

Materials Science and Engineering Sample Curriculum Schedule -- Class 2021

	SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
Freshman	107032030		思想道德修养与法律基础	Ideological and Moral Cultivation and Legal Basis	Chinese	48	3	Fall	
	888004010		体育-1	Physical Education-1	Chinese	32	1	Fall	
	312068010	ENGR 0081	新生研讨会及形势与政策 1	Freshmen Seminar 1	Bilingual	16	1	Fall	
	312002030	ENGCMP 0152	高级英文写作研习	English Composition	English	48	3	Fall/Spring	
	312082030	LING 0007/ENGCMP 0150	英语中级写作	English Writing Intermediate	English	48	3	Fall	
	312090010	ENGCMP 0152A /LING 0007A	写作中心辅导	Writing Center Tutorial	English	16	1	Fall	
	312004040	MATH 0220	解析几何与微积分 1	Analytic Geometry and Calculus 1	English	64	4	Fall	
	312080080	MATH 0235	解析几何与微积分 2	Analytic Geometry and Calculus 2	English	128	8	Fall/Spring	
	312010030	CHEM 0960	工科化学 1	General Chemistry for Engineers 1	English	48	3	Fall	
	312012030	ENGR 0011	工程分析	Introduction to Engineering Analysis	English	48	3	Fall	
	107060030		中国近代史纲要	The Outline of Chinese Modern History	Chinese	48	3	Spring	
	900001010		军事理论	Military Theory	Chinese	16	1	Spring	
	900005020		军事技能	Military Training	Chinese	112	2	Spring	
	888005010		体育-2	Physical Education-2	Chinese	32	1	Spring	
	999005030/6030/9030/8030		中华文化 (历史篇/文学篇/哲学篇/艺术篇)	Chinese Culture	Chinese	48	3	Fall/Spring	
	908049020		工科化学实验	Chemical Experiment	Chinese	32	2	Spring	
	312069010	ENGR 0082	新生研讨会及形势与政策 2	Freshmen Seminar 2	Bilingual	16	1	Spring	*ENGR 0081
	312111010	ENGCMP 0140	英语听力与口语训练	Speaking and Listening	English	16	1	Spring	
	312085030	ENGCMP 0200	专业英语写作	Seminar in Composition	English	48	3	Fall/Spring	ENGCMP 0152
	312005040	MATH 0230	解析几何与微积分 2	Analytic Geometry and Calculus 2	English	64	4	Spring	*MATH 0220
	312079040	MATH 0240	解析几何与微积分 3	Analytic Geometry and Calculus 3	English	64	4	Fall/Spring	*MATH 0230/0235
	312008040	PHYS 0174	基础物理 1-理工	Physics for Science and Engineering 1	English	64	4	Fall/Spring	
	312011030	CHEM 0970	工科化学 2	General Chemistry for Engineers 2	English	48	3	Spring	*CHEM 0960
312013030	ENGR 0012	计算机工程学	Engineering Computing	English	48	3	Spring	*ENGR 0011	
Total						976/1088	54/57		
<p>Note:</p> <p>1. MATH 220+230 = MATH 235, students either take both 220 and 230, or just take one 235;</p> <p>2. Students who are placed in MATH 220 will take PHYS 0174 simultaneously in the Fall semester. The rest of students will take PHYS0174 in the Spring semester;</p> <p>3. Some students will be placed in an extra LING 0007/ENGCMP 0150.</p>									
Sophomore	107021030		马克思主义基本原理概论	The Basic Principles of Marxism	Chinese	48	3	Fall	
	888006010		体育-3	Physical Education-3	Chinese	32	1	Fall	
	312070000	MSE 1085	院系研讨会及形势与政策 3	Department Seminar 3	Bilingual	16	0	Fall	
	312009040	PHYS 0175	基础物理 2-理工	Physics for Science and Engineering 2	English	64	4	Fall/Spring	*PHYS 0174
	312006030	MATH 0280	矩阵与线性代数导论	Matrices and Linear Algebra	English	48	3	Fall/Spring	*MATH 0230/0235
	312014030	ENGR 0022	材料结构与性能	Materials Structures and Properties	English	48	3	Fall/Spring	*MATH 0230, *PHYS 0174, *CHEM 0960
	312015030	ENGR 0135	静力学与材料力学 1	Statics and Mechanics of Materials 1	English	48	3	Fall/Spring	*MATH 0235/0230, PHYS 0174
	312083030	MEMS 0024	机械工程设计制造导论	Introduction to Mechanical Engineering Design	English	48	3	Fall	*ENGR 0011
				H/SS Elective 1	English	48	3	Fall	
				Engineering Elective	English	48	3	Fall	
	107446030		毛泽东思想和中国特色社会主义理论体系概论	The Introduction to Mao Zedong Thought and the Theory of Socialism with Chinese Characteristic	Chinese	48	3	Spring	
	107447030		习近平新时代中国特色社会主义思想概论	An Introduction to Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era	Chinese	48	3	Spring	
	888007010		体育-4	Physical Education-4	Chinese	32	1	Spring	
	312071000	MSE 1085	院系研讨会及形势与政策 4	Department Seminar 4	Bilingual	16	0	Spring	
	312007030	MATH 0290	微分方程	Differential Equations	English	48	3	Fall/Spring	*MATH 0230/0235
	202489020	PHYS 0219	工科物理实验	Basic Laboratory Physics for Science and Engineering	English	32	2	Spring	*PHYS 0174
	312016030	ENGR 0145	静力学与材料力学 2	Statics and Mechanics of Materials 2	English	48	3	Fall/Spring	*ENGR 0135
	312021030	MEMS 0040	制造工艺与分析	Manufacturing Processes and Analysis	English	48	3	Fall/Spring	*ENGR 0022
	312086030	MSE 0048	材料热力学	Thermodynamics of Materials	English	48	3	Spring	*PHYS 0174, CHEM 0960

			H/SS Elective 2	English	48	3	Spring		
			Total		864	50			
Junior	SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
	312072000	MSE 1085	院系研讨会及形势与政策 5	Department Seminar 5	Bilingual	16	0	Fall	
	312142030	MEMS 0031	电路学	Electric Circuits	English	48	3	Fall/Spring	*PHYS 0175
	312056030	MSE 1010	材料科学与工程实验方法	Experimental Methods in Materials Science and Engineering	English	48	3	Fall	*ENGR 0022
	312054030	MEMS 1052	热质传导	Heat and Mass Transfer	English	48	3	Fall/Spring	*MSE 0048
	312060030	MSE1059	相平衡	Phase Equilibria in Multi-Component Materials	English	48	3	Fall	*ENGR 0022,*MSE 0048
	312059030	MSE 1053	晶体结构与衍射	Structure of Crystals and Diffraction	English	48	3	Fall	*ENGR 0022
				H/SS Elective 3	English	48	3	Fall	
				Technical Elective 1	English	48	3	Fall	
	312073000	MSE 1085	院系研讨会及形势与政策 6	Department Seminar 6	Bilingual	16	0	Spring	
	312057020	MSE 1011	结构与材料实验室	Structure and Properties Laboratory	English	32	2	Spring	*MSE 1010
	312061030	MSE 1063	扩散与相变	Phase Transformations and Microstructure Evolution	English	48	3	Spring	*MSE 1053, MSE 1059
	312062030	MSE 1070	材料力学行为	Mechanical Behavior of Materials	English	48	3	Spring	*ENGR 0022, ENGR 0145
	312063030	MSE 1058	材料电磁特性	Electromagnetic Properties of Materials	English	48	3	Spring	*ENGR 0022
	312049030	MEMS 1028	机械设计1	Mechanical Design 1	English	48	3	Fall/Spring	*ENGR 0145
				H/SS Elective 4	English	48	3	Spring	
				Technical Elective 2	English	48	3	Spring	
			Total		688	41			
Senior	SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
	312074000	MSE 1085	院系研讨会及形势与政策 7	Department Seminar 7	Bilingual	16	0	Fall	
	312058030	MSE 1030	材料选择	Material Selection	English	48	3	Fall	*ENGR 0022, MEMS 1028
	312099030		毕业设计1	Senior Project 1	English	48	3	Fall	completion of 75% core courses, 21 credits at most per semester in senior year
				H/SS Elective 5	English	48	3	Fall	
				Technical Elective 3	English	48	3	Fall	
	312075000	MSE 1085	院系研讨会及形势与政策 8	Department Seminar 8	Bilingual	16	0	Spring	
	312076030	MSE 1043	毕业设计2	Senior Project 2	English	48	3	Spring	Senior Project 1
				H/SS Elective 6	English	48	3	Spring	
				Technical Elective 4	English	48	3	Spring	
			Total		368	21			
Required Credit : 166/169									