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. General Course : At least 27 credits and 9AU(applicable to students entering KAIST in 2009 and onward; for those who have entered KAIST before 2009, refer to the Course Completion Requirements by Year of Admission)

      ∘ Mandatory General Course

        - Students entering KAIST in 2009 and onward : 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)

        - Students entering KAIST 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)

          * English Communication I → English Communication

            English Communication II → English Conversation

            English Reading&Writing → Critical Thinking in English

      ∘ Elective General Course in Humanities & Social Science : at least 21 credits

        - Students entering KAIST in 2009 and onward : at least 21 credits including at least 1 course in each of 2 divisions among 3 divisions(Humanity, Society, Culture & Art)

        - Students having entered KAIST before 2009 : at least 21 credits including at least 1 course in each of 2 divisions among 5 divisions(Science Technology; Literature and Art; History and Philosophy; Social Science; Foreign Language and Linguistics) or at least 1 course in each of 2 divisions among 3 divisions(Humanity, Society, Literature&Art)

        - Students entering KAIST in 2007 and onward should earn at least 18 credits through English lectures 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 in 2007 and onward should take 12 credits through English lectures.)

   C. Completion of Basic Courses: at least 32 credits (applicable to students entering KAIST in 2008 and onward; for those who have entered KAIST before 2009, refer to the Course Completion Requirements by Year of Admission)

      ∘ Mandatory Basic Courses: 26 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)

        ⑩ Freshman Design Course : Introduction to Design and Communication (3)

        ※ Students having entered KAIST in 2007 or before : 23 credits (①~⑨)

      ∘ Elective Basic Courses: at least 6 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, Algorithms, Computer Organization, Programming Languages, Operating Systems and Lab., Computer Science Project (Discrete Mathematics (CS204) can be substituted by Discrete Mathematics (MAS275); 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.

G. English Proficiency Requirements upon Graduation
- ◦ Students are required to meet one of the following requirements on English proficiency before entering KAIST or during their years of enrollment: 560 points in PBT TOEFL; 220 points in CBT TOEFL; 83 points in IBT TOEFL; 6.5 points in IELTS; 720 points or 760/775 points in TOEIC (see below); or 599 points or 670/690 points in TEPS (see below).
  ※ Criteria for TOEIC and TEPS scores
    - Students submitting scores from new TOEIC (held in May 2006 and onward) or TEPS held on March 1, 2007 and onward: 720 points in TOEIC; or 599 points in TEPS
    - Students submitting scores from old TOEIC (held before April 2006) or TEPS held before February 28, 2007:
      ▫ Students entering KAIST in 2008 and onward: 775 points in TOEIC; or 690 points in TEPS
      ▫ Students entering KAIST in 2007 or before: 760 points in TOEIC; or 670 points in TEPS

※ Requirements for a double major : 40 credits including mandatory major courses

※ Requirements for a 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 entering KAIST before 2009 should refer to the Course Completion Requirements by Year of Admission.

❑ Master's Program
  1) Thesis Master's Degree

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

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 onward; 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, Intelligent Robotics, Natural Language Processing I, Computer Vision, Interactive Computer Graphics, Semantic Web, Software Ecosystem, Models of Software Systems, Designs for Software and Systems, Bionic Human-Robot Interaction.
    ** If a student takes both Database System and Database Design, only one course is recognized as fulfilling the course requirement.
  - Computer Systems: Computer Architecture, Operating System, Network Architecture, Internet Systems Technology, Advanced Information Security, Wireless Mobile Internet.
- ◦ 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 can 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 Major	Elective Major		Research	Total
		Essential	Elective		
3 + 1AU	0	9	18	3	33

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 onward; 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 Major	Elective Major		Research	Total
3 + 1AU	0	Essential	Elective	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.

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.

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