

Educational Plan for Academic Doctor Degree in Materials Science and Engineering

I. Educational Targets

1. Culturing moral behavior of research, being rigorous, realistic, creative and aggressive, targeting the ability of independent research and practice in materials science.
2. Mastering solid and broad knowledge of basic theories as well as further understanding in expertise.
3. Getting creative achievements in the field of materials science and special technique

II. Research Orientations

1. Surface Science and Engineering
2. Nanomaterials and Novel Bulk Amorphous
3. Novel metal and Ceramic Material
4. Composite Materials
5. Novel Energy Materials and .Devices
6. Photoelectric Materials and Devices

III. Educational Duration

Completion of the Ph.D. requires a minimum of four years of full-time study.

IV. Credits requirement

Doctor candidates who have already got a Master's degree should acquire no less than 32 credits.

Type	Simple Doctor candidates	
Total Credits Required	≥32 credits	
Course Credits	≥7credits	Basic courses in general education ≥7 credits (Chinese language 4 credits, a survey of China 2 credits, Orientation for New Students 1 credit)
	≥6credits	2 credits for first-level crossed courses(elective courses), 4 credits for Doctor's specialized courses (elective courses).
Research Segments	≥19 credits	Literature reading and report of subject selection, 1 credit
		Participation in international conference or national academic meetings and submit papers, 1 credit
		The report of middle stage progress, 1 credit
		Thesis publishing, 1 credit
		Degree thesis, 15 credits

V. Curriculum and Credit Allocation

The curriculum for Doctor degree majoring in materials science

Curriculum Type	Curriculum code	Course Title	Credits hour	Credits	Season	College	Remarks
Public compulsory course	922.581	Chine Language	160	4	Autumn	School of International education	7 credits
	922.582	A Survey of China	32	2	spring		
	922.583	Orientation for New Students	16	1	Autumn		
Discipline basic courses		Additive Manufacturing	32	2	Autumn	School of Material	Limited optional courses \geq 4 credits
		Precision Plastic Forming Theory and Application for Metals	32	2	Autumn		
		Preparation and Formation of Composite Materials	32	2	Autumn		
		Semiconductor Device physics and Technology	32	2	Autumn		
		Synthesis and Preparation of Nanomaterials	32	2	Autumn		
	Bulk Metallic Glasses	32	2	Autumn			
First-level crossed courses							Required for Doctor \geq 2
Research Segment	650.801	Literature reading and the report on subject selection (Doctor)		1		School of Material	
	650.802	Participation in international conference or national academic meetings and submit papers (Doctor)		1			
	650.803	The report of middle stage progress (Doctor)		1			
	650.804	Thesis publishing (Doctor)		1			
	650.805	Degree thesis (Doctor)		15			

VI. Detailed requirements of supervising Doctor candidates.

1. Doctor candidates should be supervised by Doctor guiding group, where the supervisor should be group leader. The guiding group is charged with the training and examining of the Doctor candidate.

2. Limitations for first-level crossed courses

(1). The definition of the first-level crossed courses is those not included in the first-level discipline. Students must be presented to the class and take the exams.

(2). The first-level crossed courses have to differ from the courses taken during the Master degree.

3. The report on topic selection. If the report got approved, the candidate will get 1 credit. The report should include the contents below.

(1) The origin and significance of the subject.

(2) General introduction of national and international research as well as the development tendency.

(3) Research contents and technical solution to the subject.

(4) The prospective creative achievements of the theories and practice.

(5) Prospective results.

(6) Main references.

4. The report of middle stage progress.

Before composing Doctor degree thesis, Doctor candidates should have reported their research to Doctor guiding group or other related researchers and accepted the queries for development. The candidate could not write the degree thesis until the creative research achievements are approved.

5. Doctor candidates apply for thesis defense and qualification examination.

The qualification examination of the degree thesis should be under the charge of the supervisor or the guiding group.

A Doctor candidate can apply for thesis defense when he meets the basic requirements below:

(1) Acquiring the academic credits

(2) Accomplishing the report on the selection of program.

(3) Finishing the mid-term report.

(4) Finishing the degree thesis.

(5) Passing the concealed evaluation of the Doctor thesis.

(6) The specific regulations of publishing academic thesis.

Academic requirements for the application of Ph.D. degree in the School of Materials Science and Engineering (MSE) are summarized in the document **Ph.D. Degree Requirements in School of Materials Science and Engineering**.