

## 2. Course Requirements

### □ Undergraduate Requirement

General Course			Basic Course			Major Course			Elective Course	Research	Total
Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal			
6 (9 AU)	21	27 (9 AU)	26	6	32	9	38	47	20	4	130

### □ 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.

C. Basic Course : at least 32 credits(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 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 2 courses of Freshman Design Course(3) : Introduction to System Design(2), Communication for Design(1) - as a freshman, take both at once
- ※ Students having entered KAIST in 2008 : 26 credits(①~⑨), Introduction to Design and Communication(3))
    - Introduction to Design and Communication → Introduction to System Design(2), Communication for Design(1)
  - ※ Students having entered KAIST in 2007 or before : 23 credits (①~⑨)
  - Elective Basic Courses: at least 6 credits (at least two courses among Introduction to Linear Algebra, Differential Equations and Applications, and Applied Mathematical Analysis)
    - ※ Requirements for a dual major : at least 3 credits (at least one courses among Introduction to Linear Algebra, Differential Equations and Applications, and Applied Mathematical Analysis)
- D. Major Course Requirements: at least 47 credits
- Mandatory Major Courses: 9 credits
    - Analog electronics design Lab , Digital electronics design Lab, Electronics Design Lab.
  - Elective Major Courses: at least 38 credits.
    - Select at least 4 courses from the following 8 underlined courses:
      - Circuit Theory, Signals and Systems, Digital System Design, Electromagnetics, Electronic Circuits, Introduction to Physical Electronics, Programming for Electrical Engineering, Analog circuits
    - Individual Study counts up to 4 credits.
- E. Elective Course Requirements: at least 16 credits
- from all courses in the undergraduate program.
- F. Research Course Requirements: at least 4 credits
- B.S Thesis Research (3), Seminar (Seminar is elective for foreign student) (1)
  - ※ Students having a double major are exempt.
- 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 dual major : At least 9 credits in mandatory major courses, and at least 38 credits in elective major courses.
    - Select at least 4 courses from the following 8 underlined courses:
      - Circuit Theory, Signals and Systems, Digital System Design, Electromagnetics, Electronic Circuits, Introduction to Physical Electronics, Programming for Electrical Engineering., Analog circuits
  - ※ Requirements for a minor : At least 21 credits in major courses including
    - Circuit Theory, Signals and Systems, Digital System Design, Electromagnetics, Electronic Circuits, Analog electronics design Lab

※ 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.

3. Curriculum

□ Undergraduate Course

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (Homework)	Semester	Remark
Mandatory Major Course	EE305	Analog electronics design Lab	1:6:3(6)	Spring	
	EE306	Digital electronics design Lab	1:6:3(6)	Fall	
	EE405	Electronics Design Lab.	1:6:3(6)	Spring	
Elective Major Course (Select 4 or more out of 8)	EE201	Circuit Theory	3:0:3(6)	Spring	*CS211
	EE202	Signals and Systems	3:0:3(6)	Fall	
	EE203	Digital System Design	3:0:3(6)	Spring	
	EE204	Electromagnetics	3:0:3(6)	Fall	
	EE206	Electronic Circuits	3:0:3(6)	Fall	
	EE209	Programming for Electrical Engineering	3:0:3(6)	Spring	
	EE211	Introduction to Physical Electronics	3:0:3(6)	Spring	
Elective Major Course	EE301	Analog circuits	3:0:3(6)	Spring	*CS311
	EE205	Data Organization for Engineering Application	3:1:3(6)	Spring	
	EE210	Probability and Introductory Random Processes	3:0:3(6)	Fall	
	EE308	Applied Electronics Lab.	1:6:3(6)	Fall	
	EE312	Introduction to Computer Architecture	3:1:3(6)	Fall	
	EE321	Communication Engineering	3:0:3(6)	Spring	
	EE341	Electromagnetic waves and antennas	3:0:3(6)	Spring	
	EE342	Radio Engineering	3:1:3(6)	Fall	
	EE372	Integrated Circuits Design	3:0:3(6)	Fall	
	EE381	Control System Engineering	3:0:3(6)	Spring	
	EE391	Electronic Control of Electric Machines	3:0:3(6)	Spring	
	EE401	Communication Skills	2:0:2(4)	Spring	
	EE402	Future Society and Electrical Engineering	2:0:2(4)	Fall	
	EE406	Project Lab	1:6:3(6)	Fall	
	EE411	Switching and Automata Theory	3:0:3(6)	Spring	
	EE413	Networking Design and Programming	3:1:3(6)	Spring	
	EE414	Embedded Systems	3:1:3(6)	Fall	
	EE421	Communication Systems	3:0:3(6)	Spring	
	EE432	Digital Signal Processing	3:0:3(6)	Fall	
	EE441	Introduction to Fiber Optic Communication Systems	3:0:3(6)	Spring	
EE461	Semiconductor Devices	3:0:3(6)	Fall		
EE481	Intelligent Systems	3:0:3(6)	Spring		
EE484	Special Topics in Electrical Engineering	3:0:3(6)	Spring-Fall		
EE485	Special Topics in Electronic Engineering I	1:0:1	Spring-Fall		
EE486	Special Topics in Electronic Engineering II	2:0:2	Spring-Fall		
Research	EE490	B.S. Thesis Research	0:6:3		
	EE495	Individual Study	0:6:1		
	EE496	Seminar	1:0:1	Spring	

Notes. i) 400 level course credits except EE405, EE406 can be counted as master course credits.

ii) "\*" mark represents a substitutive subject.