材料成型及控制工程专业国际学生本科指导性培养计划

表一

课程类别	课程性质	课程编号	课程名称	总学分	总学时(学周)	理论授课学时	实践教学				各学期学时（学周）								考核方式
							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
通识与公共基础课程	必修课	112306-8	汉语1-3	12.0	196	196					64	64	64						闭卷
		112309-10	中国概况1-2	4.0	64	64					32	32							闭卷
		113101-4	体育1-4	4.0	144	120			24		36	36	36	36					综合测评
		109133-4	高等数学B1-2	11.0	176	176					80	96							闭卷
		109115	线性代数	2.0	32	32						32							闭卷
		109102	概率与数理统计	3.0	48	48							48						闭卷
		109211	大学物理B	5.0	80	80						80							闭卷
		109208	大学物理实验	1.5	36		36						36						综合测评
		203104	工程化学	2.5	40	32	8				40								闭卷
		116327	计算机与C程序设计基础	2.0	32	24		8			32								闭卷
		116328	C程序设计	3.0	48	28		20				48							闭卷
		免修课程		14.0	军训、军事理论、思想道德修养与法律基础、中国近现代史纲要、马克思主义基本原理、毛泽东思想和中国特色社会主义理论体系概论、形势与政策。														
		小　　计		64.0	896	800	44	28	24		284	388	184	36					
	选修课	见公共选修课一览表		8.0	160	选修《跨文化交流与国际视野》《西方文化概论》《中国文化概论》和其他5门跨学科门类课程。													

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表二

课程类别	课程性质	课程编号	课程名称	总学分	总学时(学周)	理论授课学时	实践教学				各学期学时（学周）								考核方式
							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
学科基础课程	必修课	301296	材料成型及控制工程专业导论	1.0	16	16					16								综合测评
		202214	工程图学基础A	3.0	48	48					48								闭卷
		202215	机械制图及CAD	3.0	48	40		8				48							闭卷
		002203	机械工程综合测绘A	2.0	2					2		2周							综合测评
		033103	金工实习B	2.0	2					2			2周						综合测评
		209327	理论力学	3.5	56	56							56						闭卷
		209106	计算方法	2.0	32	32							32						闭卷
		209301	材料力学	4.5	72	64	8							72					闭卷
		202109	机械设计基础	4.0	64	58	6							64					闭卷
		002103	机械设计基础课程设计	3.0	3					3				3周					综合测评
		205162	电工技术	4.0	64	52	12							64					闭卷
		302346	机械制造基础	2.0	32	32									32				闭卷
		205163	电子技术	4.0	64	52	12								64				闭卷
		001220	认识实习	1.0	1					1					1周				综合测评
		203111	物理化学B	4.0	64	56	8								64				闭卷
		201315	金属学与热处理	5.0	80	74	6								80				闭卷
		201254	材料加工冶金传输原理	2.5	40	40									40				闭卷
		301276	材料成型控制工程基础	2.0	32	32										32			综合测评
		201226	材料成型检测技术	2.5	40	28	12									40			综合测评

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							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
		小　　计		55.0	752+8周	680	64	8		8	64	48+2周	88+2周	200+3周	280+1周	72			
	必修课（铸造方向）	301110	金属凝固原理	3.0	48	42	6								48				闭卷
		301295	铸造合金及其熔炼	3.0	48	42	6									48			闭卷
		301294	铸造工艺学	3.0	48	42	6									48			闭卷
		301222	特种铸造	2.0	32	28	4									32			闭卷
		301111	材料成型技术B	2.0	32	32										32			综合测评
		301277	铸造设备	2.0	32	32										32			综合测评
		001208	生产实习	3.0	3					3						3周			综合测评
		301112	铸造CAD/CAE	2.0	32	20		12									32		综合测评
		301278	铸造专业英语	2.0	32	32											32		综合测评
		301112	铸造生产管理	1.0	16	16											16		综合测评
		001224	铸造工艺课程设计	3.0	3					3							3周		综合测评
		001233	铸造成型工艺实验	2.0	48		48										48		综合测评
		001211	毕业设计（论文）	15.0	15					15								15周	综合测评
		小　　计		43.0	368+21周	286	70	12		21					48	192+3周	128+3周	15周	
		301258	材料成型原理B	2.0	32	32											32		综合测评

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							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
专业课程	选修课（铸造方向）	301414	冶金原理	2.0	32	32											32		综合测评
		301113	连铸连轧技术	1.5	24	24											24		综合测评
		301114	先进凝固技术与新材料制备	1.5	24	24											24		综合测评
		301290	工程信息检索与科技写作	1.0	16	16											16		综合测评
		301292	铸件质量控制与检验	1.0	16	16											16		综合测评
		301291	铸造技术前沿	1.0	16	16											16		综合测评
		小　　计		10.0	160	160											160		
		至少选6学分																	
	必修课（塑性成形	301263	塑性成形原理	3.0	48	42	6								48				闭卷
		301265	锻造工艺与模具设计	3.0	48	42	6									48			闭卷
		301264	冲压工艺与模具设计	3.0	48	42	6									48			闭卷
		301266	轧制工程学	2.0	32	28	4									32			闭卷
		301115	材料成型技术C	2.0	32	32										32			综合测评
		301257	塑性成形设备	2.0	32	32										32			综合测评
		001208	生产实习	3.0	3周					3						3周			综合测评
		301271	塑性成形CAD/CAE	2.0	32	20		12									32		综合测评

材料成型及控制工程专业国际学生本科指导性培养计划

表二

课程类别	课程性质	课程编号	课程名称	总学分	总学时(学周)	理论授课学时	实践教学				各学期学时（学周）								考核方式
							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
	形方向）	301272	塑性成形专业英语	2.0	32	32											32		综合测评
		301116	塑性成形生产管理	1.0	16	16											16		综合测评
		301117	塑性成形工艺课程设计	3.0	3周					3							3周		综合测评
		301118	塑性成形工艺实验	2.0	48		48										48		综合测评
		001211	毕业设计（论文）	15.0	15周					15								15周	综合测评
		小计		43.0	368+21周	286	70	12		21					48	192+3周	128+3周	15周	
	选修课（塑性成	301259	材料成型原理C	2.0	32	32											32		综合测评
		301268	模具选材与失效分析	2.0	32	32											32		综合测评
		301270	特种塑性成形	1.5	24	24											24		综合测评
		301285	先进材料成型技术与理论	1.5	24	24											24		综合测评
		301290	工程信息检索与科技写作	1.0	16	16											16		综合测评

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表二

课程类别	课程性质	课程编号	课程名称	总学分	总学时(学周)	理论授课学时	实践教学				各学期学时（学周）								考核方式
							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
	成形方向）	301269	塑性成形件质量分析与检测	1.0	16	16											16		综合测评
		301109	模具制造技术	1.0	16	16											16		综合测评
		小计		10.0	160	160											160		
		至少选6学分																	

材料成型及控制工程专业国际学生本科指导性培养计划

表三

课程类别	课程性质	课程编号	课程名称	总学分	总学时	理论授课学时	实践教学				各学期学时								考核方式
							实验学时	上机学时	实践学时	实践学周	一	二	三	四	五	六	七	八	
创新与创业教育	必修课	Y10010	创新创业基础	1.0	32	20			12				32						综合测评
	选修课		创新课程	1.0							至少选修 3.0 学分。 学生可在第3-7学期选修科研创新训练Ⅰ-Ⅴ五个阶段的部分训练。								综合测评
			开放实验	1.0															综合测评
			科研创新训练Ⅰ	0.5															综合测评
			科研创新训练Ⅱ	0.5															综合测评
			科研创新训练Ⅲ	0.5															综合测评
			科研创新训练Ⅳ	0.5															综合测评
			科研创新训练Ⅴ	0.5															综合测评
			创新创业项目	2.0							至少获得 2.0 学分，不占总学分								
第二课堂				2.0							至少获得 2.0 学分，不占总学分								

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 1

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
General and public courses	Compu-lsory	112306-8	Chinese Language 1-3	12.0	196	196					64	64	64						Test
		112309-10	A Survey of China 1-2	4.0	64	64					32	32							Test
		113101-4	Physical Education 1-4	4.0	144	120			24		36	36	36	36					Comprehensive assessment
		109133-4	Advanced Mathematics BⅠ-II	11.0	176	176					80	96							Test
		109115	Linear Algebra	2.0	32	32						32							Test
		109102	Probability and statistics	3.0	48	48							48						Test
		109211	Physics B	5.0	80	80						80							Test
		109208	Physics Experiment	1.5	36		36						36						Comprehensive assessment
		203104	Engineering Chemistry	2.5	40	32	8				40								Test
		116327	Computer and C programming basics	2.0	32	24		8			32								Test
		116328	C language programming	3.0	48	28		20				48							Test
		Exemption		14.0	Military Training, Military theory, Ideological and moral cultivation and legal basis, The outline of modern Chinese history, The fundamental tenets of Marxism, An introduction to Mao Zedong thought and the theoretical system of socialism with Chinese characteristics, Situation and Policy.														
		Sub-total		64.0	896	800	44	28	24		284	388	184	36					
	Option-al	Select from the list of public optional courses		8.0	160	Select <Cross-cultural Communication and International Vision> <An Introduction to Western Culture> <An Introduction to Chinese Culture> and other 5 interdisciplinary courses													

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
Discipline Basic Courses	Compu-lsory	301296	Introduction to Materials Processing Engineering	1.0	16	16					16								Comprehensive assessment
		202214	Engineering Graphics Foundation A	3.0	48	48					48								Test
		202215	Mechanical Drawing and CAD	3.0	48	40		8				48							Test
		002203	Mechanical Engineering Measuring A	2.0	2					2		2 weeks							Comprehensive assessment
		033103	Training of Metal Process Technology B	2.0	2					2			2 weeks						Comprehensive assessment
		209327	Theoretical Mechanics	3.5	56	56							56						Test
		209106	Computational Method	2.0	32	32							32						Test
		209301	Mechanics of Matericals	4.5	72	64	8							72					Test
		202109	Fundamentals of Machine Design	4.0	64	58	6							64					Test
		002103	Practice of Fundamentals of Machine Design	3.0	3					3				3 weeks					Comprehensive assessment
		205162	Electrotechnics	4.0	64	52	12							64					Test
		302346	Fundamentals of Machine Manufacturing	2.0	32	32									32				Test
		205163	Electronics Technology	4.0	64	52	12								64				Test
		001220	Cognition Practice	1.0	1					1					1 week				Comprehensive assessment
		203111	Physical Chemistry B	4.0	64	56	8								64				Test

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
		201315	Physical Metallurgy and Heat Treatment	5.0	80	74	6								80				Test
		201254	Transfer Principle in Materials Forming Process and Metallurgy	2.5	40	40									40				Test
		301276	Control Engineering Foundation in Materials Forming Process	2.0	32	32										32			Comprehensive assessment
		201226	Measuring and Testing Technology of Materials Forming Process	2.5	40	28	12									40			Comprehensive assessment
		Sub-total		55.0	752+8	680	64	8		8	64	48+2 weeks	88+2 weeks	200+3 weeks	280+1 week	72			
	Compu-lsory	301110	Fundamentals of Metal Solidification	3.0	48	42	6								48				Test
		301295	Casting Alloy and Melting	3.0	48	42	6									48			Test
		301294	Foundry Technology	3.0	48	42	6									48			Test
		301222	Special Casting	2.0	32	28	4									32			Test
		301111	Materials Processing Technology B	2.0	32	32										32			Comprehensive assessment
		301277	Equipments for Foundry Technology	2.0	32	32										32			Comprehensive assessment
		001208	Production Practice: Casting	3.0	3					3						3 weeks			Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
	(Casting)	301112	Casting CAD/CAE Technology	2.0	32	20		12									32		Comprehensive assessment
		301278	Casting of Alloys	2.0	32	32											32		Comprehensive assessment
		301112	Foundry production management	1.0	16	16											16		Comprehensive assessment
		001224	Course Design of Foundry Technology	3.0	3					3							3 weeks		Comprehensive assessment
		001233	Experiments on Casting Process	2.0	48		48										48		Comprehensive assessment
		001211	Graduation Design or Thesis	15.0	15					15								15 weeks	Comprehensive assessment
		Sub-total		43.0	368+21	286	70	12		21					48	192+3 weeks	128+3 weeks	15 weeks	
	Option-al (Casting)	301258	Principle of Materials Forming B	2.0	32	32											32		Comprehensive assessment
		301414	Metallurgical Principle	2.0	32	32											32		Comprehensive assessment
		301113	Principle and Processing of Continuous Steel Casting	1.5	24	24											24		Comprehensive assessment
		301114	Advanced Solidification Technology and preparation of new materials	1.5	24	24											24		Comprehensive assessment
		301290	Engineering Information Searching and Scientific Papers Writing	1.0	16	16											16		Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
Special-ized Course		301292	Casting Quality Control and Inspection	1.0	16	16											16		Comprehensive assessment
		301291	Advanced Forming Technology	1.0	16	16											16		Comprehensive assessment
		Sub-total		10.0	160	160											160		
		Choose at least 6 credits																	
	Compu-lsory (Plastic Formin g)	301263	Priciple of Metal Plastic Forming	3.0	48	42	6								48				Test
		301265	Forging Technology and Die Design	3.0	48	42	6									48			Test
		301264	Stamping Technology & Die Design	3.0	48	42	6									48			Test
		301266	Rolling Engineering	2.0	32	28	4									32			Test
		301115	Materials Processing Technology C	2.0	32	32										32			Comprehensive assessment
		301257	Equipments for Metal Plastic Forming	2.0	32	32										32			Comprehensive assessment
		001208	Production Practice: Plastic Forming	3.0	3					3						3 weeks			Comprehensive assessment
		301271	CAD/CAE Technology of Plastic Forming	2.0	32	20		12									32		Comprehensive assessment
		301272	English for Metal Forming	2.0	32	32											32		Comprehensive assessment
		301116	production Management of Plastic Forming	1.0	16	16											16		Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
		301117	Course Design for Plastic Forming Technology	3.0	3					3							3 weeks		Comprehensive assessment
		301118	Experiments on Plastic Forming	2.0	48		48										48		Comprehensive assessment
		001211	Graduation Design or Thesis	15.0	15					15								15 weeks	Comprehensive assessment
		Sub-total		43.0	368+21	286	70	12		21					48	192+3 weeks	128+3 weeks	15 weeks	
	Option-al (Plastic Forming)	301259	Principle of Materials Forming C	2.0	32	32											32		Comprehensive assessment
		301268	Materials Selection and Failure Analysis of Die and Mould	2.0	32	32											32		Comprehensive assessment
		301270	Special Plastic Forming	1.5	24	24											24		Comprehensive assessment
		301285	Advanced Materials Forming Technology and Theory	1.5	24	24											24		Comprehensive assessment
		301290	Engineering Information Searching and Scientific Papers Writing	1.0	16	16											16		Comprehensive assessment
		301269	Quality analysis and detection of plastic deformation parts	1.0	16	16											16		Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
		301109	Die & Mould Manufacturing Technology	1.0	16	16											16		Comprehensive assessment
		Sub-total		10.0	160	160											160		
		Choose at least 6 credits																	

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Materials Processing Engineering*

Table 3

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theore-tical teaching hours	Experiment & Internship				Semester hours(weeks)								Assessment method
							Experimental hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
Innovation and Entrepreneurship	Compu-lsory	Y10010	Foundation of Innovation and Entrepreneurship	1.0	32	20			12				32						Comprehensive assessment
	Option-al		Innovation Courses	1.0							Earn at least 3.0 credits. Students can take part in part or all of Research Training Ⅰ-Ⅴ in semester 3-7.								Comprehensive assessment
			Open Experiments	1.0															Comprehensive assessment
			Research Training Ⅰ	0.5															Comprehensive assessment
			Research Training Ⅱ	0.5															Comprehensive assessment
			Research Training Ⅲ	0.5															Comprehensive assessment
			Research Training Ⅳ	0.5															Comprehensive assessment
			Research Training Ⅴ	0.5															Comprehensive assessment
			Innovation and Entrepreneurship Projects	2.0							Earn at least 2.0 credits. BUT those credits are not included in the graduation credits.								
Second Classroom Activities				2.0							Earn at least 2.0 credits. BUT those credits are not included in the graduation credits.								