

Chemical Engineering and Technology

化学工程与技术

(081700)

1. Overview of the Program

In recent years, the discipline construction has achieved leapfrog developments, with the international influence rising significantly.

This is a full-time degree program, involving both coursework and projects. It aims at cultivating the high-level specialized personnel with a firm grasp of basic theories and professional knowledge of Chemical Engineering and Technology, with experimental skills and abilities to solve practical problems. Students will be awarded with the master degree after getting required credits. They will participate in projects in relevant fields under the guidance of his or her supervisor and complete their graduation thesis based on the projects they have conducted.

On the basis of the projects conducted by the school, we have developed a discipline for this program: Chemical Engineering & Technology: this discipline involves green chemistry technology, chemical engineering, fine chemicals, functional materials, energetic material technology, energy and chemical engineering, new energy technology, biochemical engineering, pharmaceutical engineering, electrochemical engineering industrial catalysis technology, modern spectrum, chemical detection and automation, chemical process simulation and optimization, chemical management, chemical equipment safety, etc.

2. Training Target

The target is to train high-level innovative talents who have a good knowledge of international common sense, with the ability of spreading Chinese and foreign cultures occupied, so that to bring international graduate students into full play as a cultural bridge.

3. Length of Schooling

The basic length of schooling for master students is 2 years. In principle, students should complete the courses in the first academic year. Thesis work time should not be less than one year. The maximum length of study for master students is extended by 0.5 years on the basis of 2 years. The basic length of

schooling for Ph.D. students is 4 years. In principle, students should complete the courses in the first academic year. Thesis work time should not be less than three years. The maximum length of study for Ph.D. students is extended by 2 years on the basis of 4 years.

4. Curriculum and Credit Requirements

Course Classification	Course Code	Course Name	Course Hours	Credits	Semester	Requirements	Master /Ph.D.	Credits Requirement	
Public Course	3700001	Chinese Language 汉语	96	3+3	1+2	Compulsory	Master /Ph.D.	Master=6 Ph.D.=6	
	3700002	Outline of China 中国概况	32	2	1/2	Compulsory	Master /Ph.D.	Master=2 Ph.D.=2	
Major Basic Courses	1001009	Progress in Advanced Organic Chemistry 高等有机化学进展	32	2	2	Optional	Master /Ph.D.	Master \geq 2 Ph.D. \geq 2	
	1001010	Advanced Fluid Dynamics 高等流体力学	32	2	2	Optional			
Optional Course	Major Core Courses	1001011	Chemical Biology 化学生物学	32	2	2	Optional	Master /Ph.D.	Master \geq 2 Ph.D. \geq 2
		1001012	Pharmaceutical Dosage Forms and Technology 药物制剂与工艺	32	2	1	Optional		

Major Optional 1 course	1001013	Synthetic Biotechnology 合成生物 技术	32	2	2	Optional	Master /Ph.D.	Master ≥ 6 Ph.D. ≥ 2
	1001014	Drug Design 药物分子 设计	32	2	1	Optional		
	1001015	Heterocyclic Chemistry and Application 杂环化学及 应用	32	2	2	Optional		
	1001016	Spectroscop ic Analysis 波谱分析	32	2	1	Optional		
Total Credits			Master ≥ 18 credits		Ph.D. ≥ 14 credits			

Notes:
1. Public Course

(1) Chinese Language: Set by International Students Center of BIT. All international students must take this compulsory course.

(2) Outline of China: Set by International Students Center of BIT. All international students must take this compulsory course.

2. Optional Course

Master international students must take two optional courses of their own Program. Under the guidance of the supervisor, Master international students can take undergraduate courses if needed.

Ph.D. international students can take undergraduate courses if needed.

5. Practice Part
1. Academic Activity (1 credit)

International Graduate Students need to participate in academic activities, academic lectures and

academic conferences of their own fields. Giving oral speeches on academic conferences, whether on or off campus, are highly recommended.

2. Innovative Practice (1 credit)

International Graduate Students should take scientific research training and social practices during their training period, which should be carried-out and evaluated by supervisors.

6. The Dissertation Related Work

1. Literature Review & Opening Report

Under the guidance of the supervisor, International Graduate Students should pick a research direction as well as reading certain amount reference books, both Chinese or foreign languages, at the same time.

Master students should write a literature review, no less than 4000 words, based on the reading of over 30 papers , both Chinese or foreign languages, of their own research field.

Ph.D. students should write a literature review, no less than 5000 words, based on the reading of over 50 papers , both Chinese or foreign languages, of their own research field.

On the basis of the Literature Review, the Opening Report should mainly introduce following factors: research target, research meaning, methods of research, technical route, implementary plan, arrangements and expected results.

2. Mid-Term Evaluation

Schools organize Mid-Term Evaluation for International Students, which includes the evaluations of course study, literature review, opening report and the research progress of publishing papers and writing of Degree thesis.

3. Thesis Writing and Thesis Pre-Defense (for Ph.D. students)

International Graduate Students should complete a Degree thesis under the guidance of supervisors. Ph.D. students can take the Thesis Pre-Defense after finishing a supervisor-approved first draft.

4. Thesis Defense

After thesis approved and the Sub- Committee of Degree Assessment authorized, International Graduate Students can take the Thesis-Defense.

5. Degree Conferment

International students should acquire certain academic results as regulated when applying for a Master or Ph.D. Degree. Each program should clarify the categories of Master Degree and Ph.D. Degree.

Time nodes of relevant procedure

The Dissertation Related Work	Master	Ph.D.
Literature Review& Opening Report	Before week 1 of the 3 rd semester	Before week 1 of the 5 th semester
Mid-Term Evaluation	week 1-2 of the 4 rd semester	Before week 1 of the 7 th semester
Thesis Pre-Defense	---	Before Blind review
Thesis Defense	At least 9 months after the Opening Report	At least 18 months after the Opening Report
Degree Application	The application should be raised in a certain time after the Thesis Defense	

7. Course Syllabus

Course Code, Course Name, Class Hour, Credits, Course Description and Course Target, Teaching Method, Evaluation and Exams, Suitable Specialty, Prerequisites, Course Contents, Reference, and Lecturer Introduction.