

International School of Information Science & Engineering

国际信息与软件学院 2014 级培养方案

1. Introduction 专业介绍

This specialty consolidates the high quality educational resources of Dalian University of Technology and Ritsumeikan University (RU), integrating computer science, software engineering, computer engineering and industry technologies in internationally advanced teaching models and training systems. It enables students to acquire fundamental knowledge systematically in the broad field of software engineering, master specific knowledge in a particular direction, and develop professional multi-capabilities, such as application abilities, research abilities, analysis abilities, design and verification abilities. Besides, by virtue of Japanese and English teaching, this specialty strengthens cross-cultural humanities courses, social science courses and other practice-oriented courses such as communication, internship and graduation thesis, aiming at producing advanced IT engineering and management elites with international horizons and good command of foreign languages and making them come to the fore in the future international IT industry.

This program takes fully advantage of RU's high quality educational resources and introducing parts of RU's curriculum and teaching models. From Grade 1 to Grade 4, the percentage of RU staffs participation steadily increases, for instance, Technology Japanese courses for freshmen, 7 specialized basic courses for sophomore, half of curriculum and all Japanese textbooks and teaching materials for juniors, and Graduation Thesis courses for seniors in RU's mode. The program adopts RU's TOPICS educational system, inviting reputed senior managers and engineers from Chinese and Japanese enterprises into classrooms to cover the fields of technologies frontiers, industry development, enterprises management, etc. It enriches students' knowledge and enlarges the opportunities for students to take internships in international companies.

The graduates are competent in IT R&D or management jobs in Japanese enterprises(in Japan or their overseas branches) and Chinese or international enterprises engaged in Japanese software business. They have strong competitive edge in foreign languages and comprehensive capabilities including professional qualities, communicative abilities and organizing skills.

本专业整合大连理工大学和日本立命馆大学优质教育资源，将计算机科学、软件工程、计算机工程 and 行业技术融合在一起，采用国际领先的教学模式和培养体系，培养学生掌握软件工程一级学科领域的系统性知识和方法，了解行业的国际发展动态，掌握特定工程方向的知识体系，具备熟练的工程技术应用能力、研究能力和具备软件系统的分析设计构造验证等能力。同时通过面向应用的日语和英语教学，强化国际人文和社会科学类课程以及沟通与交流、实习与毕设等实践教学环节，培养谙熟亚洲及西方文化，具备国际化视野、扎实的日语和英语能力、高水平的专业知识及职业素养，在未来信息与软件领域的国际舞台上独占鳌头的国际化精英型 IT 高级工程及管理人才。

本培养方案充分利用日方的优质教育资源，引入日方的部分课程体系，从 1 年级到 4 年级的教学中，融合日方教师的授课模式和方法，不断加大日方教师的授课比例，一年级有由日方老师讲授科技日语；二年级有 7 门专业基础课由日方教师讲授；三年级为日方教师与中方教师授课并重的课程体系，利用日方老师的授课方式和教材及相关资料；四年级的毕业设计由日方教师按照立命馆大学的模式进行培养和指导。本项目采用立命馆大学的 TOPICS 教育体系，在培养过程中，引进中日两国 IT 企业的一线高层管理者和工程师，从技术前沿、产业发展、企业运营管理等方，培养学生的能力和丰富学生的知识，使学生能够较好地适应在中日跨国企业的实践学习。

毕业生可在日资企业（包括日本本土或包括中国在内的日本境外分支机构）、开展对日业务的中资或外资企业从事 IT 技术和软件等相关领域的研发和管理工作，特别在日语、英语和专业结合方面以及职业素养、沟通能力和组织表达能力等综合素质方面有较强优势和竞争力。

2. Course System (178credits) 课程体系(最低学分 178 学分)

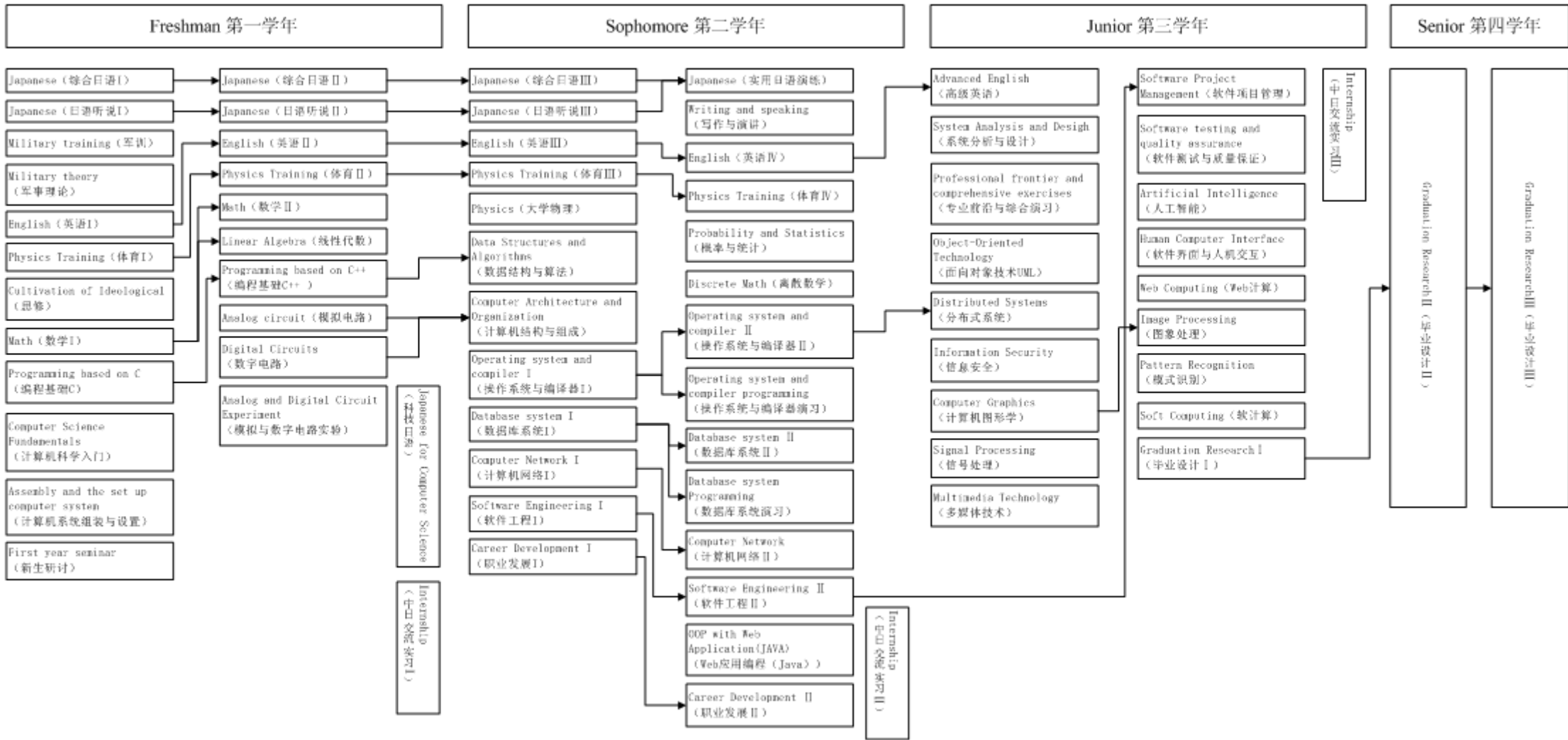
Course No.	Course Name	Credits	√	Course No.	Course Name	Credits	√
1070320010	CULTIVATION OF IDEOLOGICAL(思修)	2.0		1090930060	OBJECT-ORIENTED TECHNOLOGY WITH UML(面向对象技术 UML)	2.0	
1090930010	COMPUTER GRAPHICS(计算机图形学)	2.0		1090440030	SYSTEM ANALYSIS AND DESIGN(系统分析与设计)	2.0	
1090930030	SIGNAL PROCESSING(信号处理)	2.0		1090441030	SOFTWARE PROJECT MANAGEMENT(软件项目管理)	2.0	
1090930040	MULTIMEDIA TECHNOLOGY(多媒体技术)	2.0		1090930100	SOFTWARE TESTING AND QUALITY ASSURANCE(软件测试与质量保证)	2.0	
1090930080	IMAGE PROCESSING(图像处理)	2.0		1090445000	ARTIFICIAL INTELLIGENCE(人工智能)	2.0	
1090930090	HUMAN AND COMPUTER INTERFACE(软件界面与人机交互)	2.0		1090920200	OOP WITH WEB APPLICATION(JAVA)(WEB 应用编程(JAVA))	2.0	
1090910090	ENGLISH I (英语 I)	1.5		1090445020	PATTERN RECOGNITION(模式识别)	2.0	
1090910100	ENGLISH II (英语 II)	1.5		1090445030	SOFT COMPUTING(软计算)	2.0	
1090910110	ENGLISH III(英语 III)	1.5		1090930110	WEB COMPUTING(WEB 计算)	2.0	
1090910120	ENGLISH IV(英语 IV)	1.5		1090930070	DISTRIBUTED SYSTEMS(分布式系统)	2.0	
1090910140	ADVANCED ENGLISH(高级英语)	2.0		1090461010	ASSEMBLY AND SETTING OF THE COMPUTER SYSTEM(计算机系统组装与设置)	1.0	
1090910010	JAPANESE (综合日语 I)	5.5		1090920160	OPERATING SYSTEM AND COMPILER PROGRAMMING(操作系统与编译器演习)	1.0	
1090910030	JAPANESE (综合日语 II)	6.0		1090920180	DATABASE SYSTEM PROGRAMMING(数据库系统演习)	1.0	
1090910060	JAPANESE (综合日语 III)	6.0		1090920060	ANALOG AND DIGITAL CIRCUIT EXPERIMENT(模拟与数字电路实验)	1.0	
1090910020	JAPANESE (日语听说 I)	5.0		1090930020	PROFESSIONAL FRONTIER AND COMPREHENSIVE EXERCISES(专业前沿与综合演习)	2.0	
1090910040	JAPANESE (日语听说 II)	6.0		1090940020	INTERNSHIP(中日交流实习 I)	1.0	
1090910070	JAPANESE (日语听说 III)	4.0		1090940050	INTERNSHIP(中日交流实习 II)	1.0	
1090910080	JAPANESE(实用日语演练)	5.0		1090940060	INTERNSHIP(中日交流实习 III)	1.0	
1090910050	JAPANESE FOR COMPUTER SCIENCE I (科技日语)	2.0		1090930120	GRADUATION RESEARCH I (毕业设计 I)	2.0	
1090920050	ANALOG CIRCUIT(模拟电路)	2.0		1090930130	GRADUATION RESEARCH I (毕业设计 II)	8.0	
1090920040	DIGITAL CIRCUITS(数字电路)	2.0		1090930140	GRADUATION RESEARCH II(毕业设计 III)	8.0	
1090920010	COMPUTER SCIENCE FOUNDATIONS(计算机科学入门)	2.0		1090940030	CAREER DEVELOPMENT I (职业发展 I)	2.0	
1090920070	DATA STRUCTURES & ALGORITHMS(数据结构与算法)	3.0		1090940040	CAREER DEVELOPMENT II(职业发展 II)	2.0	
1090920130	DISCRETE MATHEMATICS(离散数学)	2.0		1090940010	FIRST YEAR SEMINAR(新生研讨会)	1.0	
1090920080	COMPUTER ARCHITECTURE AND ORGANIZATION(计算机结构与组成)	2.0		1090910130	WRITING AND PRESENTATION(写作与演讲)	1.5	
1090920020	PROGRAMMING FUNDAMENTALS C (编程基础 C)	3.0		1110020011	PHYSICS(大学物理) (软)	4.0	
1090920030	PROGRAMMING FUNDAMENTALS C++(编程基础 C++)	2.0		1120020050	MATH (数学 I)	5.0	
1090920090	COMPUTER NETWORK I(计算机网络 I)	1.0		1120020060	MATH (数学 II)	5.0	
1090920140	COMPUTER NETWORK II(计算机网络 II)	2.0		1120020111	LINEAR ALGEBRA(线性代数)	3.5	

Course No.	Course Name	Credits	√	Course No.	Course Name	Credits	√
1090920100	OPERATING SYSTEM AND COMPILER I(操作系统与编译器 I)	1.0		1120020140	PROBABILITY AND STATISTICS(概 率与统计)	3.0	
1090920150	OPERATING SYSTEM AND COMPILER II(操作系统与编译器 II)	2.0		1130020010	PE 体育 I	1.0	
1090920110	DATABASE I(数据库系统 I)	1.0		1130020020	PE 体育 II	1.0	
1090920170	DATABASE II(数据库系统 II)	2.0		1130020030	PE 体育 III	1.0	
1090930050	INFORMATION SECURITY(信 息安全)	2.0		1130020040	PE 体育 IV	1.0	
1090920120	SOFTWARE ENGINEERING I(软件工程 I)	1.0		1150020010	MILITARY THEORY (军事理论)	0.5	
1090920190	SOFTWARE ENGINEERING II(软件工程 II)	2.0		1150020020	MILITARY TRAINING (军训)	3.0	
1070320050	SITUATION AND POLICY (形 式与政策)	0.0					
	小计	91.5			小计	81.5	

FREE ELECTIVES LIST
选修课列表

Course No.	ECONOMICS & MANAGEMENT 法律、经济与管理类	Credits	√	Course No.	HUMANITIES & SOCIAL SCIENCE 人文、社科与艺术类	Credits	√
1000010070	SOCIOLOGY 社会学	3.0		1070050080	STUDENTS PSYCHOLOGY 大学生心理 学	1.5	
1010050090	NUTRITION AND HEALTH 营养与 健康	1.5		1070050250	MODERN CAREER PLANNING 现代职 业生涯规划	1.5	
1060050020	BUSINESS AND MANAGEMENT 企业管理	2.0		1070050270	BASIC KNOWLEDGE OF MUSIC 音乐 基础知识	1.5	
1060050030	OPERATION AND MANAGEMENT 经营管理	2.0		1000010070	SOCIOLOGY 社会学	3.0	
1060050100	TECHNICAL ECONOMICS B 技术 经济学 B	2.0		1150050020	THE ART OF WAR 孙子兵法	1.5	
1070050010	POLITICS AND ECONOMY OF THE CONTEMPORARY TAIWAN SOCIETY 当代台湾社会政治与经 济	1.5					
	TOTAL: 21 SELECT: 5						

3. 课程流程图



4. Plan of Study 指导性教学计划

Semester	Course No.	Course Name	Credits	In-class hours					Notes Lab	
				Lecture	Lab	Computer Operation	Practice	Design		
Freshman 第一学年	1-1	1070320010	CULTIVATION OF IDEOLOGICAL(思修)	2.0	32					
		1070320050	SITUATION AND POLICY (形式与政策)	0.0						
		1090910090	ENGLISH(英语 I)	1.5	24					
		1090910020	JAPANESE(日语听说 I)	5.0	80					
		1090910010	JAPANESE(综合日语 I)	5.5	88					
		1090920010	COMPUTER SCIENCE FOUNDATIONS(计算机科学入门)	2.0	32					
		1090920020	PROGRAMMING BASED ON C(编程基础 C)	3.0	48					
		1090461010	ASSEMBLY AND THE SET UP COMPUTER SYSTEM(计算机系统组装与设置)	1.0				1 周		
		1120020050	MATH(数学)	5.0	80					
		1130020010	PHYSICS TRAINING(体育 I)	1.0				24		
		1150020010	MILITARY THEORY(军事理论)	0.5	8					
		1150020020	MILITARY TRAINING (军训)	3.0				3 周		
		1090940010	FIRST YEAR SEMINAR(新生研讨)	1.0	16					
			小计		30.5					
	Freshman 第一学年	1-2	1070320050	SITUATION AND POLICY (形式与政策)	0.0					
1090910100			ENGLISH(英语 II)	1.5	24					
1090910040			JAPANESE(日语听说 II)	6.0	96					
1090910030			JAPANESE(综合日语 II)	6.0	96					
1090920040			DIGITAL CIRCUITS(数字电路)	2.0	32					
1090920050			ANALOG CIRCUIT(模拟电路)	2.0	32					
1090920060			ANALOG AND DIGITAL CIRCUIT EXPERIMENT(模拟与数字电路实验)	1.0	16					
1120020111			LINEAR ALGEBRA(线性代数)	3.5	56					
1090920030			PROGRAMMING BASED ON C++(编程基础 C++)	2.0	32					
1120020060			MATH(数学)	5.0	80					
1130020020			PHYSICS TRAINING(体育 II)	1.0				24		
		小计		30.0						
Freshman 第一学年	1-3	1090910050	JAPANESE FOR COMPUTER SCIENCE(科技日语)	2.0	32					
		1090940020	INTERNSHIP(中日交流实习 I)	1.0				1 周		
		小计		3.0						
Sophomore 第二学年	2-1	1070320050	SITUATION AND POLICY (形式与政策)	0.0						
		1090910110	ENGLISH (英语 III)	1.5	24					
		1090910060	JAPANESE (综合日语 III)	6.0	96					
		1090910070	JAPANESE(日语听说 III)	4.0	64					
		1110020011	PHYSICS(大学物理) (软)	4.0	64					
		1090920070	DATA STRUCTURES AND ALGORITHMS(数据结构与算法)	3.0	48					
		1090920080	COMPUTER ARCHITECTURE AND ORGANIZATION(计算机组织与结构)	2.0	32					
		1090920090	COMPUTER NETWORK I(计算机网络 I)	1.0	16					
		1090920100	OPERATING SYSTEM AND COMPILER I(操作系统与编译器 I)	1.0	16					

Semester	Course No.	Course Name	Credits	In-class hours					Notes Lab	
				Lecture	Lab	Computer Operation	Pract ice	Design		
2-2	1090920110	DATABASE SYSTEM I(数据库系统 I)	1.0	16						
	1090920120	SOFTWARE ENGINEERING I(软件工程 I)	1.0	16						
	1090940030	CAREER DEVELOPMENT I(职业发展 I)	2.0	32						
	1130020030	PHYSICS TRAINING(体育III)	1.0				24			
		小计	27.5							
	1070320050	SITUATION AND POLICY (形式与政策)	0.0							
	1090910130	WRITING AND SPEAKING(写作与演讲)	1.5	24						
	1090920130	DISCRETE MATH(离散数学)	2.0	32						
	1090910120	ENGLISH(英语IV)	1.5	24						
	1090910080	JAPANESE(实用日语演练)	5.0	80						
	1090920140	COMPUTER NETWORK II(计算机网络 II)	2.0	32						
	1090920150	OPERATING SYSTEM AND COMPILER II(操作系统与编译器 II)	2.0	32						
	1090920160	OPERATING SYSTEM AND COMPILER PROGRAMMING(操作系统与编译器演习)	1.0			24				
	1090920170	DATABASE II(数据库系统 II)	2.0	32						
	1090920180	DATABASE SYSTEM PROGRAMMING(数据库系统演习)	1.0			24				
	1090920190	SOFTWARE ENGINEERING II(软件工程 II)	2.0	32						
	1090920200	OOP WITH WEB APPLICATION(JAVA)(Web 应用编程 (JAVA))	2.0	32						
	1090940040	CAREER DEVELOPMENT II (职业发展 II)	2.0	32						
	1120020140	PROBABILITY AND STATISTICS(概率与统计)	3.0	48						
	1130020040	PHYSICS TRAINING(体育IV)	1.0				24			
	小计	28.0								
2-3	1090940050	INTERNSHIP(中日交流实习 II)	1.0				1 周			
		小计	1.0							
3-1	1090930010	COMPUTER GRAPHICS(计算机图形学)	2.0	32						
	1090910140	ADVANCED ENGLISH(高级英语)	2.0	32						
	1090930020	PROFESSIONAL FRONTIER AND COMPREHENSIVE EXERCISES(专业前沿与综合演习)	2.0	32						
	1090930030	SIGNAL PROCESSING(信号处理)	2.0	32						
	1090930040	MULTIMEDIA TECHNOLOGY(多媒体技术)	2.0	32						
	1090930050	INFORMATION SECURITY(信息安全)	2.0	32						
	1090930060	OBJECT-ORIENTED TECHNOLOGY (面向对象技术 UML)	2.0	32						
	1090440030	SYSTEM ANALYSIS AND DESIGN(系统分析与设计)	2.0	32						
	1090930070	DISTRIBUTED SYSTEMS(分布式系统)	2.0	32						
		小计	18.0							
	3-2	1090930080	IMAGE PROCESSING(图像处理)	2.0	32					
		1090930090	HUMAN AND COMPUTER INTERFACE (软件界面与人机交互)	2.0	32					
		1090441030	SOFTWARE PROJECT MANAGEMENT (软件项目管理)	2.0	32					
1090930100		SOFTWARE TESTING AND QUALITY ASSURNCE(软件测试与质量保证)	2.0	32						
1090445000		ARTIFICIAL INTELLIGENCE(人工智能)	2.0							
1090445020		PATTERN RECOGNITION(模式识别)	2.0	32						
1090445030	SOFT COMPUTING(软计算)	2.0	32							

大连理工大学-立命馆大学 国际信息与软件学院 (2014 级)

Semester	Course No.	Course Name	Credits	In-class hours					Notes Lab	
				Lecture	Lab	Computer Operation	Pract ice	Design		
	1090930110	WEB COMPUTING(WEB 计算)	2.0	32						
	1090930120	GRADUATION RESEARCH(毕业设计 I)	2.0	32						
		小计	18.0							
	3-3	1090940060	INTERNSHIP(中日交流实习III)	1.0				1 周		
			小计	1.0						
	Senior 第四学年	4-1	1090930130	GRADUATION RESEARCH I (毕业设计 II)	8.0					8 周
			小计	8.0						
4-2		1090930140	GRADUATION RESEARCH I (毕业设计 III)	8.0					8 周	课外 8 周
			小计	8.0						