过程装备与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
		109133-34	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
		109201	大学物理	6.0	96	96						96							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		51.0	912	816	44	28	24	0	284	404	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	202216	工程图学基础B	3.0	48	48					48								闭卷
		202217	机械制图基础及CAD	2.5	40	34		6				40							综合测评
		203210	公差配合与化工制图B	2.5	40	40							40						综合测评
		201312	工程材料	2.5	40	36	4						40						闭卷
		209327	理论力学	3.5	56	56							56						闭卷
		209301	材料力学	4.5	72	64	8							72					闭卷
		205164	电工学基础	5.0	80	64	16							80					闭卷
		203201	工程热力学A（双语教学）	3.5	56	52	4							56					闭卷
		203211	传热学	2.5	40	36	4								40				闭卷
		203205	化工流体力学(双语教学)	3.0	48	44	4								48				闭卷
		202109	机械设计基础	4.0	64	58	6								64				闭卷
		202306	机械制造基础	3.0	48	48									48				闭卷
		209106	计算方法	2.0	32	24		8							32				闭卷
		203212	过程工程原理	3.5	56	48	8									56			闭卷
		033110-1	金工实习A1-2	4.0	4周					4		2周	2周						综合测评
		005103	电装实习	2.0	2周					2				2周					综合测评
		002204	机械工程综合测绘B	1.0	1周					1				1周					综合测评
		002103	机械设计基础课程设计	3.0	3周					3					3周				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	
		003221	化工单元过程课程设计	2.0	2周					2							2周		综合测评
		小　　计		57.0	720+12周	652	54	14		12	48	40+2周	136+2周	208+3周	232+3周	56	2周		
专业课程	必修课	303220	过程流体机械（项目式教学）	4.0	64	58	6									64			闭卷
		303221	过程设备设计(项目式教学)	4.0	64	58	6									64			闭卷
		303229	过程装备控制技术及应用	2.0	32	28	4										32		闭卷
		303224	阀门设计	2.0	32	30	2									32			闭卷
		303228	过程装备与控制工程导论	1.0	16	16					16								综合测评
		003203	认识实习	1.0	1周					1		1周							综合测评
		003217	过程设备课程设计	2.0	2周					2						2周			综合测评
		003205	专业应用软件综合训练	2.0	2周					2							2周		综合测评
		003218	生产实习	3.0	3周					3							3周		综合测评
		003219	毕业设计	15.0	15周					15								15周	综合测评
		小　　计		36.0	208+23周	190	18			23	16	1周				160+2周	32+5周	15周	
		303223	流体密封技术*	2.0	32	30	2								32				综合测评
		303211	过程装备成套技术*	2.0	32	32											32		综合测评

过程装备与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	
	选修课	303215	过程装备制造技术*	2.0	32	32										32			综合测评
		303222	过程装备测试技术	2.0	32	32										32			综合测评
		303219	制冷技术	2.0	32	32											32		综合测评
		303102	过程装备腐蚀与防护	2.0	32	32										32			综合测评
		小　　计		12.0	192	190	2									96	64		
		至少选 6 学分，其中带 * 为建议选修																	

过程装备与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 *Process Equipment and Control 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 B1-2	11.0	176	176					80	96							Test
		109115	linear Algebra	2.0	32	32						32							Test
		109102	Probability and Mathematical Statistics	3.0	48	48							48						Test
		109201	College PhysicsA	6.0	96	96							96						Test
		203104	Engineering Chemistry	2.5	40	32	8					40							Test
		109208	College Physics Experiment	1.5	36		36							36					Comprehensive assessment
		203104	Engineering Chemistry	2.5	40	32	8				40								Test
		116327	Computer& C Programming basics	2.0	32	24		8			32								Test
		116328	C Programming Design	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		53.5	952	848	52	28	24		285	350	247	76					
	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 *Process Equipment and Control 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	202216	Engineering Graphics Foundation B	3.0	48	48					48								Test
		202217	Mechanical Drawing and CAD	2.5	40	34		6				40							Comprehensive assessment
		203210	Tolerance and Chemical Drawing B	2.5	40	40							40						Comprehensive assessment
		201312	Engineering Materials	2.5	40	36	4						40						Test
		209327	Theoretical Mechanics	3.5	56	56							56						Test
		209301	Mechanics of Matericals	4.5	72	64	8							72					Test
		205164	Fundamentals of Electrotechnics	5.0	80	64	16							80					Test
		203201	Engineering Thermodynamics A	3.5	56	52	4							56					Test
		203211	Heat transfer	2.5	40	36	4								40				Test
		203205	Hydrodynamics in Chemical Engineering	3.0	48	44	4								48				Test
		202109	Fundamentals of Machine Component Design	4.0	64	58	6								64				Test
		202306	Fundamentals of Machine Manufacturing	3.0	48	48									48				Test
		209106	Computational Method	2.0	32	24		8							32				Test
		203212	Process Engineering Principles	3.5	56	48	8									56			Test
		033110-1	Training of Metal Process Technology A1-2	4.0	4					4		2 weeks	2 weeks						Comprehensive assessment
		005103	Denso Internship	2.0	2					2				2 weeks					Comprehensive assessment
		002204	Mechanical Engineering Measuring A	1.0	1					1				1 week					Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Process Equipment and Control 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	
		002103	Practice of Machine Component Design	3.0	3					3					3 weeks				Comprehensive assessment
		003221	Course Design of Chemical Unit Process	2.0	2					2							2 weeks		Comprehensive assessment
		Sub-total		57.0	720+12 weeks	652	54	14		12	48	40+2 weeks	136+2 weeks	208+3 weeks	232+3 weeks	56	2 weeks		
Special-ized Course	Compu-lsory	303220	Fluid machine	4.0	64	58	6									64			Test
		303221	Process Equipment Design	4.0	64	58	6									64			Test
		303229	Techniques and Application of Process Equipment Control	2.0	32	28	4										32		Test
		303224	The Valve Design	2.0	32	30	2									32			Test
		303228	Introduction to Process Equipment and Control Engineering	1.0	16	16					16								Comprehensive assessment
		003203	Cognition practice	1.0	1					1		1 week							Comprehensive assessment
		003217	Course Design of Process Equipment	2.0	2					2						2 weeks			Comprehensive assessment
		003205	Training of Application Professional Software	2.0	3					2							2 weeks		Comprehensive assessment
		003218	Production Practice	3.0	3					3							3 weeks		Comprehensive assessment
		003219	Graduation Design	15.0	15					15								15 weeks	Comprehensive assessment
		Sub-total		36.0	208+23 weeks	190	18			23	16	1 week				160+2 weeks	32+5 weeks	15 weeks	

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Process Equipment and Control 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	
	Option-al	303223	Fluid Sealing Technique*	2.0	32	30	2								32				Comprehensive assessment
		303211	Process Equipment Set Technology*	2.0	32	32											32		Comprehensive assessment
		303215	Fabrication of Process Equipment*	2.0	32	32										32			Comprehensive assessment
		303222	Testing Tech nique of Process Equipment	2.0	32	32										32			Comprehensive assessment
		303219	Refrigeration Technique	2.0	32	32											32		Comprehensive assessment
		303102	Corrosion and Protection of Process Equipment	2.0	32	32										32			Comprehensive assessment
		Sub-total		10.0	160	160										96	64		
		Choose at least 6 credits,*is necessary																	

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Process Equipment and Control 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.								