

## □ Course Requirements

### □ Undergraduate Courses

A. Graduation Credits: at least 130 credits in total

※ A cumulative grade point average of 2.0 or higher out of a possible 4.3 in all coursework

B. **Completion of General Courses: At least 28 credits and 9AU** (applicable to students entering KAIST in 2014 and thereafter; for those who have entered KAIST in 2013 and before, refer to the Course Completion Requirements by Year of Admission)

○ Mandatory General Courses

| Academic Year          | Credits           | Required Courses  |
|------------------------|-------------------|---|
| In 2014 and thereafter | 7 credits and 9AU | English Presentation & Discussion(1), Advanced English Listening(1), Advanced English Reading(1), Advanced English Writing(1), Writing(3), Physical Education(4AU), Humanity/Leadership(2AU), Ethics and Safety II(1AU), Happy College Life(1AU), Exciting College Life(1AU)  |
| Between 2011 and 2013  | 6 credits and 9AU | English Communication(1), Critical Thinking in English(2), Writing(3), Physical Education(4AU), Humanity/Leadership(2AU), Ethics and Safety II(1AU), Happy College Life(1AU), Exciting College Life(1AU)  |
| Between 2009 and 2010  | 6 credits and 9AU | English Communication(1), Critical Thinking in English(2), Writing(3), Physical Education(4AU), Community Service(2AU), Humanity/Leadership(2AU), Ethics and Safety II(1AU)   |
| Between 2007 and 2008  | 7 credits and 9AU | English Communication I(1), English Communication II(1), English Reading&Writing(2), Writing(3), Physical Education(4AU), Community Service(2AU), Humanity/Leadership(2AU), Ethics and Safety II(1AU)<br>* English Communication I → English Communication<br>* English Communication II → English Conversation<br>* English Reading&Writing → Critical Thinking in English |
| Between 1998 and 2006  | 7 credits and 9AU | English I(2), English II(2) Writing(4AU), Community Service(2AU), Humanity/Leadership(2AU), Ethics and Safety II(1AU)<br>* English I → English Communication<br>* English II → Critical Thinking in English   |

○ Elective General Courses in Humanities & Social Sciences: at least 21 credits

- Take (6 credits) 1 course of each of the following 2 categories among 3 categories: Humanity, Society and Literature and Arts; the rest can be chosen regardless of the category. (applicable to students entering KAIST in 2009 and thereafter; for those who have entered KAIST in and before 2008, refer to the Course Completion Requirements by Year of Admission)

- Students entering KAIST between 2007 and 2010 should earn at least 9 credits through lectures in English among the 21 credits required as Elective General Courses in Humanities & Social Science.

- Students having a double major take 12 credits without considering categories. (Students entering KAIST between 2007 and 2010 should take 6 credits through lectures in English.)

※ The requirement of taking lectures in English as Elective General Courses in Humanities & Social Science is not applied to students entering KAIST in 2011 or thereafter.

C. **Completion of Basic Courses: at least 32 credits** (applicable to students entering KAIST in 2012 and thereafter; for those who have entered KAIST in 2011 and before, refer to the Course Completion Requirements by Year of Admission)

○ Mandatory Basic Courses: 23 credits

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 Advance 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 (1)
- ⑨ 1 course of Basic Programming (3) or Advanced Programming (3)
- Students having entered KAIST in 2007 or before: 23 credits (①~⑨)
- Students having entered KAIST between 2008 and 2011: 26 credits ((①~⑨), Freshman Design Course: Introduction to Design and Communication) (3))
- Elective Basic Courses: at least 9 credits (including Introduction to Linear Algebra (MAS109))
  - Students entering KAIST before 2012 take 6 credits
- ※ Requirements for a double major: at least 3 credits (including Introduction to Linear Algebra (MAS109))

D. Major Course: at least 43 credits

- Mandatory Major Courses: at least 22 credits  
Discrete Mathematics, Data Structure, Introduction to Algorithms, Computer Organization, Programming Languages, Operating Systems and Lab., Computer Science Project (Discrete Mathematics (CS204) can be substituted by Discrete Mathematics (MAS275, MA260); Computer Organization (CS311) can be substituted by Introduction to Computer Architecture (EE312)).
- Elective Major Courses: at least 21 credits  
Four credits from individual study courses are counted at maximum.

E. Elective Course: none

F. Research Course: at least 3 credits

- Students must take three credits for Research in Computer Science (CS490).
- Credits from seminar courses are counted as Research Course credits.
- ※ Students having a double major are exempt.

G. English Proficiency Requirements upon Graduation

- Before entering or during studying at KAIST, students should obtain the minimum required score or higher from one of the following: TOEFL, TOEIC, TEPS and IELTS.
- Students who have hearing impairment level 3 or above should obtain the minimum required score or higher, excluding listening.
- 1) Students who have submitted past scores for TOEIC (before April 2006) or TEPS (before February 28, 2007)
  - Students admitted in 2008 or later

| Classification  | iBT TOEFL | PBT TOEFL | CBT TOEFL | TOEIC | TEPS | IELTS |
|---|-----------|-----------|-----------|-------|------|-------|
| General qualification score                                 | 83        | 560       | 220       | 775   | 690  | 6.5   |
| Qualification score for hearing impairment level 3 or above | 62        | 372       | 146       | 387   | 414  | 4.8   |

- Students admitted in 2007 or earlier

| Classification  | iBT TOEFL | PBT TOEFL | CBT TOEFL | TOEIC | TEPS | IELTS |
|---|-----------|-----------|-----------|-------|------|-------|
| General qualification score                                 | 83        | 560       | 220       | 760   | 670  | 6.5   |
| Qualification score for hearing impairment level 3 or above | 62        | 372       | 146       | 380   | 402  | 4.8   |

2) Students who have submitted NEW TOEIC score taken after May 2006 or TEPS score taken after March 1, 2007

| Classification  | iBT TOEFL | PBT TOEFL | CBT TOEFL | TOEIC | TEPS | IELTS |
|---|-----------|-----------|-----------|-------|------|-------|
| General qualification score                                 | 83        | 560       | 220       | 720   | 599  | 6.5   |
| Qualification score for hearing impairment level 3 or above | 62        | 372       | 146       | 360   | 359  | 4.8   |

H. Graduation Requirements for Foreign Students: TOPIK (Test of Proficiency in Korean)

- Undergraduate foreign students are required to obtain level 2 or higher score in TOPIK before entering or during studying at KAIST.

※ Applies to students entering KAIST in 2013 and thereafter

I. Requirements for Double Major and Minor

- Double major: 40 credits including mandatory major courses
- Minor: at least 21 credits from major courses, including 15 credits in required major courses.

※ General and basic courses in undergraduate program are different from years of admission; therefore, students should refer to the Course Completion Requirements by Year of Admission.

□ Master's Program

1) Thesis Master's Degree

| General Mandatory | Mandatory Major | Elective Major |          | Research | Total |
|-------------------|-----------------|----------------|----------|----------|-------|
|                   |                 | Essential      | Elective |          |       |
| 3 + 1AU           | 0               |                |          | 6        | 33    |
|                   |                 | 9              | 9        |          |       |

A. Graduation Credits: at least 33 credits in total.

B. Mandatory General Course: 3 credits and 1AU

- Take 1 course from the following courses: Probability and Statistics (CC511), Introduction to Materials and Engineering (CC512), Engineering Economy and Cost Analysis (CC513), Introduction to Instruments (CC522), Entrepreneurship and Business Strategies (CC530), and Collaborative System Design and Engineering (CC532).
- CC010 Special Lecture on Leadership(non-credit, this applies to students entering KAIST in 2002 and thereafter; general scholarship students, foreign students are excluded)
- CC020 Ethics and Safety I (1AU)

C. Mandatory Major Course: none

D. Elective Course: at least 18 credits

- Essential Courses (at least 9 credits): Take one course from each of the following three areas.
  - Theory: Design and Analysis of Algorithms, Theory of Formal Languages and Automata, Computational Geometry, Computational Linguistics.
  - Software: Theory of Programming Languages, Software Engineering, Database System, Database Design, Artificial Intelligence and Machine Learning, Intelligent Robotics, Natural Language Processing I, Computer Vision, Interactive Computer Graphics, Semantic Web, Models of Software Systems, Designs for Software and Systems.
  - Computer Systems: Computer Architecture, Operating System, Network Architecture, Internet Systems Technology, Advanced Information Security, Wireless Mobile Internet, Distributed Systems

- Elective Courses (at least 9 credits): 6 credits must be from the courses offered by the Department of Computer Science.
- E. Research Credits : (at least 6 credits): 2 credits from seminar courses must be included.
- F. Miscellaneous: Up to 9 credits from 500-level courses taken as an undergraduate at KAIST are acknowledged.

2) Coursework Master's Degree

| General Mandatory | Mandatory Major | Elective Major |          | Research | Total |
|-------------------|-----------------|----------------|----------|----------|-------|
|                   |                 | Essential      | Elective |          |       |
| 3 + 1AU           | 0               |                |          | 3        | 33    |
|                   |                 | 9              | 18       |          |       |

- A. Graduation Credits: at least 33 credits in total.
- B. Mandatory General Course: 3 credits and 1AU
  - Take 1 course from the following courses: Probability and Statistics (CC511), Introduction to Materials and Engineering (CC512), Engineering Economy and Cost Analysis (CC513), Introduction to Instruments (CC522), Entrepreneurship and Business Strategies (CC530), and Collaborative System Design and Engineering (CC532).
  - CC010 Special Lecture on Leadership(non-credit, this applies to students entering KAIST in 2002 and thereafter; general scholarship students, foreign students are excluded)
  - CC020 Ethics and Safety I (1AU)
- C. Mandatory Major Course: none
- D. Elective Course: at least 27 credits
  - Essential Courses (at least 9 credits): Same as Thesis Master's program requirement.
  - Elective Courses (at least 18 credits): 6 credits must be from the courses offered by the Department of Computer Science.
- E. Research Credits: at least 3 credits, including credits from individual study and 2 credits from seminar courses.
- F. Miscellaneous: Up to 9 credits from 500-level courses taken as an undergraduate at KAIST are acknowledged.
- G. GPA must be over 3.0.

□ Doctoral Program

| General Mandatory | Mandatory Major | Elective Major |          | Research | Total |
|-------------------|-----------------|----------------|----------|----------|-------|
|                   |                 | Essential      | Elective |          |       |
| 3 + 1AU           | 0               |                |          | 30       | 60    |
|                   |                 | 9              | 18       |          |       |

- A. Graduation Credits: at least 60 credits in total
- B. Mandatory General Course: at least 3 credits and 1AU  
Same as master's program requirement. (If a student has already fulfilled this requirement for master's program, he or she is considered to have fulfilled this requirement in doctoral program.)
- C. Mandatory Major Course: none
- D. Elective Course : at least 27 credits.
  - Essential Courses (at least 9 credits): Same as the master's program requirements. If a student has already fulfilled this requirement for master's program, he or she is considered to have fulfilled this requirement in doctoral program.

- Elective Courses (at least 18 credits): 9 credits must be from the courses offered by the Department of Computer Science.

E. Research Credits: at least 30 credits. (Four credits from seminar courses can be included.)

- ※ The course credits earned in the Master's course work can be used towards the Doctoral degree (except research credits).

## □ Measures for Change

### A. Bachelor's Program

- A.1. Students who entered in 2005 or later should fulfill current degree requirements. Students who entered in 2004 or earlier should fulfill previous degree requirements except that they could fulfill the current elective course requirement and elective basic course requirement (undergraduate requirement C and E).
- A.2. Current research course requirement (undergraduate requirement F) applies to those who entered in 2001 or later. Students who entered in 2000 or earlier should fulfill previous degree requirements. (Credits from research courses are counted towards major course requirement.)
- A.3. Substitute courses for
  - Discontinued courses
    - Simulation (CS434) has not been offered from Fall 2001. Computer Simulation (IE363) is counted as elective major course from Fall 2001.
    - Introduction to Computer Science (CS200) has not been offered from Spring 2009. IT Programming and Practice (IE362) or Programming for Electrical Engineering (EE209) is counted as elective major course from Spring 2009.
    - Mobile Applications Development (CS446) → Mobile Computing and Applications (CS442) (Retaking class after 2011 Spring)

### B. Master's Program

- B.1. Students who entered in 1998 or earlier can use credits from Graph Theory towards mandatory major course requirement in theory area.
- B.2. From the Fall semester 2001, Internet Server (TE628) offered by Cooperative Telecommunication Education Program is counted as elective major course.
- B.3. Smart Business Application and Development(CS541) is counted as Elective course from Fall 2012.

C. Doctoral Program: The same regulations as Master's Program stand.