焊接技术与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
		109131-32	高等数学A1-2	12	192	192					96	96							闭卷
		109115	线性代数	2	32	32						32							闭卷
		109102	概率与数理统计	3	48	48							48						闭卷
		109201	大学物理B1-2	5	80	80						48	32						闭卷
		109208	大学物理实验	1.5	36		36						36						综合测评
		116327	计算机与C程序设计基础	2	32	24		8			32								闭卷
		116328	C程序设计	3	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		48.5	872	784	36	28	24		260	356	216	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。													

焊接技术与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	
学科基础课程	必修课	33103	金工实习	2	2					2		2周							综合测评
		209305	工程力学	5.5	88	80	8						88						闭卷
		202216	工程图学基础B	3	48	48					48								闭卷
		202217	机械制图基础及CAD	2.5	40	34		6				40							综合测评
		202109	机械设计基础	4	64	58	6							64					闭卷
		2101	机械设计课程基础课程设计	4	4					4				4周					综合测评
		302346	机械制造基础	2	32	32									32				闭卷
		205164	电工学基础	5	80	64	16							80					闭卷
		205141	微机原理及应用	4	64	52	12									64			闭卷
		203104	工程化学	2.5	40	32	8					40							闭卷
		203111	物理化学B	4	64	56	8							64					闭卷
		201357	材料科学基础A	5	80	72	8								80				闭卷
		201507	传感与检测	2	32	28	4									32			综合测评
		301261	材料成型原理A	2	32	32									32				闭卷
		201350	材料分析方法B	2	32	26	6								32				闭卷
		201359	材料力学性能B	2	32	28	4									32			闭卷
			材料加工自动控制基础	4	64	64									64				闭卷
		301531	焊接专业导论	1	16	16					16								综合测评

焊接技术与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	
		小　　计		56.5	808+6周	722	80	6		6	80	80+2周	88	208+4周	240	128			
专业课程	必修课	301525	焊接物理(双语)	3	48	48									48				闭卷
		201501	焊接冶金学	2	32	26	6								32				闭卷
		301532	金属材料焊接工艺	2	32	28	4									32			闭卷
		301533	现代弧焊电源及控制	2	32	28	4								32				闭卷
		301534	熔焊方法及设备	2	32	26	6								32				闭卷
		301504	焊接结构与设计	2	32	28	4									32			闭卷
		301223	无损检测	2	32	26	6									32			综合测评
		001513	焊接工艺评定	3	3周					3						3周			综合测评
		001516	焊接装备课程设计	3	3周					3							3周		综合测评
		001517	焊接电源课程设计	2	2周										2周				综合测评
		001511	认识实习	1	1周					1				1周					综合测评
		001512	生产实习	3	3周					3						3周			综合测评
		001515	毕业设计	15	15周					15								15周	综合测评
		小　　计		42.0	240+28周	210	30			25				1周	144+2周	96+6周	3周	15周	

焊接技术与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	301536	焊接生产与管理	1	16	16										16			综合测评
		301538	焊接成形技术专业外语(双语)	2	32	32										32			综合测评
		301539	焊接机器人技术及自动化	1	16	16										16			综合测评
			焊接数值模拟	2	32	32											32		综合测评
			焊接生产辅助装备	2	32	32										32			综合测评
		301530	表面工程	2	32	32										32			综合测评
		301537	先进连接技术	2	32	32											32		综合测评
		小　　计		12.0	192	192										128	64		
		至少选7学分,其中《焊接生产与管理》，《焊接成形技术专业外语(双语)》，《焊接机器人技术及自动化》，《焊接生产辅助装备》为限选课																	

焊接技术与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			国际焊接工程师培训	2.0	158	158					至少获得 2.0 学分，不占总学分								

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Welding Technology and 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	32	32						32							Test
		109102	Probability and mathematical statistics	3	48	48							48						Test
		109201	College physicsB1-2	5	80	80						48	32						Test
		109208	Experiment of college physics	1.5	36		36						36						Comprehensive assessment
		116327	Computer and C language programming basics	2	32	24		8			32								Test
		116328	C language programming	3	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		47.5	856	768	36	28	24		244	356	216	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 *Welding Technology and 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	301531	Introduction to Welding technology and Engineering	1	16	16					16								Comprehensive assessment
		33103	Metalworking practice	2	2					2		2 weeks							Comprehensive assessment
		209305	Engineering mechanics	5.5	88	80	8						88						test
		202216	Fundamentals of engineering darwings B	3	48	48					48								test
		202217	Fundamentals of mechanical drawing and CAD	2.5	40	34		6				40							Comprehensive assessment
		202109	Fundamentals of mechanical design	4	64	58	6							64					test
		2101	Course projectfor mechanical design course	4	4					4				4 weeks					Comprehensive assessment
		302346	Fundamental of mechanical manufacture	2	32	32									32				test
		205164	Fundamentals of electrical engineering	5	80	64	16							80					test
		205141	Principle and Application of microcomputer	4	64	52	12									64			test
		203104	Engineering chemistry	2.5	40	32	8					40							test
		203111	Physical chemistry B	4	64	56	8							64					test
		201357	Fundamentals of material scienceA	5	80	72	8								80				test
		201507	Sensing and detection	2	32	28	4									32			Comprehensive assessment
		301261	Principle of material formingA	2	32	32									32				test

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Welding Technology and 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	
		201350	Methods of material analysis B	2	32	26	6								32				test
		201359	Mechanical properties of materials B	2	32	28	4									32			test
			Automatic control of materials processes	4	64	64									64				test
		Sub-total		56.5	802+3 weeks	722	80			6	64	80+2 weeks	88	208+4 weeks	240	128			
Special	Compu-lsory	301525	Welding physics	3	48	48									48				test
		201501	Welding metallurgy	2	32	26	6								32				test
		301532	Welding technology of metal materials	2	32	28	4									32			test
		301533	Modern arc welding power supply and control	2	32	28	4								32				test
		301534	Welding method and equipment	2	32	26	6								32				test
		301504	Design of welding structure	2	32	28	4									32			test
		301223	NDT(nondestructive testing)	2	32	26	6									32			Comprehensive assessment
		001513	WPQ(welding procedure qualification)	3	3					3						3 weeks			Comprehensive assessment
		001516	Course design of welding equipment	3	3					3							3 weeks		Comprehensive assessment
		001517	Course design of welding power supply	2	2										2 weeks				Comprehensive assessment
		001511	Cognitive practice	1	1					1				1 weeks					Comprehensive assessment

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Welding Technology and 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	
-ized Course		001512	Production practice	3	3					3						3 weeks			Comprehensive assessment
		001515	Graduation thesis	15	15					15								15 weeks	Comprehensive assessment
		Sub-total		42.0	240+28 weeks	210	30			25				1week	144+2 weeks	96+6 weeks	3 weeks	15 weeks	
	Option-al	301536	Production and management of Welding	1	16	16										16			Comprehensive assessment
		301538	Professional english for Welding	2	32	32										32			Comprehensive assessment
		301539	Welding robot technology and automation	1	16	16										16			Comprehensive assessment
			Welding numerical simulation	2	32	32											32		Comprehensive assessment
			Auxiliary equipment for welding	2	32	32										32			Comprehensive assessment
		301530	Surface engineering	2	32	32										32			Comprehensive assessment
		301537	Advanced joining technology	2	32	32											32		Comprehensive assessment
		Sub-total		12.0	192	192										128	64		
		At least 7 credits, select <Professional english for Welding> <Production and management of Welding> <welding robot technology and automation> <Auxiliary equipment for welding>																	

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Welding Technology and 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			International welding engineer training	2.0	158	158					Earn at least 2.0 credits. BUT those credits are not included in the graduation credits.								