

## Course Requirements

### □ Undergraduate Program

General Course			Basic Course			Major Course			Elective Course	Research	Total
Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal	Mandatory	Elective	Subtotal			
7 (8 AU)	21	28 (8 AU)	23	9	32	24	27	51	15	4	130

#### A. Graduation Credits

At least 130 credits in total

#### B. General Course Requirements: At least 28 credits and 8AU.

- o Mandatory General Courses: 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.
- o Elective General Courses in Humanities & Social Science: at least 21 credits (at least 7 courses).
  - Take (15 credits) 1 course in each of the 5 divisions: Science Technology; Literature and Art; History and philosophy; Social Science; Foreign Language and Linguistics; the remaining courses can be chosen regardless of the divisions.
  - ※ As for completing courses of Foreign Language and Linguistics division, students should take at least 1 course of a *second* foreign language.

#### C. Basic Course Requirements: at least 32 credits.

- o Mandatory Basic Courses: 23 credits (Take 1 course among the following categories)
  - ① 1 course of Fundamental Physics I (3), General Physics I (3), or Advanced Physics I (3)
  - ② 1 course of Fundamental Physics II (3), General Physics II (3), or 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 of Basic Chemistry (3), General Chemistry I (3) or 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)
- o Elective Basic Courses: at least 9 credits

#### D. Major Course Requirements: at least 51 credits

- o Mandatory Major Courses: at least 24 credits
  - IE241 (Engineering Statistics I), IE341 (Engineering Statistics II), IE251 (Manufacturing Process Innovation), IE261 (Information Technology for Industrial Engineering), IE321 (Production Management I), IE331 (Operations Research I), IE332 (Operations Research II), IE362 (IT Programming and Practice).
- o Elective Major Courses: at least 27 credits.

- See the Undergraduate Course List.
- Designated Elective Courses: The following non-IE courses are designated as Elective Courses, and up-to 12 credits from these courses are accepted as Elective Course Credit of Industrial Engineering.
  - Mechanical Engineering: MAE200, MAE205, MAE206, MAE302, MAE370, MAE453, MAE460
  - Industrial Design: ID213, ID216, ID301, ID303, ID304, ID307, ID308, ID309, ID310.
  - Materials Science & Eng.: MS481
  - Nuclear & Quantum Eng.: NQE261
  - Electrical Engineering: EE202, EE203, EE204, EE206, EE312, EE314, EE321, EE342, EE372, EE413, EE421
  - Computer Science: CS204, CS206 or BiS232, CS211, CS230, CS300, CS310, CS320, CS322, CS350, CS360, CS370, CS441, CS470, CS480
  - Mathematics Science: MAS241(AM241), MAS270(MA270), MAS275(MA260), MAS365(AM321), MAS371(AM465), MAS410(MA411)
  - Culture Technology: GCT582
  - Bio Medical Eng.: BiS200, BiS331, BiS333, BiS351
  - BE Program: BEP410 or MGT341, BEP420 or MGT342, BEP430 or MGT346, BEP450
  - Management: MGT340

E. Elective Course Requirements: at least 15 credits.

F. Research Course Requirements: up-to 6 credits.

- o Graduate research : 3 credits (required)
- o IE Seminar : 1 credit (required)
- o Independent Research : 2 or fewer credits.

G. English Language Requirements for Graduation

- o One of the following requirements should be satisfied for graduation before entering school or while in school:
  - 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

H. Minor and Double Major

- o Minor: at least 18 credits in Industrial Engineering Major courses.
- o Double Major: at least 51 credits in Industrial Engineering Major courses.

**□ Master's-Doctoral Programs**

1) Master's Program

General Courses	Major Courses		Research (including seminar credits)	Total
	Mandatory	Elective		
3	0	24	9	36

A. Graduation Credits: At least 36 credits in total.

B. General Course Requirements: at least 3 credits

o Select 1 course among the following 8:

CC500, CC510, CC511, CC512, CC513, CC522, CC530, CC531.

C. Elective Major Course Requirements: at least 24 credits.

o Select at least 18 credits from IE courses.

o Students enrolled in an interdisciplinary program are required to select at least 9 credits from IE courses.

o IE801: up to 9 credits

D. Research Course Requirements: within 9 credits (including 1 in seminar).

2) Doctoral Program: at least 78 credits

General Courses	Major Courses		Research (including seminar credits)	Total
	Mandatory	Elective		
6	0	42	30	78

A. Graduation Credits: At least 78 credits in total.

B. General Course Requirements: at least 6 credits (including CC500).

o Select 2 courses among the following 8 including CC500:

CC500, CC510, CC511, CC512, CC513, CC522, CC530, CC531.

C. Elective Major Course Requirements: at least 42 credits.

o Select at least 27 credits from IE courses (see the Graduate Course List)

o Students enrolled in an interdisciplinary program are required to select at least 9 credits from IE courses.

o Students from other graduate schools or from other KAIST department are required to select at least 18 credits from IE courses.

o IE801: up-to 9 credits

o Credits taken in the MS program except for research and seminar credits can be counted as Ph.D. program credits.

D. Research Course Requirements: at least 30 credits (including 1 credit for a graduate seminar).