

## Materials Science and Engineering Sample Curriculum Schedule -- Class 2019

SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
107032030		思想道德修养与法律基础	Ideological and Moral Cultivation and Legal Basis	Chinese	48	3	1	
888004010		体育-1	Physical Education-1	Chinese	32	1	1	
312068010	ENGR 0081	新生研讨会及形势与政策 1	Freshmen Seminar 1	Bilingual	16	1	1	
312002030	ENGCOMP 0152	高级英文写作研习	English Composition	English	48	3	1	
312082030	ENGCOMP 0150	英语中级写作	English Writing Intermediate	English	48	3	1	
312090010	ENGCOMP 0152A/0150A	写作中心辅导	Writing Center Tutorial	English	16	1	1	
312111010	ENGCOMP 0140	英语听力与口语训练	Speaking and Listening	English	16	1	1	
312004040	MATH 0220	解析几何与微积分 1	Analytic Geometry and Calculus 1	English	64	4	1	
312080080	MATH 0235	解析几何与微积分 2	Analytic Geometry and Calculus 2	English	128	8	1	
312008040	PHYS 0174	基础物理 1-理工	Physics for Science and Engineering 1	English	64	4	1	
312010030	CHEM 0960	工科化学 1	General Chemistry for Engineers 1	English	48	3	1	
312012030	ENGR 0011	工程分析	Introduction to Engineering Analysis	English	48	3	1	
<b>Total</b>					<b>576</b>	<b>35</b>	<b>1</b>	
SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
107060030		中国近代史纲要	The Outline of Chinese Modern History	Chinese	48	3	2	
900001010		军事理论	Military Theory	Chinese	16	1	2	
900005020		军训	Military Training	Chinese	32	1	2	
888005010		体育-2	Physical Education-2	Chinese	32	1	2	
312069010	ENGR 0082	新生研讨会及形势与政策 2	Freshmen Seminar 2	Bilingual	16	1	2	*ENGR 0081
999005030/6030/7030/8030		中华文化（历史篇/文学篇/哲学篇/艺术篇）	Chinese Culture	Chinese	48	3	2	
312085030	ENGCOMP 0200	专业英文写作	Seminar in Composition	English	48	3	2	ENGCOMP 0152
312005040	MATH 0230	解析几何与微积分 2	Analytic Geometry and Calculus 2	English	64	4	2	*MATH 0220
312079040	MATH 0240	解析几何与微积分 3	Analytic Geometry and Calculus 3	English	64	4	2	*MATH 0230/0235
312009040	PHYS 0175	基础物理 2-理工	Physics for Science and Engineering 2	English	64	4	2	*PHYS 0174
312011030	CHEM 0970	工科化学 2	General Chemistry for Engineers 2	English	48	3	2	*CHEM 0960
908049020		工科化学实验	Chemical Experiment	Chinese	32	2	2	
312013030	ENGR 0012	计算机工程学	Engineering Computing	English	48	3	2	*ENGR 0011
312110030		计算思维与程序设计导论	Introduction to Computational Thinking and Programming	English	48	3	2	
918002020		实验室安全与环境保护	Laboratory Safety and Environmental Protection	Chinese	32	2	2	
<b>Total</b>					<b>640</b>	<b>38</b>	<b>2</b>	
SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
107021030		马克思主义基本原理概论	The Basic Principles of Marxism	Chinese	48	3	3	
888006010		体育-3	Physical Education-3	Chinese	32	1	3	
312070000	MSE 1085	院系研讨会及形势与政策 3	Department Seminar 3	Bilingual	16	0	3	
312006030	MATH 0280	矩阵与线性代数导论	Matrices and Linear Algebra	English	48	3	3	*MATH 0230/0235
312014030	ENGR 0022	材料结构与性能	Materials Structures and Properties	English	48	3	3	*MATH 0235/0230, PHYS 0174
312015030	ENGR 0135	静力学与材料力学 1	Statics and Mechanics of Materials 1	English	48	3	3	*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	3	*ENGR 0011
			H/SS Elective 1	English	48	3	3	
			Engineering Elective	English	48	3	3	
<b>Total</b>					<b>384</b>	<b>22</b>	<b>3</b>	
SCU Course #	Pitt Course #	Chinese Course Name	English Course Name	Language	Credit Hour	Credit	Term	Prerequisites/Corequisites
107061050		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	80	5	4	
888007010		体育-4	Physical Education-4	Chinese	32	1	4	

312071000	MSE 1085	院系研讨会及形势与政策 4	Department Seminar 4	Bilingual	16	0	4	
312007030	MATH 0290	微分方程	Differential Equations	English	48	3	4	*MATH 0230/0235
202489020	PHYS 0219	工科物理实验	Basic Laboratory Physics for Science and Engineering	English	32	2	4	
312016030	ENGR 0145	静力学与材料力学 2	Statics and Mechanics of Materials 2	English	48	3	4	*ENGR 0135
312021030	MEMS 0040	制造工艺与分析	Manufacturing Processes and Analysis	English	48	3	4	*ENGR 0022
312086030	MSE 0048	材料热力学	Thermodynamics of Materials	English	48	3	4	*PHYS 0174, CHEM 0960
			H/SS Elective 2	English	48	3	4	
<b>Total</b>					<b>400</b>	<b>23</b>	<b>4</b>	
<b>SCU Course #</b>	<b>Pitt Course #</b>		<b>English Course Name</b>	<b>Language</b>	<b>Credit Hour</b>	<b>Credit</b>	<b>Term</b>	<b>Prerequisites/Corequisites</b>
312072000	MSE 1085	院系研讨会及形势与政策 5	Department Seminar 5	Bilingual	16	0	5	
312142030	MEMS 0031	电路学	Electric Circuits	English	48	3	5	*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	5	*ENGR 0022
312054030	MEMS 1052	热质传导	Heat and Mass Transfer	English	48	3	5	*MSE 0048
312060030	MSE1059	相平衡	Phase Equilibria in Multi-Component Materials	English	48	3	5	*ENGR 0022
312059030	MSE 1053	晶体结构与衍射	Structure of Crystals and Diffraction	English	48	3	5	*ENGR 0022
			H/SS Elective 3	English	48	3	5	
			Technical Elective 1	English	48	3	5	
<b>Total</b>					<b>352</b>	<b>21</b>	<b>5</b>	
<b>SCU Course #</b>	<b>Pitt Course #</b>		<b>English Course Name</b>	<b>Language</b>	<b>Credit Hour</b>	<b>Credit</b>	<b>Term</b>	<b>Prerequisites/Corequisites</b>
312073000	MSE 1085	院系研讨会及形势与政策 6	Department Seminar 6	Bilingual	16	0	6	
312057020	MSE 1011	结构与材料实验室	Structure and Properties Laboratory	English	32	2	6	*MSE 1010
312061030	MSE 1063	扩散与相变	Phase Transformations and Microstructure Evolution	English	48	3	6	*MSE 1053, MSE 1059
312062030	MSE 1070	材料力学行为	Mechanical Behavior of Materials	English	48	3	6	*ENGR 0022, ENGR 0145
312063030	MSE 1058	材料电磁特性	Electromagnetic Properties of Materials	English	48	3	6	*ENGR 0022
312049030	MEMS 1028	机械设计1	Mechanical Design 1	English	48	3	6	*ENGR 0145
			H/SS Elective 4	English	48	3	6	
			Technical Elective 2	English	48	3	6	
<b>Total</b>					<b>336</b>	<b>20</b>	<b>6</b>	
<b>SCU Course #</b>	<b>Pitt Course #</b>		<b>English Course Name</b>	<b>Language</b>	<b>Credit Hour</b>	<b>Credit</b>	<b>Term</b>	<b>Prerequisites/Corequisites</b>
312074000	MSE 1085	院系研讨会及形势与政策 7	Department Seminar 7	Bilingual	16	0	7	
312058030	MSE 1030	材料选择	Material Selection	English	48	3	7	*ENGR 0022, MEMS 1028
312099030		毕业设计1	Senior Project 1	English	48	3	7	
			H/SS Elective 5	English	48	3	7	
			Technical Elective 3	English	48	3	7	
<b>Total</b>					<b>208</b>	<b>12</b>	<b>7</b>	
<b>SCU Course #</b>	<b>Pitt Course #</b>		<b>English Course Name</b>	<b>Language</b>	<b>Credit Hour</b>	<b>Credit</b>	<b>Term</b>	<b>Prerequisites/Corequisites</b>
312075000	MSE 1085	院系研讨会及形势与政策 8	Department Seminar 8	Bilingual	16	0	8	
312076030	MSE 1043	毕业设计2	Senior Project 2	English	48	3	8	
			H/SS Elective 6	English	48	3	8	
			Technical Elective 4	English	48	3	8	
<b>Total</b>					<b>160</b>	<b>9</b>	<b>8</b>	
Required Credit : 169/172 (MATH 220+230 = MATH 235, students either take both 220 and 230, or just take one 235)								