

## Completion requirements, etc. for the Graduate School of Biological Sciences

### Completion Requirements

#### Master's Course

Students are required to select either the Frontier Bio course or the Bio-Expert course under the guidance offered by the education committee of the school.

Students who select the Bio-Expert course are also required to select either Research Experiment or Research on Biological Subjects, based on consultation with their research instructors.

Completion Requirements (for individuals admitted in academic year 2017)

Subject		Number of credits offered	Frontier Bio course	Bio-Expert course	
			Required	Required	
Common	Commentaries on Science and Technology	1	1	1	
	Computer System	1	(**)	(**)	
	Algorithm	1	(**)	(**)	
	Foundation of Materials Science	1	(**)	(**)	
	Science Communication	1	(**)	(**)	
	Philosophy of Science	1	(**)	(**)	
	Technology and Professional Ethics	1	(**)	(**)	
	Introduction to Biological Sciences	1	(*)	(*)	
General	Global Entrepreneur I	1	(*)	(*)	
	Global Entrepreneur II	1	(*)	(*)	
	Global Entrepreneur III	1	(*)	(*)	
	Global Entrepreneur IV	1	(*)	(*)	
	Global Entrepreneur V	1	(*)	(*)	
	Professional English I	1	1	1	
	Professional English II	1	1	1	
	Professional English III	1	1	1	
	Communication Strategies	1	(*)	—	
	Communication Quality through Phonology	1	(*)	—	
	Logic in Scientific Discovery	1	(*)	—	
	Social Life Science	1	1	1	
	Advanced Genome Science and Technology	1	1	1	
Basic	Introduction of Current Biology	1	1	1	
	Practical Biology for Advanced Science I ~ II	2	2	2	
	Basic Bioscience Seminar I ~II	2	2	2	
	Microbial Biotechnology	1	1	1	
	Environmental Plant Science	1			
	Biomedical Sciences	1			
	Bioinformatics	1	2	2	
	Practical Bioscience Seminar I ~II	2			
	Bioexpert Seminar for Research Project	1			—
Frontier Bioscience Seminar for Research Project	1	1	—		
Special	Advanced Lecture in Developmental Biology	1	2  (Except Practice in Bio-industrial Technology)	3	5
	Bio-industrial Technology	1			
	Practice in Bio-industrial Technology	1			
	Topics in Animal Science	1			
	Frontiers of Plant Sciences	1			
	Advanced Systems Biology	1			
	Lecture of intellectual property right	1			
	Topics in Bioinformatics	1			
	Bio-Imaging	1			
	Systems Biology II	1			
	International Forefront in Bioscience I	1			
	International Forefront in Bioscience II	1	—	—	
	Frontier Bioscience Tutorial	1	1	—	—

Subject	Number of credits offered	Frontier Bio course	Bio-Expert course	
		Required	Required	
Seminar I ~IV	8	4	4	4
Research Experiment I ~IV	12	6	6	—
Thesis	2	2	2	—
Research on Biological Subjects I ~IV	8	—	—	4
Project Report	2	—	—	2
Total		30	30	30

— : Unable to take subjects depending on the course

(\*) : Not count as credits toward the completion requirements.

(\* \*) : Up to two credits in total earned by taking (i) subjects that are offered by other graduate schools or (ii) common courses marked by an asterisk (\*\*) may be counted as credits earned by taking specialized courses that constitute the completion requirements.

## International course of master program

Students from foreign countries and Japanese students who have fluency in English can enroll in this International course after consultation with the education committee of the school.

List of subjects and requirements (For students who enroll in 2017)

Section	Subject	Credit allocated	Credits required for completion
Common	Japanese Class for Beginners I	2	*
	Japanese Class for Beginners II (1)	1	*
	Japanese Class for Beginners II (2)	1	*
	Japanese Class for Beginners III (1)	1	*
	Japanese Class for Beginners III (2)	1	*
	Japanese Culture	2	*
	Technology and Professional Ethics	1	1
General	Professional English I	1	*
	Professional English II	1	*
	Professional English III	1	*
	Communication Strategies	1	*
	Communication Quality through Phonology	1	1
	Logic in Scientific Discovery	1	1
Basic	Molecular Cell Biology	1	1
	Advanced Topics in Bioscience	1	1
	Laboratory Rotation I	1	1
	Laboratory Rotation II	1	1
	Literature in Bioscience Research I	1	1
	Literature in Bioscience Research II	1	1
	Research Presentation Forum	1	1
Special	International Forefront in Bioscience I	1	3
	International Forefront in Bioscience II	1	
	Bioscience Colloquium	1	
	UCD Online Seminar	1	
	**Systems Biology I	1	
	Bioresource Research Proposal	1	*
Seminar I-IV		8	6
Research Experiment I-IV		12	9
Thesis		2	2
Total credits required for completion			30

\* Not counted toward the degree requirement.

\*\* Subjects in Graduate School of Information Science.

## Doctoral Course

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

### 1. Completion requirements for the Doctoral Course

Individuals who wish to complete the Doctoral Course and obtain a doctoral degree are required to earn necessary credits in specified subjects (refer to Graduate School of Biological Sciences curriculum table p40), receive necessary research guidance, submit a doctoral thesis, deliver a presentation before the Screening Committee, and pass the doctoral thesis examination and final examination.

### 2. To submit a doctoral thesis, the following requirements must be met:

- (a) The research is characterized by its originality, novelty, or applicability.
- (b) The thesis has passed a degree application preliminary examination by the Advisory Committee and other faculty members.

### 3. Conditions for awarding a doctoral degree

A doctoral degree is awarded to individuals who are recognized to be fully capable of continuing research and development as independent researchers or engineers based on the doctoral thesis submitted for the thesis examination.