mechanical Engineering & Applied Electronics Technology
0007487	Principles of Materials Science (Chinese/English)	Exam	3.5	56	46	6	0	4							3.5									College of Materials Science and Engineering
0001900	Electrical EngineeringIV	Exam	3.5	56	42	14	0										3.5							College of Electronic Information and Control Engineering
0007165	Introduction to Materials Characterization	Exam	4	64	61	0	0	3										4						College of Materials Science and Engineering
0002545	Fundamentals of Materials Engineering-1	Exam	4	64	64	0	0											4						College of Materials Science and Engineering
0000276	Properties of Materials	Exam	4	64	62	0	0	2									4							College of Materials Science and Engineering
0005953	The foundation of Eco-Materials	Exam	2	32	28	2	0	2												2				College of Materials Science and Engineering
Discipline Requirements		Sub-total	45	720	639	70	0	11	4	0	4	0	9.5	0	10	0	7.5	0	8	0	2	0	0	
0004747	Machine Shop Training B	General Assessment	2	60	0	0	60		2															College of Mechanical Engineering & Applied Electronics Technology
0002567	Practice of Engineering Graphics	General Assessment	2	60	0		60				2													College of Mechanical Engineering & Applied Electronics Technology
0004964	Physics Laboratory (Engineering)-1	General Assessment	1	24	2	22	0				1													College of Applied Sciences
0007069	Social Practices	General Assessment	2	48	0	0	48									2								School of Marxism
0003087	Practices of National Defense	General Assessment	1	30	0	0	30					1												Students' Affairs Office
0004965	Physics Laboratory (Engineering)-2	General Assessment	1.5	36	0	36	0						1.5											College of Applied Sciences
0001302	Design Course for Fundamentals of Mechanical Design II	General Assessment	2	60	0	0	60									2								College of Mechanical Engineering &Applied Electronics Technology
0007166	Optical Analysis	General Assessment	2	48	0	48	0										2							College of Materials Science and Engineering

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									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0007167	Material Engineering Measure and Test Technology	General Assessment	2	48	0	48	0										2							College of Materials Science and Engineering
0001212	Fundamental Training on Electrical and Electronics Engineering II	General Assessment	1	30	15	0	15										1							College of Electronic Information and Control Engineering
0007168	Experiment of Materials Modern Analytical Method	General Assessment	1	24	0	24	0												1					College of Materials Science and Engineering
0007169	Cognitive Practice	General Assessment	1	30	0	0	30						1											College of Materials Science and Engineering
0007170	Professional Practice	General Assessment	4	120	0	0	120													4				College of Materials Science and Engineering
0005962	Material Comprehensive Experiment	General Assessment	2	60	0	60	0														2			College of Materials Science and Engineering
0007171	Materials Properties Testing Program	General Assessment	1	24	0	24	0										1							College of Materials Science and Engineering
0007172	Application of Computers in Materials Science and Engineering	General Assessment	1	24	0	24	0														1			College of Materials Science and Engineering
0005236	Senior Project	General Assessment	16	480	0	0	480																16	College of Materials Science and Engineering
Practical Requirements		Sub-total	42.5	1206	17	286	903	0	2	0	3	1	2.5	0	0	4	6	0	1	4	3	0	16	
Discipline Electives			3.5	56													3.5							
Major Requirements			12	192															8		4			
Major Electives			2	32																	2			
GEESEM:EM			4	64															2		2			
General Education Electives			12	192											4		4		2		2			
Theoretical Electives		Sub-total	33.5	536																				
Practical Electives		Sub-total	1	24																	1			
Total for Theoretical Instruction			143.5	2394																				
Total for Practical Instruction			43.5	1230																				
Innovation Requirements			4	96															2		2			
Freshmen Seminar Course			1	16																				
Total			191	1326					25.5	0	24.5	3	28	0	25	4	21	0	23	4	18	0	16	

Notation: GEESEM:EM is the abbreviation for General Education Electives for Science and Engineering Majors: Economics and Management.

2012 Undergraduate Curriculum for Materials Science and Engineering (II)

Course Number	Course Title	Assessment	Credits	Instruction Hour Allocation					Credits Distribution for Semesters														Responsible Unit	
				Total Hrs	Lec	Lab	Practice	Recita- tion	1	I	2	II	3	III	4	IV	5	V	6	VI	7	VII		8
									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W		16 W
0005949	Principles of Materials Science (Metal)	Exam	3.5	56	48	6	0	2									3.5							College of Materials Science and Engineering
0005950	Principles of Materials Science (Inorganic)	Exam	3.5	56	56	0	0										3.5							College of Materials Science and Engineering
Discipline Electives		Sub-total	7	112	104	6		2																
0007173	Characterization of Photoelectric Thin Films	General Assessment	1	24	0	24	0														1			College of Materials Science and Engineering
0005985	Experiments in Materials Processing	General Assessment	1	24	0	24	0														1			College of Materials Science and Engineering
0005986	Metal Material Comprehensive Experiment	General Assessment	1	24	0	24	0														1			College of Materials Science and Engineering
0006596	Inorganic Material Test	General Assessment	1	24	0	24	0														1			College of Materials Science and Engineering
Practical Electives		Sub-total	4	96	0	96	0	0																
0000927	Non-destructive Testing	General Assessment	2	32	28	4	0												2					College of Materials Science and Engineering
0003250	Materials Joining Science and Technology	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0003251	Materials Surface Engineering	General Assessment	2	32	30	2	0												2					College of Materials Science and Engineering
0003253	Materials Processing Automation	General Assessment	2	32	26	6	0												2					College of Materials Science and Engineering
0005955	Electroceramics	General Assessment	2	32	28	0	0	4											2					College of Materials Science and Engineering
0007174	Basics of Solid State Physics	General Assessment	2	32	30	0	0	2											2					College of Materials Science and Engineering
0007175	Ferromagnetic Materials	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0005966	Cement Material Science	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0005973	Foundation of Casting Engineering	General Assessment	3	48	46	2	0												3					College of Materials Science and Engineering
0005972	Heat Treatment Technique and Equipment	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0005971	Metal Materials	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0005967	Concrete Science	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0007176	Semiconductor Materials	General Assessment	2	32	32	0	0												2					College of Materials Science and Engineering
0007177	Photoelectric Thin Films	General Assessment	2	32	32	0	0														2			College of Materials Science and Engineering

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									19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	18 W	3 W	19 W	0 W	16 W		
0005975	Amorphous Alloys (Self-learning)	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0005970	Inorganic Material Plant Design (Self-learning)	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0005959	Materials Application and Selection (Self-learning)	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0005974	Metal Forming Processing and Equipment	General Assessment	3	48	46	0	0	2												3			College of Materials Science and Engineering		
0005958	Novel Techniques of Information & Energy Source (Self-learning)	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0007178	Electronic Packaging Technology and Materials（Chinese/English）	General Assessment	2	32	24	8	0													2			College of Materials Science and Engineering		
0007179	New-style Wall Materials	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0007180	Glass Materials	General Assessment	2	32	32	0	0											2					College of Materials Science and Engineering		
0007181	Ceramic Materials	General Assessment	2	32	32	0	0											2					College of Materials Science and Engineering		
Major Requirements		Sub-total	48	768	738	22	0	8															College of Materials Science and Engineering		
0002394	Lectures on Frontiers of Materials Science	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0003254	Nanomaterials	General Assessment	2	32	28	4	0													2			College of Materials Science and Engineering		
0005976	Powder Metallurgy Technology	General Assessment	2	32	28	4	0											2					College of Materials Science and Engineering		
0005977	Failure Analysis and Prevention of Engineering Materials	General Assessment	2	32	32	0	0													2			College of Materials Science and Engineering		
0005978	Theory of Metal Corrosion and Corrosion Control	General Assessment	2	32	32	0	0											2					College of Materials Science and Engineering		
0007182	Introduction to New Battery Materials	General Assessment	2	32	32	0	0											2					College of Materials Science and Engineering		
0005980	Advanced Technology in Materials Processing	General Assessment	2	32	32	0	0											2					College of Materials Science and Engineering		
0005981	Glass Technology of Machining	General Assessment	1	16	16	0	0													1			College of Materials Science and Engineering		
0007183	Chemical Building Materials	General Assessment	1	16	16	0	0													1			College of Materials Science and Engineering		
Major Electives		Sub-total	16	256	248	8	0	0																	

Vice-Director:

Vice-President:

Date:

Date: