

Course Requirements

□ Undergraduate Course

A. Graduation Credits

At least 130 credits in total

B. General Course Requirements: At least 28 credits

- Mandatory General Course: 7 credits and 8 AU

(1 AU means 1 hour activity / work a week for a semester)

- Students who entered the KAIST in or before 2006

· "English I," "English II," and "Writing" : 7 credits

· 4 AU of "Community Service"(64 hours), 4AU of "Physical Education"(64 hours) : 8 AU

- Students who enter the KAIST in or after 2007

· "English Communication I", "English Communication II", "English Reading & Writing", and "Writing"
: 7 credits

· 2 AU of "Community Service"(32 hours), 4AU of "Physical Education"(64 hours), 2AU of "Humanity/Leadership": 8 AU

※ AU is not counted for GPA but required for graduation.

- Elective General Course in Humanities & Social Science: at least 21 credits (at least 7 courses).

- At least 1 course in each of 5 divisions: Science Technology; Literature and Art; History and Philosophy; Social Science; Foreign Language and Linguistics.

C. Basic Course Requirements: at least 32 credits

- Mandatory Basic Courses: 23 credits (1 course from each of the following 9 categories)

① 1 course among Fundamental Physics I (3), General Physics I (3), and Advanced Physics I (3)

② 1 course among Fundamental Physics II (3), General Physics II (3), and Advanced Physics II (3)

③ 1 course of General Physics Lab I (1)

④ 1 course of Basic Biology (3) or General Biology (3)

⑤ 1 course of Calculus I (3) or Honor Calculus I (3)

⑥ 1 course of Calculus II (3), or Honor Calculus II (3)

⑦ 1 course among Basic Chemistry (3), General Chemistry I (3) and Advanced Chemistry (3)

⑧ 1 course of General Chemistry Lab I (1) or Advanced Chemistry Lab II (1)

⑨ 1 course of Basic Programming (3) or Advanced Programming (3)

- Elective Basic Courses:

1. Required: PH152 General Physics Laboratory II

2. Recommended: CH103 General Chemistry II, MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, MAS202 Applied Mathematical Analysis

D. Major Course Requirements: at least 40 credits

- Mandatory Major Courses : at least 19 credits

- Elective Major Courses : at least 21 credits

E. Elective Course Requirements: at least 25 credits

F. Research Course Requirements: at least 5 credits

- Required: PH490 B.S. Thesis Research (3), PH496 Seminar (2)

- Optional: PH495 Individual Study (maximum 4 credits)

G. English Language Requirements for Graduation

- One of the following should be satisfied for graduation before entering or while enrolled at KAIST:

- PBT TOEFL (ITP) score : at least 560

- CBT TOEFL score : at least 220

- iBT TOEFL score: at least 83

- TOEIC score : at least 760

- TEPS score : at least 670

※ Requirements for a double major: must satisfy all of the requirements for a physics degree (students who have entered KAIST after 2001 are exempt from research course requirements including B.S. Thesis Research).

※ Requirements for a minor in physics: minimum 19 credits in physics courses including PH301 Quantum Mechanics I, and PH351 Physics Laboratory III (or PH352 Physics Laboratory IV).

NOTE: Graduation requirements can differ depending on your class. Be sure to check on the requirements pertinent to you.

□ Master's Program

1) Thesis Master's Degree (Master's degree with thesis): Must satisfy the following course requirements, and pass the thesis defense.

A. Graduation Credits: minimum 36 credits

B. Mandatory General Course Requirements: 3 credits

i. One of the following courses: CC510, CC511, CC512, CC522

ii. CC010 Special Lectures on Leadership (non-credit course. Not required for recipients of general scholarship and foreign students).

C. Mandatory Major Course Requirements: 12 credits (Applied Physics Laboratory I, II, Quantum Mechanics I, Advanced Electrodynamics I)

D. Elective Course Requirements: minimum 9 credits (minimum 6 credits from physics)

E. Research Credits: up to 12 credits (2 semesters of PH990 required, Not required for recipients of general scholarship and foreign students)

2) Coursework Master's Degree (Master's degree without thesis): Thesis defense is not required, but students must satisfy all of the following requirements.

o Fulfill the course requirements (below)

o Be admitted to the Ph. D. program

o Be recommended by the thesis advisor

A. Required number of credits for graduation: minimum 36 credits

B. Mandatory General course requirement: 3 credits

i. One of the following courses: CC510, CC511, CC512, CC522

ii. CC010 Special Lectures on Leadership (no course credit. Not required for recipients of general scholarship and foreign students).

C. Mandatory Major Course Requirements: 21 credits (Applied Physics Laboratory I, II, Quantum Mechanics I, II, Advanced Mechanics, Advanced Electrodynamics I, Statistical Mechanics)

D. Elective Course Requirements: minimum 9 credits (minimum 6 credits from physics)

E. Research Credits: minimum 3 credits (2 semesters of PH990 required, Not required for recipients of general scholarship and foreign students)

* Master's degree without thesis is available to students who entered KAIST after the year 2000.

□ Doctoral Program

A. Required number of credits for graduation: minimum 72 credits.

B. General Course Requirements: the same as those for the Master's degree (not required if taken during the Master's degree program).

C. Mandatory Major Course Requirements: 24 credits (All of the courses for the mandatory physics course requirements for the Master's degree, plus Quantum Mechanics II, Advanced Mechanics, Advanced Electrodynamics II, and Statistical Mechanics).

D. Elective Course Requirements: minimum 15 credits (minimum 9 credits from physics).

E. Research Credits: minimum 30 credits

※ The course credits earned in the Master's course work can be used towards the Doctoral degree

(except research credits).

* Graduate students are strongly recommended to take CC500.