

Master of Engineering in Software Engineering

(International Students)

Program Code: 0835

(Course conducted in English)

I. Training Program

Cultivate professionals who master the solid basic theory, systematic professional knowledge and scientific research methods of this discipline, have the ability to continue studying for a doctorate or independently engage in scientific research, teaching or software technology, and have a high level of organizational and management skills, comprehensive, international software engineering technology and software engineering.

II. Research Topics

1. Software Engineering Theory and Technology: the theory and methods of large complex software development, operation and maintenance, the technologies and corresponding supporting tools, platforms and environments mainly include formal methods, automatic software generation and evolution, software modeling and analysis, software intelligent theory and methods, and software middleware technologies.

2. Data Science and Engineering: big data processing and analysis, machine learning, data mining, etc.

3. Software Service Platform and Engineering: software service engineering principles, methods, and technologies; build infrastructure and platforms that support software service systems, including software service architecture, engineering methods, software service operation support, and software service quality assurance.

4. Domain software engineering: the application of software engineering in specific fields,

and then form domain-oriented software engineering theories, methods and technologies, including domain analysis, domain design, domain implementation, and application engineering.

III. Years of Study

Full-time academic degree master's degree is generally 3 years.

IV. Training Method

Adopt the combination of supervisor responsibility and discipline collective training, give full play to the guidance role of the tutor, and pay attention to the collective guidance role of the entire academic collective, especially the masters echelon; encourage, support and promote interdisciplinary and cross-professional training methods; adopt joint training with fellow scholars or academic research units at home and abroad. The discipline is responsible for the formulation of master's degree training programs, the organization, coordination, guidance, and inspection of all aspects of master's degree training, and supports and assists mentors in their efforts to improve the quality of master's degree training. The supervisor is the first person responsible for master's degree training, and is responsible for guiding the formulation of personal training plans, clear elective courses, determining research directions and topic selection, organizing academic activities, and completing dissertation.

V. Curriculum and Credit Requirements

Course Category		Course ID	Course Title	Credit	Semester	Notes
Degree Course	Public Basic Course	M888X001	Introduction of Chinese I	3	Spring/Autumn	7 credits Compulsory
		M888X002	Comprehensive Chinese I	2	Spring/Autumn	
		M888X003	Applied Chinese I	2	Spring/Autumn	
	Subject Basic Course	M999X008	Matrix Theory	3	Autumn	3 credits (any one)
		M013X090	Combinatorial Mathematics	3	Spring	
	Professional Basic Course	M013X061	Advanced Software Engineering	3	Spring	Compulsory 9 credits
		M013X051	Object-oriented Technology	3	Autumn	
		M013X014	Machine Learning	3	Spring	
	Elective	M999X016	Research Ethics and Academic Norms	2	Autumn	compulsory

Course Category		Course ID	Course Title	Credit	Semester	Notes
	Course	M013X028	Computer Networks Technology	3	Autumn	1. At least 9 credits 2. At least 2 credits for starred course (*)
		M013X101	Software Requirement Analysis	3	Spring	
		M013X102	Software Project Management	3	Autumn	
		M013X103	Software Data Analysis Technology and Application	3	Spring	
		M013X104	Advanced Robotic Vision*	2	Autumn	
		M013X105	Quantum Computation*	3	Autumn	
		M013X106	Neural Network and Deep Learning*	3	Spring	
		M013X005	Second Foreign Language (Japanese)	2	Autumn	
		M013X006	English for International Academic Communication	2	Spring	
		M013X053	Parallel Processing Technology	3	Spring	
		M013X035	Artificial Intelligence	3	Spring	
		M013X054	Modern Cryptography	3	Autumn	
		M013X029	Network Security Technology	3	Spring	
		M013X056	Data Mining	3	Spring	
		M013X057	Formal Method	3	Spring	
		M013X058	New Software Theory and Technology	3	Spring	
		M013X060	Database	3	Spring	
		M013X010	Pattern Recognition	3	Autumn	
		M013X006	Optimization Theory and Algorithm*	3	Autumn	
		M013X016	Knowledge Management and Knowledge Engineering	3	Spring	
		M013X055	Advanced Software Testing	3	Autumn	
		M013X086	Software Analysis and Verification	3	Spring	
		M999X015	Research on Yangzhou Local Culture	1	Autumn	
		M013X052	Cloud Computing Technology	3	Spring	
		M999X017	How to Write a Research Paper	1	Autumn	
		M999X018	Paper Writing and Academic Report	2	Autumn	
		M999X021	Social Innovation and Entrepreneurship	1	Autumn	
		M999X022	English Grammar and Writing Style	0.5	Autumn	
		M999X023	Nutrition and Health	1	Autumn	

Course Category		Course ID	Course Title	Credit	Semester	Notes
		M999X024	Information Literacy	2	Autumn	
		M999X025	Healthy Psychology	1	Autumn	
Academic Events				2		Compulsory
Experimental Practice				4		
Total Credits						≥ 32credits