Course Requirements

❑ Undergraduate

General Courses			Basic Courses			Major Courses			Elective Courses	Research	Total
Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal			
7(9AU)	21	28(9AU)	23	9	32	25	18	43		3	130

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 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 Course

① Students entering KAIST 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)
* English Communication(1) → Intermideate English Speaking & Listening(2)
* Critical Thinking in English(2) → Intermediate English Reading & Writing(2)

② Students having entered KAIST 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)

③ Students having entered KAIST 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)

④ Students having entered 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

⑤ Students having entered KAIST between 1998 and 2006 : 7 credits and 9AU
- English I(2), English II(2) Writing(3), Physical Education(4AU), Community Service(4AU),
Ethics and Safety II(1AU)
* English I → English Communication

          * English II → Critical Thinking in English

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

    ① Students entering KAIST in 2009 and thereafter : at least 21 credits
      – At least 21 credits including at least 1 course in each of 2 categories among 3 categories
        (Humanities, Society, Literature and Arts)
    ② Students having entered KAIST in 2008 and before : at least 21 credits
      – At least 21 credits including at least 1 course in each of 2 categories among 5 categories
        (Science and Technology, Literature and Arts, History and Philosophy, Social Sciences,
        Foreign Languages and Linguistics)
      – or at least 1 course in each of 2 divisions among 3 divisions
        (Humanities, Society, Literature and Arts)
    ※ 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 and 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 between 2008 and 2011 : 26 credits [①~⑨), Freshman Design
Course(3)]
      * Freshman Design Course(3) : ED100 Introduction to Design and Communication(3)
    ※ Students having entered KAIST in 2007 and before : 23 credits [①~⑨]

  ○ Elective Basic Courses : at least 9 credits
    ※ Students having entered in 2011 and before : 6 credits
    ※ Students having a double major take 3 credits.

D. Major Course Requirements : at least 43 credits

  ○ Mandatory Major Courses : at least 25 credits

○ Elective Major Courses : at least 18 credits

E. Elective Course Requirements : Take required major courses or Elective courses in other departments.

F. Research Course Requirements: at least 3 credits

○ Please be sure to take 3 credits for graduation research

○ Research credits include the credits that are earned from an independent study and seminar.
※ 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.

I. Requirements for Double Major and Minor

○ Double Major : 40 credits including mandatory major courses

○ Minor : at least total 21 credits are required (at least 15 credits from mandatory major courses)

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

❑ **Master's Program**

1) Thesis Master's Degree (at least 21 credits for course work + at least 12 research credits)

Mandatory General	Mandatory Major	Elective	Research (including seminar credits)	Total
3 and 1AU	0	18	12 (2)	33

A. Graduate Credits : at least 33 credits in total
   ※ A cumulative grade point average of 2.5 or higher out of a possible 4.3 in all coursework

B. Mandatory General Courses : 3 credits and 1AU (including Special Lecture on Leadership)
   ○ General Course Requirements : 3 credits – Choose one course from the following courses
      – CC500 Scientific Writing, CC510 Introduction to Computer Application, CC511 Probability and Statistics,
        CC512 Introduction to Materials Science and Engineering, CC513 Engineering Economics and Cost Analysis,
        CC522 Introduction to Instruments, CC530 Enterpreneurship and Business Strategies, CC531 Patent
        Analysis and Invention Disclosure, CC532 Collaborative System Design and Engineering
        (NQE595 can replace CC500).
        * HS586 for foreign students' can be replaced by CC500 only for foreign students.
   ○ CC020 Ethics and Safety I : 1AU
   ○ CC010 Special Lecture on Leadership : non-credit
      – General scholarship students, Foreign students are excluded.

C. Mandatory Major Courses : None.

D. Elective Courses : at least 18 credits (including major courses in other departments)
   ○ Among the 18 credits, at least 6 credits should be taken in our department.
   ○ Students whose undergraduate major is not Nuclear Engineering must take either NQE502 or NQE503.

E. Research Credits : at least 12 credits (should include at least 2 credits in Seminar).
   ○ Part-time general scholarship and Foreign students are excepted seminar.

F. Other
   ○ When Master student chooses to apply for the non-mutually recognized bachelor and master's degree
      only 3 credits are recognized as master degree graduate credits.

2) Coursework Master's Degree (at least 27 credits for coursework + at least 6 research credits)

Mandatory General	Mandatory Major	Elective	Research (individual research)	Total
3 and 1AU	0	24	6	33

A. Graduate Credits : at least 36 credits in total
  ※ A cumulative grade point average of 2.5 or higher out of a possible 4.3 in all coursework

B. Mandatory General Courses: 3 credits and 1AU
  ○ General Course Requirements : 3 credits – Choose one course from the following courses
    – CC500 Scientific Writing, CC510 Introduction to Computer Application, CC511 Probability and Statistics,
    CC512 Introduction to Materials Science and Engineering, CC513 Engineering Economics and Cost Analysis,
    CC522 Introduction to Instruments, CC530 Enterpreneurship and Business Strategies, CC531 Patent
    Analysis and Invention Disclosure, CC532 Collaborative System Design and Engineering
    (NQE595 can replace CC500).
    * HS586 for foreign students' can be replaced by CC500 only for foreign students.
  ○ CC020 Ethics and Safety I : 1AU

C. Mandatory Major Courses : None

D. Elective Courses : At least 24 credits (including major courses in other departments)
  ○ Among the 24 credits, at least 12 credits should be taken in our department.
  ○ Students whose undergraduate major is not Nuclear Engineering must take either NQE502 or NQE503.

E. Research Credits : at least 6 credits (only MS's individual research).

F. Others
  ○ The application to the course-work plan is limited not only to the foreign students but also to
    Korean students who are admitted to the corporation-related R&D manpower development program
    and are approved by the department.
  ○ When Master student chooses to apply for the non-mutually recognized bachelor and master's degree
    only 6 credits are recognized as master degree graduate credits.

❑ **Doctoral Degree** (at least 30 credits for course-work + at least 30 research credits)

Mandatory General	Mandatory Major	Elective	Research (including seminar credits)	Total
3 and 1AU	0	27	30 (3)	60

A. Graduate Credits : at least 60 credits in total.
  ※ A cumulative grade point average of 2.5 or higher out of a possible 4.3 in all coursework

B. Mandatory General Courses : 3 credits and 1AU
  ○ Same as the Master's program (Student who already earned 3 credits in Master's course does not need
    to obtain 3 credits again)

C. Mandatory Major Courses : None.

D. Elective Courses : At least 27 credits (including major courses in other department)

○ Among the 27 credits, at least 12 credits should be taken in our department.

○ Students whose undergraduate and M.S. majors are not Nuclear Engineering must take either NQE502

      or NQE503.

  E. Research Credits : at least 30 credits (should include at least 3 credits in Seminar).

○ Part-time general scholarship and foreign students are excepted seminar.

  F. Others

○ The curriculum credits acquired in the master's course may be cumulatively added to the curriculum credits in PhD course (except research credits).

○ When Doctoral student chooses to apply for the bachelor courses or mutually recognized bachelor and master's degree only 6 credits are recognized as doctoral degree graduate credits. However, when doctoral student wish to earn credits from the bachelor courses as doctoral graduate credits, approval from the personal tutor is needed beforehand.

❑ **Elective General Courses and Requirements**

○ If students complete the following courses in the graduate program, credits are given as elective courses.

  - HSS583 Graduate English Presentation : 3 credits

  - HSS585 Principles and Application of Vision : 3 credits

  - HSS586 Introductory Korean for Foreigners I : 3 credits

    * Foreign students are allowed to take HSS586 instead of taking CC500 Scientific Writing.

  - HSS587 Introductory Korean for Foreigners II : 3 credits