# Completion requirements, etc. for the Graduate School of Materials Science

## Completion Requirements

#### Master's Course

Students are required to be enrolled in the Master's Course for two years or more, earn 30 credits or more from the completion requirements below, receive necessary research guidance(including taking "Research Ethics Training Session" and passing the test), and pass the master's thesis examination and final examination. Students who produce excellent research results can complete the Master's Course with the enrollment period of one year or more.

Completion Requirements (for individuals admitted in academic year 2017)

Subject	Numbe r of credits offered	Number of credits required													
		α course			π course			σ course							
								Research thesis*1			Thematic research*1			i course	
		Required	Required Elective	Elective	Required	Requerie d Elective	Elective	Required	Required Elective	Elective	Required	Required Elective	Elective	Required	Elective
Common Subjects	10*2	1		2	1		2	1		2	1		2		6
General Subjects	8*2	3			3			3			3			2	U
Basic Subjects	22	6	2	2	6	2	2	6	2	2	6	2	2	2	2
Specialized Subjects	13			4*3			4*3			4*3			6*3		5
Subtotal		20 or more							22 or more			17 or more			
Exercise and Experiments in															
Materials Science	2	2			2			2			2			3	
Seminar A	1	1			1									2	
Seminar B	2							2			2				
Interdisciplinary Seminar A	1				1									2	
Interdisciplinary Seminar B	2	2													
Research Thesis	6				6			6						6	
Special Research on Materials Science	5	5													
Research on Materials Science	4										4				
Subtotal		10		10			10		8		13				
Total		30 or more													

<sup>(\*1)</sup> Students in the  $\sigma$  course are required to select either research thesis or thematic research based on consultation with the main research instructor.

<sup>(\*2)</sup> Credits earned by taking Introduction to Materials Science (a common subject) and Mathematical Analyses for Materials Science, Materials Science English  ${\rm I\hspace{-.1em}I\hspace{-.1em}I}$ , Global Entrepreneur  ${\rm I\hspace{-.1em}I}$ , Prototyping  ${\rm I\hspace{-.1em}I}$  (general subjects) do not count as credits toward the completion requirements.

<sup>(\*3)</sup> Up to two credits earned by taking (i) subjects that are offered by the Graduate Schools of Information Science and Biological Sciences, and made available to students of other NAIST graduate schools and (ii) common subjects (except Introduction to Materials Science, Technology and Professional Ethics) may be counted as credits earned by taking special subjects that constitute the completion requirements, if the total amount of credits earned from these classes exceeds two credits.

#### **Doctoral Course**

In connection with Article 42 of the NAIST Regulations and the Degree Regulations

1. Completion requirements for the Doctoral Course

Students who want to earn a doctoral degree by completing the Doctoral Course are required to earn 10 credits or more from the completion requirements below, receive necessary research guidance(including taking "Research Ethics Training Session" and passing the test), submit a doctoral thesis, present the details of the thesis at a public hearing, and pass a thesis examination and final examination. In principle, students are required to be enrolled in the Doctoral Course for three years. Note that students who produce excellent research results can complete the Doctoral Course with the enrollment period of three years for the Master's Course and Doctoral Course combined

Completion Requirements (for individuals admitted in academic year 2017)

Subject	Number of credits offered	Number of credits required								
		α co	ourse	π course/l	DD course	τ course				
		Required	Elective	Required	Elective	Required	Elective			
Internationalization subject	10		2		1					
Interdisciplinary subjects	1			1						
Research management	5	1		1		3				
Interdisciplinary seminars	3		1		1		1			
General research	6	6		6		6				
Total		1	0	1	0	10				

- 2. When submitting a doctoral thesis, students are required to meet the conditions including but not limited to the following:
- (1) An overall evaluation score of 4.0 or higher has been given by respective supervisors in the immediate midterm examination.
- (2) The doctoral thesis research is characterized by originality, novelty or applicability.
- (3) Either of the following conditions is met. Note that only (a) is applicable for short-term completion.
  - (a) At least part of the doctoral thesis has been published or will be published in the near future in the form of an original thesis, in which the individual submitting the doctoral thesis to a peer-reviewed English scientific journal serves as the first author.
- (b) A student earns two credits by taking International Internship (a short-term program to study abroad for a period of two months or longer) and passes a doctoral thesis preliminary examination.

### 3. Conditions for awarding a doctoral degree

The thesis examination verifies that the student submitting the doctoral thesis has sufficient ability to work on research and development activities on an ongoing basis as an independent researcher or engineer.

#### 4. Doctoral thesis

A doctoral thesis may be prepared either in English or Japanese. Note that students submitting a doctoral thesis in accordance with 2. (3) (b) are required to prepare a thesis in English.