

机械电子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			40								闭卷
		116328	C程序设计	3.0	48	28		20				40							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			50.0	896	800	44	28	24	0	292	300	228	72					
	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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							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	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
		209307	理论力学	4.5	72	72							72						闭卷
		209301	材料力学	4.5	72	64	8							72					闭卷
		202107	机械原理	4.0	64	60	4							64					闭卷
		202101	机械设计	4.0	64	58	6								64				闭卷
		205162	电工技术	4.0	64	52	12							64					闭卷
		205163	电子技术	4.0	64	52	12								64				闭卷
		205141	微机原理与应用	4.0	64	52	12									64			闭卷
		204111	液压流体力学	3.5	56	52	4								56				闭卷
		304319	流体控制工程	3.5	56	56										56			闭卷
		209103	复变函数与积分变换	3.0	48	48							48						闭卷
		201312	工程材料	2.5	40	36	4								40				闭卷
		202505	互换性与技术测量	2.0	32	28	4								32				闭卷
		204321	流体控制工程实验	1.0	24		24									24			综合测评
		033110-1	金工实习A1-2	4.0	4周					4		2周	2周						综合测评
		002203	机械工程综合测绘A	2.0	2周					2				2周					综合测评
		002102	机械原理课程设计	2.0	2周					2				2周					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	
		002108	机械设计课程设计	3.0	3 周					3					3周				综合测评
		209106	计算方法	2.0	32	24		8							32				闭卷
		204204	热工基础	2.0	32	32									32				闭卷
		005109	微机原理及应用课程设计	2.0	2周					2						2周			综合测评
		小 计		67.5	880+13周	774	90	16		13	48	48+2周	120+2周	200+4周	320+3周	144+2周			
专业课程	必修课	304239	液压元件	3.5	56	52	4									56			闭卷
		304318	液压传动系统	2.5	40	36	4										40		闭卷
		304307	气压传动与控制A	2.5	40	38	2										40		闭卷
		304326	液压控制系统	2.5	40	40											40		闭卷
		304311	液压系统测试与微机控制	2.0	32	32											32		闭卷
		304353	液压元件与系统制造工艺学	2.0	32	32										32			综合测评
		304262	专业导论	1.0	16	8			8		16								综合测评
		004236	专业课程设计	4.0	4周					4							4周		综合测评
		004237	生产实习	2.0	2周					2						2周			综合测评
		004215	毕业设计与实践	15.0	15周					15								15周	综合测评
		小 计		37.0	256+21周	238	10		8	21	16					88+2周	152+4周	15周	

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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	
	选修课	304354	液压技术进展	1.5	24	24										24		综合测评	
		304252	新能源概论	2.0	32	32										32		综合测评	
		小 计		3.5	56	56										56			
		至少选 1.5 学分，《液压技术进展》必选，《新能源概论》任选。																	

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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															
	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 *Mechatronic 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
							Experimen-tal hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8	
General and public courses	Compu-Isory	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 MathematicsB1-2	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
		109211	college physics B	5.0	80	80							80						Test
		109208	Physical Experiment of College	1.5	36		36							36					Comprehensive assessment
		203104	Engineering chemistry	2.5	40	32	8				40								Test
		116327	Computer and C Programming Language Basis	2.0	32	24		8			40								Test
		116328	Programming in C	3.0	48	28		20				40							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			50.0	896	800	44	28	24		293	302	231	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 *Mechatronic Engineering*

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theoretical 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	Computational	202214	Fundamentals of Engineering Graphics A	3.0	48	48					48								Test
		202215	Engine Drawing and CAD	3.0	48	40		8				48							Test
		209307	Theoretical Mechanics	4.5	72	72							72						Test
		209301	Mechanics of Materials	4.5	72	64	8							72					Test
		202107	Principle of Mechanics	4.0	64	60	4							64					Test
		202101	Mechanical Design	4.0	64	58	6								64				Test
		205162	Electrotechnical	4.0	64	52	12							64					Test
		205163	Electronic technology	4.0	64	52	12								64				Test
		205141	Microcomputer principle and application	4.0	64	52	12									64			Test
		204111	Hydro-mechanics	3.5	56	52	4								56				Test
		304319	Fluid Control Engineering	3.5	56	56										56			Test
		209103	Complex variable function and integral transformation	3.0	48	48							48						Test
		201312	Engineering Material	2.5	40	36	4								40				Test
		202505	Elementary Technology of Exchangeability Measurement	2.0	32	28	4								32				Test
		204321	Fluid control engineering experiment	1.0	24		24									24			Comprehensive assessment
		033110-1	Metalworking PracticeA1-2	4.0	4					4		2 weeks	2 weeks						Comprehensive assessment
		002203	Comprehensive Surveying of Mechanical Engineering A	2.0	2					2				2 weeks					Comprehensive assessment
		002102	Course Exercise of Mechanical Principle	2.0	2					2				2 weeks					Comprehensive assessment

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

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theoretical 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	
		002108	Course Exercise in Mechanical Design	3.0	3					3					3 weeks				Comprehensive assessment
			Calculation method	2.0	32	24		8							32				Test
		204204	Basis of Heat Engineering	2.0	32	32									32				Test
		005109	Microcomputer principle and application course design	2.0	2					2						2 weeks			Comprehensive assessment
		Sub-total		67.5	880+13 weeks	774	90	16		13	48	48+2 weeks	120+2 weeks	200+4 weeks	320+3 weeks	144+2 weeks			
Special-ized Course	Computing	304239	Hydraulic Components	3.5	56	52	4									56			Test
		304318	Hydraulic Transmission System	2.5	40	36	4										40		Test
		304307	Pneumatic Transmission and control A	2.5	40	38	2										40		Test
		304326	Hydraulic Control System	2.5	40	40											40		Test
		304311	Hydraulic system testing and microcomputer control	2.0	32	32											32		Test
		304353	Manufacturing Process of Hydraulic Components and System	2.0	32	32										32			Comprehensive assessment
		304262	Introduction of Major Courses	1.0	16	8			8		16								Comprehensive assessment
		004236	Course Design for Specialty	4.0	4					4							4 weeks		Comprehensive assessment
		004237	Practice on Fluid Power Components	2.0	2					2						2 weeks			Comprehensive assessment
		004215	Graduation Project and Practice	15.0	15					15								15 weeks	Comprehensive assessment

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

Table 2

Course Category	Course type	Course code	Course name	Course credits	Hours (Weeks)	Theoretical 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	
		Sub-total		37.0	256+21 weeks	238	10		8	21	16					88+2 weeks	152+4 weeks	15 weeks	
	Optional	304354	Hydraulic Technique Progress	1.5	24	24											24		Comprehensive assessment
		304252	Introduction to New Energy	2.0	32	32											32		Comprehensive assessment
		Sub-total		2.0	32	32											56		
	Choose at least 1.5 credits,Compulsory Course: 《Hydraulic Technique Progress》 ,OptionalCourse: 《Introduction to New Energy》 .																		

Courses and Teaching Plan for Undergraduate Foreign Students majoring in *Mechatronic 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	
							Experimen- tal hours	Computer study hours	Field practice hours	Field practice weeks	1	2	3	4	5	6	7	8		
Innovation and Entrepreneurship	Compulsory	Y10010	Foundation of Innovation and Entrepreneurship	1.0	32	20			12					32					Comprehensive assessment	
	Optional		Innovation Courses	1.0								Earn at least 3.0 credits.								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								Students can take part in part or all of Research Training I - V in semester 3-7.	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.							