



長春工業大學

CHANGCHUN UNIVERSITY OF TECHNOLOGY

2014
1952-2014

本科人才 培养方案

(化学与生命科学学院卷)

教 务 处

二〇一四年八月

2014	1	
"	"	13
2014	19	
2014	21	
	22	
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080201	27	
080201	36	
080205	45	
120701	53	
080204	61	
080207	69	
080405	79	
080203	88	
080402	.....	99
080801	.....	107
080601	.....	116
080301	.....	125

080901	135
080701	146
080903	156
080902	166
120201K	177
120102	186
020401	195
120801	205
120202	214
120203K	223
020301K	231
120204	239
081301	247
080407	255
081302	264
082502	273
081303T	281
082701	289
071002	298
083001	306
070301	314
070102	323
071201	331

030101K	339
030302	347
120401	356
050303	365
120403	373
050201	383
050207	392
050202	400
130502	409
130503	418
130310	430
130305	439
080906	447
081602	457
130505	466
.....	475

关于修（制）订 2014 年版本科人才培养方案的原则意见

一、指导思想

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二、基本原则

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五、“卓越工程师教育培养计划”试点专业的人才培养方案

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长春工业大学本科人才培养方案构成及学分比例分配表

		15	7.0%	15	7.0%
		15	7.0%	15	7.0%
		36.5	16.9%	20.5	9.5%
		7	3.2%	7	3.2%
		43.5	20.1%	27.5	12.7%
		48	22.3%	69	32.0%
		5	2.3%	5	2.3%
		53	24.6%	74	34.3%
		16	7.5%	16	7.5%
		16	7.5%	16	7.5%
		32	15%	32	15%
		1	0.4%	1	0.4%
		8	3.7%	8	3.7%
		9	4.1%	9	4.1%
		55	25.5%	50	23.2%
		8	3.7%	8	3.7%
		171.5	79.6%	171.5	79.6%
		44	20.4%	44	20.4%
		215.5	100%	215.5	100%
		116.5	75.4%	121.5	76.2%
		38	24.6%	38	23.8%
		154.5	100%	159.5	100%

长春工业大学有关课程设置及教学安排指导方案

		423101112		2	32	1
		423201111		2	32	3
		423301111		2	32	4
		423401111		3	48	5
		423501112 ~ 423508112		2	32	1-8
		405101111		2	32	4
		410501211 410502211 410503211 410504211	A1—4	15	240	1—4
		410505211 410506211 410507211 410508211	B1—4	12	192	1—4
		408101211 408102211	A1 A2	10	160	1—2
		408103211 408104211	B1 B2	9	144	1—2
		408135211		4	64	1
		408401211 408402211	A1 A2	6	96	2—3
		408403211	B	5	80	2 3
		408404211	C	4	64	2 3
		408405212 408406212	A1 A2	3	48	3—4
		408407212	B	2	32	3 4
		414101211		1.5	24	1
		414103211	A	4	64	2
		414104211	B	4.5	72	2
		415101222 415102222 415103222 415104222	1-4	7	108	1—4
						7

		408106311		2	32	3—4	4
		408110311		2	32		
		408108311		1	20		
		408109311		1	20		
		408127311		2	32		
		408107311		3	48		
		425101512		0.5	8	2	
		425102512		0.5	8	6	
		425201512		—	2	1	
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				1	16	16	

长春工业大学本科（四年制）实践教学平台有关课程安排

		0.5		1		
		3.5	3.5	1		
		1	1	1		
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		1-2	1-2			
	A	6	6			
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		1	1			
	A	2	2			
	B	1	1			
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						7-8
		2-4	2-4			
		12-14	12-14			

创新、创业教育平台实践模块学分认定标准表

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		15	7.0%
		15	7.0%
		36.5	16.9%
		7	3.2%
		43.5	20.1%
		48	22.3%
		5	2.3%
		53	24.6%
		16	7.5%
		16	7.5%
		32	15%
		1	0.4%
		8	3.7%
		9	4.1%
		55	25.5%
		8	3.7%
		171.5	79.6%
		44	20.4%
		213.5	215.5
		116.5	75.4%
		38	24.6%
		154.5	100%

8-10		0.5			
		3.5	3.5		
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		1	1		
		3	3		
	E				
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6-8					
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12-14	/				
	E				
	E				
	E				
18-20					
	E	2-4	2-4		
	E	12-14	12-14		
	E				
	E				

长春工业大学 2014 年招生本科专业一览表

1			080201	
2			080205	
3			120701	
4			080204	
5			080207	
6			080405	
7			080203	
8			080402	
9			080801	
10			080601	
11			080301	
12			080901	
13			080701	
14			080903	
15			080902	
16			120201K	
17			120102	
18			020401	
19			120801	
20			120202	
21			120203K	
22			020301K	
23			120204	

24			081301	
25			080407	
26			081302	
27			082502	
28			081303T	
29			082701	
30			071002	
31			083001	
32			070301	
33			070102	
34			071201	
35			030101K	
36			030302	
37			120401	
38			050303	
39			120403	
40			050201	
41			050207	
42			050202	
43			130502	
44			130503	
45			130310	
46			130305	
47			080906	

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2014

长春工业大学教研室序号一览表

	01		1
			2
			3
			4
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	02		1
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	03		1
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			3
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			5
			6
	04		1
			2
			3
			4
	05		1
			2
			3
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			8

	06		1
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			6
			7
	07		1
			2
			3
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	08		1
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	09		1
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	15		1
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			5
			6
	16		1
	17		1
			2
			3
	19		1
	23		1
			2
			3
			4
			5
			6
			7
	24		1
			2
			3
			4
			5
			6
			7
	25		1
	34		1
			2

本科人才培养方案表格中有关符号说明

1

LX	KS	BS	WJ	K	J
RX	GS	DZ	GX	JX	SX
	BX	R	B	GL	SJ
					KX

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5q9	1	5		5	
2 3	q9		9		
5h7	1	5		5	
2 3	h7		7		

化学与生命科学学院
School of Chemistry and Life Science

本科人才培养方案
**The Cultivating Program for
Undergraduate**

食品科学与工程专业（082701）培养计划

(The Cultivating Program for Undergraduate of Food Science and Engineering)

一、专业简介及特色

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二、培养目标

三、培养要求

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四、主干学科

五、核心课程

六、学制及授予学位

七、专业人才培养标准实现矩阵

八、课程结构比例表

十、食品科学与工程专业理论课程总表及教学安排

Table of Courses

Course Code	Course Names	Crns.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	16	18	18	11	10	
humanity and Society Science Courses Platform														
Compulsory		13	208											
423101112	Moral Character Cultivation and Basis of Law	2	32	32			2							
423201111	Outline of China's Modern History	2	32	32					2					
423301111	Introduction to Basic Principles of Marxism	2	32	32						2				
423401111	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	3	48	48							2.5			
423501112 ~ 423508112	Situation and Policy	2	32	32										
416101112	Military Theory	2	36	36										
405101111	Economic Management Base	2	32	32						2				
Whole		15	244	244			4.5		2	4	2.5			
Common Basic Subject Courses Platform														
Compulsory		35.5	568											
410101211 410102211 410103211 410104211	()A1-4 College Foreign Language (E) A1-4	15	240	240			3	3.5	4	3.5				
408103211 408104211	B1 B2 Advanced Mathematics B1 B2	9	144	144			4.5	4						
408404211	C University Physics C	4	64	64				3.5						
408407212	B Experimental Physics B	2	32		32				2					
414101211	College Basic Computer	1.5	24	12		12	1.5							
414103211	A C Computer Program Design A C	4	64	44		20		3.5						
Elective		7	108											
415101222 415102222 415103222 415104222	Physical Education	7	108	108			2	1.5	2	1.5				
Whole		42.5	676	612	32	32	11	16	8	5				

Course Code	Course Names	Crs.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	16	18	18	11	10	
Basic Courses Platform														
Compulsory		49	784											
407201312	Subject Introduction	1	16	16			1							
408106311	Linear Algebra	2	32	32					2					
408110311	Probability Theory	2	32	32					2					
407105311	Inorganic Chemistry	3	48	48			3							
407109312	Experiment Inorganic Chemistry	2	32		32		2							
407110311	Organic Chemistry	5	80	80				4						
407111312	Experiment Organic Chemistry	2	32		32		1.5							
407112311	Analytical Chemistry	3	48	48				3						
407113312	Experiment Analytical Chemistry	2	32		32			2						
407114311	Physical Chemistry	4	64	64					3.5					
407115312	Experiment Physical Chemistry	2	32		32				2					
407202311	The Principle of Food Engineering	4	64	44	20					3.5				
407301311	Biochemistry	5	80	60	20				4.5					
407203311	Food Chemistry	4	64	44	20					3.5				
407130311	Natural Product Chemistry	3	48	48						2.5				
407302311	Microbiology	5	80	60	20					4.5				
Elective		5	80											
407201322	Food Safety and Quality Management	1.5	24	24										
407202322	Food Toxicology	2	32	32										
407203322	Agro-product Processing	2	32	32										
407204322	Modern Instrumental Analysis	2	32	32					2	2		2		
407205322	Experimental Optimal Design for Food Science	1.5	24	24										
407206322	Food Raw Material and Resources	1.5	24	24										
Whole		54	864	656	208		6	5.5	11	12	14	2		

Course Code	Course Names	Crs.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	16	18	18	11	10	
Major Courses Platform														
Compulsory		16	256											
407201411	Food Technology	4	64	44	20								6	
407202411	Food Machinery and Equipment	2.5	40	40									3.5	
407203411	Food Analysis	2.5	40	24	16								3.5	
407204411	Technology of Natural Product of Extraction	4	64	64									6.5	
407205411	Food Nutrition and Hygiene	3	48	48						2.5				
Elective		16	256											
407201422	Basis of Food Factory Design	2	32	32										
407202422	Food Sensory Evaluation	1.5	24	24										
407203422	Food Additive	2	32	32										
407204422	Food Biotechnology	2	32	32										
407205422	Functional Food	2	32	32										
407206422	Physical Properties of Foods	1.5	24	24						4	6	14		
407207422	Food Packing	1.5	24	24										
407208422	Advanced Technology for Food Industry	2	32	32										
407209422	Food specialized English	2	32	32										
407210422	Literature Retrieval	1.5	24	24										
407211422	Meat Processing Technology	2	32	24	8									

Course Code	Course Names	Crs.	Type				Weekly Hours											
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8				
							15	19	16	18	18	11	10					
407212422	Food Specialized Literature Writing	2	32	32														
407213422	The Principle of Food Preservation	1.5	24	24														
407214422	The Principle of Fruits and Vegetables Processing	1.5	24	24														
407215422	Fermentation Engineering	2	32	32														
407216422	Soybean Products Technology	1.5	24	24														
407217422	Corn Deep Processing	1.5	24	24														
407218422	Food Marketing	1.5	24	24														
407219422	Food Business Management	1.5	24	24														
Whole		32	512	512							6.5	19	2.5					
Education for All-round Development Platform																		
Compulsory		1	18															
425101512	Vocation Planning and Quality Development	0.5	8	8					0.5									
425102512	Employment Guidance and Business-starting Education	0.5	8	8								0.5						
425201512	Psychological Health and Education	—	2	2														
Elective		8	128															
		6	96	96														
	Psychological Health	1	16	16					2	4	2							
	Career Development	1	16	16														
Whole		9	146	146					2.5	4	2		0.5					
Amount		152.5	2442	2170	240	32	21.5	24	25	23	23	21.5	20.5					

十一、食品科学与工程专业实践教学平台 Practical Teaching Platform

Teaching Classification	Course Code	Course Names	Sem.	Weeks	Crs.	Content	Place	Notes
Moral and Professional Competence Module		School Education	1	0.5				
	416101612	Military Training	1	3.5	3.5			
	423101612	Moral Character Cultivation and Basis of Law (Practice)	1	1	1			
	423301612	Introduction to Basic Principles of Marxism (Practice)	4	1	1			
	423401612	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics (Practice)	5	3	3			
	407201612	Perceptual Practice	3	1	1			
Basic Skills and Practical Training Module	417104612	D Metalwork Practice D	3	2	2			
	417202612	B The Practice of Electrician and Electron B	4	1	1	EDA		
Specialized Skills and Design Module	407203612	Production Practice	6	4	4			
	407204612	Course Design of Food Engineering Principle	5	1	1			
	407205612	Course Design of Food Machinery and Equipment	6	2	2			
	407414612	Fermentation Engineering Experiment	6	2	2			
	407207612	Engineering training of Modern food	7	4	4			
Comprehensive Skills and Application Module	407208612	Integrated Experiment for Food Analysis	7	5	5			
	407209612	Graduation Practice	8	3.5	3.5			
		Major Social Practice	7	4				
	407210612	Graduation Design (Paper)	8	14	14			
Hours and Credits for Practical Training Education				52.5	48			

十二、创新、创业教育平台

Innovation and Entrepreneurship Education Platform

Theory Module		2	2
Practice Module		6	6

十三、总周数分配

The Total Number of Weeks Distribution

	LX	KS	BS	K	J	RX	GS	DZ	ZS	SX	BX	R	B	SJ	=	
	15			1	3.5							0.5			6	26
	19			1											6	26
	16			1		1	2								6	26
	18			1				1							6	26
	18			1											6	26
	11	2		1					2	4					6	26
	10	2		1			4		5						6	26
			14								3.5		0.5			18
	107	4	14	7	3.5	1	6	1	7	4	3.5	0.5	0.5		42	200

071002

The Cultivating Program for Undergraduate of Biotechnology

DNA

		244	9.9%	15	7.3%
		568	23.0%	35.5	17.3%
		108	4.4%	7	3.4%
		776	31.5%	48.5	23.7%
		80	3.2%	5	2.4%
		256	10.4%	16	7.8%
		256	10.4%	16	7.8%
		18	0.7%	1	0.5%
		128	5.2%	8	3.9%
		50.5	—	45	22.0%
		32	1.3%	8	3.9%
		1862	75.5%	161	78.5%
		604	24.5%	44	21.5%
		2466	100%	205	100%



Table of Courses

Course Code	Course Names	Crns.	Type				Weekly Hours								
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8	
							15	19	15	18	17	11	10		
humanity and Society Science Courses Platform															
Compulsory		15	244												
423101112	Moral Character Cultivation and Basis of Law	2	32	32			2								
423201111	Outline of China's Modern History	2	32	32				2							
423301111	Introduction to Basic Principles of Marxism	2	32	32					2						
423401111	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	3	48	48						3					
423501112 ~ 423508112	Situation and Policy	2	32	32											
416101112	Military Theory	2	36	36			2.5								
405101111	Economic Management Base	2	32	32					2						
Whole		15	244	244			4.5		2	4	3				
Common Basic Subject Courses Platform															
Compulsory		35.5	568												
410101211 410102211 410103211 410104211	()A1-4 College Foreign Language (E) B1-4	15	240	240			3	3.5	4	3.5					
408103211 408104211	B1 B2 Advanced Mathematics B1 B2	9	144	144			5	4							
408404211	C University Physics C	4	64	64				3.5							
408407212	B Experimental Physics B	2	32		32				2						
414101211	University Computer Basis	1.5	24	12		12	1.5								
414103211	A C Computer Program Design A C	4	64	44		20		3.5							
Elective		7	108												
415101222 415102222 415103222 415104222	Physical Education	7	108	108			2	1.5	2	1.5					
Whole		42.5	676	612	32	32	11.5	16	8	5					

Course Code	Course Names	Crs.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	15	18	17	11	10	
Basic Courses Platform														
Compulsory		48.5	776											
407301312	Subject Introduction	1	16	16			1							
408110311	Linear Algebra	2	32	32					2					
408110311	Probability Theory	2	32	32					2					
407105311	Inorganic Chemistry	3	48	48			3							
407109312	Inorganic Chemistry Experiment	2	32		32		2							
407110311	Organic Chemistry	5	80	80				4						
407111312	Organic Chemistry Experiment	2	32		32			1.5						
407112311	Analytical Chemistry	3	48	48					3					
407113312	Analytical Chemistry Experiment	2	32		32				2					
407131311	Physical Chemistry	3	44	44						2.5				
407132312	Physical Chemistry Experiment	1	20		20					1				
407302311	Biology	6	96	72	24				6.5					
407303311	Biochemistry	8	128	96	32					3.5	4			
407304311														
407305311	Microbiology	5.5	88	58	30						5			
407306311	Bioengineering Principle	3	48	32	16						3			
Elective		5	80											
407306322	The Topic of Advanced Technology	2	32	32										
407307322	Special English	2	32	32										
407308322	Basic Immunology	2	32	32										
407210322	Modern Instrumental Analysis	3.5	56	32	24					2	2	2		
407309322	Enzyme engineering	2	32	12	20									
407310322	Introduction Biotechnology	2	32	32										
407311322	Biostatistics	2	32	32										
Whole		53.5	856	638	218			6	5.5	15.5	9	14	2	

Course Code	Course Names	Crs.	Type				Weekly Hours								
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8	
			15	19	15	18	17	11	10						

Practical Teaching Platform

Teaching Classification	Course Code	Course Names	Sem.	Weeks	Crs.	Content	Place	Notes
Moral and Professional Competence Module		School Education	1	0.5				
	416101612	Military Training	1	3.5	3.5			36
	423101612	Moral Character Cultivation and Basis of Law (Practice)	1	1	1			
	423301612	Introduction to Basic Principles of Marxism (Practice)	4	1	1			
	423401612	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics (Practice)	5	3	3			
	407301612	Perceptual Practice	3	2	2			
Basic Skills and Practical Training Module	417104612	D Metalwork Practice D	3	2	2			
	417202612	B The Practice of Electrician and Electron B	4	1	1			
Specialized Skills and Design Module	407302612	Production Practice	6	4	4			
	407303612	Course Design of Bioprocess Engineering Principle	5	2	2			
	407304612	Experiment of Biology technology principle	6	2	2			
	407406612	Fermentation Engineering Experiment	6	2	2			
Comprehensive Skills and Application Module	407305612	Separation and Purification of Biological Macromolecules Experiment	7	4	4			
		Major Social Practice	7	5				
	407306612	Graduation Practice	8	3.5	3.5			
	407307612	Graduation Design Paper	8	14	14			
Hours and Credits for Practical Training Education					50.5	45		

Innovation and Entrepreneurship Education Platform

Theory Module		2	2
Practice Module		6	6

The Total Number of Weeks Distribution

	LX	KS	BS	K	J	RX	GS	DZ	ZS	SX	BX	R	B	SJ	=	
	15			1	3.5							0.5		(1)	6	26
	19			1											6	26
	15			1		2	2								6	26
	18			1				1						(1)	6	26
	17			1										(3)	6	26
	11			1					4	4					6	26
	10			1					4					5	6	26
	0		14										0.5			18
	105	2	14	7	3.5	2	2	1	8	4	3.5	0.5	0.5	5	42	200

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The Cultivating Program for Undergraduate of Bioengineering

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		244	10.1%	15	7.3%
		568	23.6%	35.5	17.4%
		108	4.5%	7	3.4%
		720	29.9%	45	22.0%
		80	3.3%	5	2.4%
		256	10.6%	16	7.8%
		256	10.6%	16	7.8%
		18	0.7%	1	0.5%
		128	5.3%	8	3.9%
		55.5	—	48	23.5%
		32	1.3%	8	3.9%
		1806	74.9%	160.5	78.5%
		604	25.1%	44	21.5%
		2410	100%	204.5	100%

204.5



Table of Courses

Course Code	Course Names	Crns.	Type				Weekly Hours								
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8	
							15	19	15	18	19	13	6	8	
humanity and Society Science Courses Platform															
Compulsory		15	244												
423101112	Moral Character Cultivation and Basis of Law	2	32	32			2								
423201111	Outline of China's Modern History	2	32	32				2							
423301111	Introduction to Basic Principles of Marxism	2	32	32					2						
423401111	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	3	48	48						2.5					
423501112 ~ 423508112	Situation and Policy	2	32	32											
416101112	Military Theory	2	36	36			2.5								
405101111	Economic Management Base	2	32	32					2						
Whole		15	244	244			4.5		2	4	2.5				
Common Basic Subject Courses Platform															
Compulsory		35.5	568												
410101211 410102211 410103211 410104211	A1-4 College Foreign Language A	15	240	240			3	3.5	4.5	3.5					
408103211 408104211	B1 B2 Advanced Mathematics B1 B2	9	144	144			5	4							
408404211	C University Physics C	4	64	64				3.5							
408407212	B Experimental Physics B	2	32		32				2						
414101211	University Computer Basis	1.5	24	12		12	1.5								
414103211	A C Computer Program Design A C	4	64	44		20		3.5							
Elective		7	108												
415101222 415102222 415103222 415104222	Physical Education	7	108	108			2	1.5	2	1.5					
Whole		42.5	676	612	32	32	11.5	16	8.5	5					

408106311

Linear Algebra

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408110311

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Course Code	Course Names	Crs.	Type				Weekly Hours											
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8				
							15	19	15	18	19	13	6					
Major Courses Platform																		
	Compulsory	16	256															
407401411	Fermentation Engineering	3	48	48														2.5

Practical Teaching Platform

Teaching Classification	Course Code	Course Names	Sem.	Weeks	Crs.	Content	Place	Notes
Moral and Professional Competence Module		School Education	1	0.5				
	416101612	Military Training	1	3.5	3.5			
	423101612	Moral Character Cultivation and Basis of Law (Practice)	1	1	1			
	423301612	Introduction to Basic Principles of Marxism (Practice)	4	1	1			
	423401612	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics (Practice)	5	3	3			
	407401612	Perceptual Practice	3	2	2			
Basic Skills and Practical Training Module	417104612	D Metalwork Practice D	3	2	2			
	417202612	B The Practice of Electrician and Electron B	4	1	1			
Specialized Skills and Design Module	407402612	Production Practice	6	4	4			
	407403612	Course Design of biological Engineering Principle	6	2	2			
	407404612	Course Design of Bioreaction Engineering Principle	7	2	2			
	407405612	Biotechnology Experiment	7	2	2			
	407406612	Fermentation Engineering Experiment	7	2	2			
Comprehensive Skills and Application Module	407407612	Biological Engineering Experiment	7	3	3			
	407408612	Genetic Engineering Experiment	7	2	2			
	407409612	Graduation Practice	8	3.5	3.5			
	407410612	Graduation Design	8	14	14			
Hours and Credits for Practical Training Education					48.5	48		

Innovation and Entrepreneurship Education Platform

Theory Module		2	2
Practice Module		6	6

The Total Number of Weeks Distribution

	LX	KS	BS	K	J	RX	GS	DZ	ZS	SX	BX	R	B	SJ	=	
	15			1	3.5							0.5		(1)	6	26
	19			1											6	26
	15			1		2	2								6	26
	18			1				1						(1)	6	26
	19			1										(3)	6	26
	13	2		1						4					6	26
	6	2		1					11						6	26
			14								3.5		0.5			18
	105	4	14	7	3.5	2	2	1	11	4	3.5	0.5	0.5		42	200

化学专业（070301）培养方案

（The Cultivating Program for Undergraduate of Chemistry）

一、专业简介及特色

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985 211

二、培养目标

三、培养要求

四、主干学科

五、核心课程

六、学制及授予学位

八、课程结构比例表

		244	9.9%	15	7.3%
		568	23.0%	35.5	17.3%
		108	4.4%	7	3.4%
		800	32.3%	50	24.3%
		80	3.2%	5	2.4%
		240	9.7%	15	7.3%
		256	10.3%	16	7.8%
		18	0.7%	1	0.5%
		128	5.2%	8	3.9%
		50.5	—	45	21.9%
		32	1.3%	8	3.9%
		1870	75.6%	161.5	78.6%
		604	24.4%	44	21.4%
		2474	100%	205.5	100%

九、毕业最低学分要求

205.5



十、化学专业理论课程总表及教学安排

Table of Courses

Course Code	Course Names	Crns.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	15	18	14	14	10	
humanity and Society Science Courses Platform														
Compulsory		15	244											
423101112	Moral Character Cultivation and Basis of Law	2	32	32			2							
423201111	Outline of China's Modern History	2	32	32					2					
423301111	Introduction to Basic Principles of Marxism	2	32	32						2				
423401111	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	3	48	48							3.5			
423501112 ~ 423508112	Situation and Policy	2	32	32										
416101112	Military Theory	2	36	36			2.5							
405101111	Economic Management Base	2	32	32						2				
Whole		15	244	244			4.5		2	4	3.5			
Common Basic Subject Courses Platform														
Compulsory		35.5	568											
410101211 410102211 410103211 410104211	()B1-4 College Foreign Language (E) B1-4	15	240	240			3	3.5	4.5	3.5				
408103211 408104211	B1 B2 Advanced Mathematics B1 B2	9	144	144			5	4						
408404211	C University Physics C	4	64	64				3.5						
408407212	B Experimental Physics B	2	32		32				2					
414101211	University Computer Basis	1.5	24	12		12	1.5							
414103211	A C Computer Program Design A C	4	64	44		20		3.5						
Elective		7	108											
415101222 415102222 415103222 415104222	Physical Education	7	108				2	1.5	2	1.5				
Whole		42.5	676	612	32	32	11.5	16	8.5	5				

Course Code	Course Names	Crns.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	15	18	14	14	10	
Basic Courses Platform														
Compulsory		50	800											
407111312	Subject introduction	1	16	16			1							
408106311	Linear algebra	2	32	32					2					
408110311	Probability theory	2	32	32					2					
407106311	Inorganic chemistry	5	80	80			5.5							
407110312	Inorganic chemistry experiment	4	64		64		4.5							
407116311	I II	6	96	96				2.5	3					
407117311	Organic chemistry I II													
407118312	I II	4	64		64			1.5	2					
407119312	Organic chemistry experiment I II													
407120311	Analytical chemistry	2	32	32				1.5						
407121312	Quantitative analytical experiment	2	32		32			1.5						
407122311	Instrumental analysis	3	48						3					
407123312	Instrumental analysis experiment	2	32		32				2					
407124311	I II	6	96	96					2.5	3.5				
407125311	Physical chemistry I II													
407126312		4	64		64				2	2.5				
407127312	Physical chemistry experiment													
407128311	Polymer chemistry	3	48	48							3.5			
407129311	Structural chemistry	4	64	48	16					40(	0011	Tw(P)5(h)2.2(y)-01w-		

Course Code	Course Names	Crs.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	15	18	14	14	10	
Major Courses Platform														
Compulsory		15	240											
407101411	Chemicals preparation	3	48	48							3.5			
407102411	Advanced instrumental analysis	3	48	32	16				2.5					
407103411	Polymer physics	2	32	32									3	
407104411	Fundamental chemical engineering	4	64	48	16						4.5			
407105411	Chemical engineering graphics	3	48	48							3.5			
Elective		16	256											
407106422	English for chemistry major	2	32	32										
407107422	Chemistry information and literature search	1.5	24	24										
407108422	Application of computer in chemistry	1.5	24	24										
407109422	Writing skills of science and technology paper	1.5	24	24										
407110422	Functional materials	2	32	32										
407111422	Elementary polymer engineering	2	32	32										
407112422	Separation science and technology	2	32	32										
407113422	Electrochemical analysis	1.5	24	24										
407114422	Environmental analysis and evaluate	1.5	24	24										
407115422	Analysis in industrial	2	32	32							10		17	
407116422	Composite material	2	32	32										
407117422	Organics synthesis and design	2	32	32										
407118422	Introduction to Catalysis	2	32	32										
407119422	Pharmaceutical Analysis	2	32	32										
407120422	Analysis in food	2	32	32										
407121422	Stereochemistry	2	32	32										
407122422	Metallic organic chemistry	2	32	32										
407123422	Biological organic chemistry	2	32	32										
407124422	Advanced organic chemistry	2	32	32										
407125422	Physical organic chemistry	2	32	32										
Whole		31	496	464	32						2.5	7	14.5	20

Course Code	Course Names	Crns.	Type				Weekly Hours							
			Hrs.	Lec.	Exp.	Ope.	1	2	3	4	5	6	7	8
							15	19	15	18	14	14	10	8
Education for All-round Development Platform														
Compulsory		1	18											
425101512	Vocation Planning and Quality Development	0.5	8	8				0.5						
425102512	Employment Guidance and Business-starting Education	0.5	8	8							0.5			
425201512	Psychological Health and Education	—	2	2										
Elective		8	128											
		6	96	96										
	Psychological Health	1	16	16				2	4	2				
	Career Development	1	16	16										
Whole		9	146	146				2.5	4	2		0.5		
Amount		152.5	2442	2074	336	32	27	25.5	26.5	22	23	20.5	20	

十一、化学专业实践教学平台

Practical Teaching Platform

Teaching Classification	Course Code	Course Names	Sem.	Weeks	Crs.	Content	Place	Notes
Moral and Professional Competence Module		School Education	1	0.5				
	416101612	Military Training	1	3.5	3.5			36
	423101612	Moral Character Cultivation and Basis of Law (Practice)	1	1	1			
	423301612	Introduction to Basic Principles of Marxism (Practice)	4	1	1			
	423401612	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics (Practice)	5	3	3			
	407110612	Perceptual Practice	3	2	2			
Basic Skills and Practical Training Module	417104612	D Engineering Training D	3	2	2			
	417202612	B Electrical and Electronic Practice B	4	1	1			
	407102612	Preparation and synthesis experiment	6	2.5	2.5			
Specialized Skills and Design Module	407103612	Professional practice	5	4	4			
	407104612	Chemical engineering design	5	1	1			
	407105612	Large scale instrument practice	6	2.5	2.5			
Comprehensive Skills and Application Module	407106612	Experiment of Chemistry	7	4	4			
		Major Social Practice	7	5				
	407107612	Graduation Practice	8	3.5	3.5			
	407108612	() Graduation Design(Paper)	8	14	14			
Hours and Credits for Practical Training Education				50.5	45			

十二、创新、创业教育平台

Innovation and Entrepreneurship Education Platform

Theory Module		2	2
Practice Module		6	6

十三、总周数分配

The Total Number of Weeks Distribution

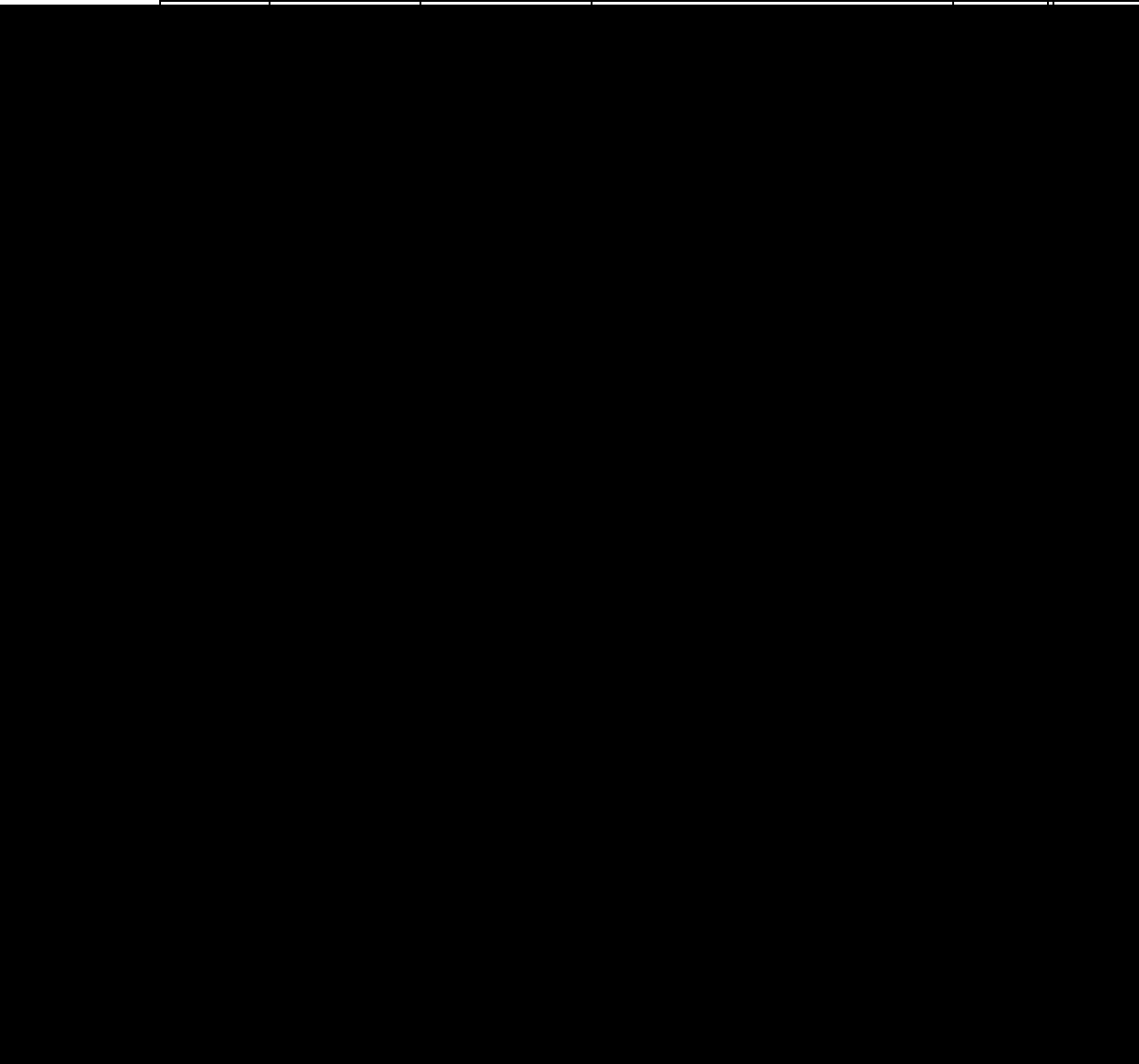
	LX	KS	BS	K	J	RX	GS	DZ	ZS	SX	BX	R	B	SJ	=	
	15			1	3.5							0.5		(1)	6	26
	19			1											6	26
	15			1		2	2								6	26
	18			1				1						(1)	6	26

长春工业大学素质教育选修课一览表

1		407201532	—	32	2	
2		409101532	—	32	2	
3		423201532		32	2	
4		416101532	—	32	2	
5		409102532		32	2	
6		409103532		32	2	
7		409104532	—	32	2	
8		409105532	—	32	2	
9		409106532	—	32	2	
10		409201532		32	2	
11		409202532		32	2	
12		409203532		32	2	
13		409204532		32	2	
14		409205532		32	2	
15		401101532		32	2	
16		405101532		32	2	
17		409107532		32	2	
18		409108532		32	2	
19		409109532		32	2	
20		409301532		32	2	
21		409302532		32	2	
22		409303532		32	2	
23		423101532	—	32	2	
24		409304532		32	2	
25		409501532		32	2	
26		409202532		32	2	
27		409203532		32	2	
28		430101532	KAB	32	2	
29		420101532		32	2	
30		401102532		32	2	
31		407201532		32	2	
32		412101532		32	2	
33		412102532		32	2	
34		412103532		32	2	
35		412104532		32	2	
36		412104532		32	2	
37		412106532		32	2	

38		412107532		32	2	
39		412108532		32	2	
40		412109532		32	2	
41		412110532		32	2	
42		412111531		32	2	
43		412112532		32	2	
44		412113532		32	2	
45		434101532		32	2	
46		412114532		32	2	
47		412115532		32	2	
48		412116532		32	2	
49		414201532		32	2	
50		414202532		32	2	
51		415101532		32	2	
52		415102532		32	2	
53		415103532		32	2	
54		415104532		32	2	
55		424101532		32	2	—
56		412201532		32	2	
57		405255532		32	2	
58		405146532		32	2	
59		405103532		32	2	
60		405104532				

77		401201532		32	2	
78		406101532		32	2	
79		406102532		32	2	
80		406103532	CAD	32	2	
81		406401532		32	2	
82		406501532		32	2	
83		406104532		32	2	
84		406201532	Internet	32	2	
85		406202532		32	2	
86		401104532		32	2	
87		401105532	CAD	32	2	
88		406203532		32	2	
89		407301532		32	2	
90		406204532	—	32	2	



115		415112532		32	2	
116		415113532		32	2	
117		415114532		32	2	
118		415115532		32	2	
119		415116532		32	2	
120		416103532		32	2	
121		416104532		32	2	
122		421101532		32	2	
123		420103532		32	2	
124		424102532		32	2	—
125		424103532		32	2	—
126		424105532	ASP	32	2	—
127		424106532		32	2	—
128		424107532	Dream weaver	32	2	—
129		404403532		32	2	
130		409309532		32	2	
131		425201532		16	1	—
132		425202532		32	2	
133		425203532		32	2	
134		425204532		16	1	
135		425205532		16	1	
136		425206532		16	1	
137		425207532		16	1	
138		425208532		16	1	
139		425209532		16	1	
140		425210532		16	1	
141		425211532		16	1	
142		425212532		16	1	
143		425213532		32	2	
144		425214532		32	2	
145		425215532		32	2	
146		425216532		16	1	
147		425217532		16	1	
148		425218532		16	1	
149		425219532		32	2	
150		425220532		32	2	

主 编：胡 明
副 主 编：王占礼 李万龙 张海龙
执行编辑：肖 月 徐培鑫 赵 杨
封面设计：吴 菲

本科人才培养方案

2014年

愛國

敬業

求實

創新