

Master Program in Software Engineering

-International School of Software

I . Educational Objective

This program is aimed to train advanced professionals with basic theoretical and professional knowledge in Software Engineering studies, and be able to solve practical problems. Candidates from this major are expected to obtain the ability to undertake the specialized technical or management works independently, having good professional quality. Specific requirements are as follows:

(1) All candidates are expected to have a deep understanding of China' s politics, economy, culture and society, abide by Chinese laws and regulations; are required to have rigorous and realistic approach toward learning attitude and work style, should be health of spirits and body.

(2) All candidates are required to master the basic theory, advanced technical methods and means of this field, have ability to be engaged in independently, in a certain direction such as engineering design, project implementation, project research, project development and project management.

(3) All candidates are expected to be fluent in English, can speak Chinese.

II. Recruit major and field description

Recruit major: Software Engineering

Field description:

Software engineering is an engineering science focusing on the research of

large-scale software development methods, tools and management. The key characteristic of software engineering is based on the engineering principles and methods which are used to organize and standardize the software development process. The main research contents of software engineering include software development methodology and environments, software tools and integration technology, software automation and automated testing techniques, software quality control and software reuse technology.

Subject curriculum of software Engineering includes Mathematic Modeling、 Art of Communication、 Software Requirement Engineering、 Modern Software Architecture、 Software process management、 Object-oriented Analysis and Design、 Project Management etc.

III. Period of schooling

The learning period is 2 years, using full-time study mode.

IV. Training mode

It adopts the mode of combining course learning, practical teaching and dissertation.

The curriculum is based on basic theory, practical application and advanced knowledge, which highlights the professional practice courses and engineering practice courses. The practical teaching is an important part of training for full-time postgraduate students in Engineering, encouraging them to carry out internship or practice in enterprise, implementing the mode of combining intensive practice and sub-practice. During their studies, postgraduate students in Engineering are required to accomplish the practical teaching for minimum half a year.

V. Curriculum and credits

The postgraduate students in Engineering should gain minimum 40 total credits, and minimum 25 degree course credits therein, including 9 credits from public compulsory courses, 6 credits from specialized courses and 10 credits from specialized courses for research direction. Others are elective course credits and professional practice credits.

Specific curriculum and credit requirements can be viewed in Appendix.

VI. Practices requirement

During their studies, students are required to accomplish the professional practice for minimum half a year, can be used with the mode of combining intensive practice and sub-practice. Students can carry out their practices in the joint cultivation base of school, or in the user units combining with their engineering projects. According to the requirement of engineering project, the student who wants to carry out the practice in the school, is required to submit a written application by his/her supervisor, when approved by the school, it will be reported to the graduate school for record and examination.

Students need to be confirmed thesis supervisor at the end of the first semester. Developing and submitting practical program under the guidance of supervisor. Professional practices are usually arranged during the second and the third semester, and should be accomplished step by step according to the preplanning. When finish each part, students must submit a self-assessment, which will be evaluated by the mentor who in charge of this part (can be a supervisor from within or outside school, or an expert from practice department). Submit report is

required after whole practice training. Students should confirm the academic thesis topic combining with their professional practices. The evaluation group evaluates students' practice performance and final report. The students will gain their credits after passing the evaluation, and then may propose for thesis defense.

VII. Academic thesis

The thesis subject should result from engineering practice or definite engineering background, could be as: new technologies, new processes, new equipment, new material, new product research and development. The content of the thesis could be as: engineering design and research, technical research or technical retrofit scheme research, engineering software development or application development, project management etc.

Thesis writing must be independently accomplished under the guidance of supervisor. Effecting Two-Tutor system, one tutor comes from school, another comes from enterprise or expert in related field.

After accomplishing the thesis, besides written detailed review opinions by supervisor, it will be reviewed by 2 experts in related field (at least one outside expert). Reviews should be especially considered with the following aspects: ability of thesis author for using a combination of scientific theory, methods and technological means to solve engineering technique problems, technical difficulty and workload in the thesis work, new ideas, new methods and new progress to solve engineering and technology problems, advancement and practicality of new process, new technology and new design, economic and social profits made by

itself etc.

When full-time graduate students in engineering accomplish all parts required in the training program, gain their credits, with good grades, may propose for thesis defense. The dissertation committee should be composed of 5 experts in related field (at least one outside expert).

Those who have successfully defended their thesis and approved by the School of Academic Degree Evaluation Committee shall be conferred the master's degree of Engineering Studies and can get a master's graduate diploma as well.

Appendix:

The Curriculum of Software Engineering Studies

Course categories		Course code	Course name	Credits	Hours	Semester	Notes
Degree courses	Public		Comprehensive Chinese	4	72	1	9 credits
			Outline of China	3	36	1	
	Compulsory courses	43010017	Information Retrieval	1	18	1	
		43010018	Intellectual Property	1	18	1	
	Specialized Compulsory courses	43011352	Art of Communication	2	36	1	6 credits
		43011353	Software Requirement Engineering	2	36	1	
			Technical English	2	36	1	
	Compulsory courses for Research	43010019	Mathematic Modeling	2	36	1	10 credits
		43011354	Software Architecture	2	36	1	
		43011355	Software process	2	36	1	

Course categories		Course code	Course name	Credits	Hours	Semester	Notes
Direction			management				
		43011356	Object-oriented Programming Analysis and Design	2	36	1	
		43011357	Project Management	2	36	1	
Elective courses		43011365	JAVA Programming Language	3	54	1	
		43013608	Academic Lectures	2	36	2	
Required parts		43011370	Software Engineering Training	10	/	2	
		43011373	Thesis	4	/	3 - 4	
			1.Thesis Proposal 2.Midterm	/	/	2 - 3	

Course categories	Course code	Course name	Credits	Hours	Semester	Notes
		Report of Thesis Writing				

Contact Information:

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