

## Major Course Requirements for School of Electrical Engineering (For undergraduate students admitted in 2015 or before)

Please check the common graduation requirements

- **Credit Requirement for Graduation:** Required to complete a total of more than 130 credits
  
- **Note for General Courses (Only for EE Students)**
  - **Elective Basic Courses:** at least 9 credits
    - at least two courses among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  - ※ Requirement for a Double Major : at least 3 credits
    - at least one course among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  
- **Major:** at least 53 credits
  - **Mandatory Major Courses:** 18 credits
    - EE305 Introduction to Electronics Design Lab., EE405 Electronics Design Lab., EE201 Circuit Theory, EE202 Signals and Systems, EE204 Electromagnetics, EE209 Programming Structure for Electrical Engineering
  - **Elective Major Courses:** at least 35 credits
    - Individual Study counts up to 4 credits.
    - EE students having a double major (or a minor) take total of at least 29 credits
  
- **Minor:** At least 21 credits in major courses including
  - EE201 Circuit Theory, EE202 Signals and Systems, EE204 Electromagnetics, EE303 Digital System Design, EE304 Electronic Circuits, EE305 Introduction to Electronics Design Lab.
  - ※ In the event that major courses and minor courses overlap, up to 9 credits can be applied to both courses of study.
  
- **Double Major:** at least 40 credits including mandatory major courses
  - ※ In the event that major courses and double major courses overlap, up to 9 credits can be applied to both courses of study.
  
- **Research Courses:** at least 3 credits
  - B.S. Thesis Research 3 credits.
  - Students having a double major are exempt.
  
- ◎ Maximum of 9 credits of 24-Week Internship Program <EE Co-op 1> can be substituted for Introduction to Electronics Design Lab.(3), B.S. Thesis Research(3) and Elective Courses(3).  
If Introduction to Electronics Design Lab.(3) or B.S. Thesis Research(3) has been

completed before participating in 24-Week Internship Program <EE Co-op 1>, the corresponding credits can be recognized as Elective Courses.  
Maximum of 3 credits of 24-Week Internship Program <EE Co-op 2> can be granted as graduation credits.

**□ Transitional measures**

- Students admitted in 2015 or before may choose to be governed by the completion requirements applicable to students admitted in 2016 and after if desired.
- The credit grant policy of 24-Week Internship Program <EE Co-op 1,2> are applicable to all students.
- The above requirement is applicable to students who were admitted in 2014 and 2015.
- Students who were admitted in 2013 and before should follow the requirement for the year of admission.
- Requirement for Mandatory and Elective Major Courses

| classification | Between 2004 and 2008  | Between 2009 and 2013   | Between 2014 and 2015   |
|----------------|--|---|---|
| Mandatory      | 6<br>EE305 Electronics Lab. I<br>EE405 Electronics Design Lab.   | 18<br>EE201 Circuit Theory<br>EE202 Signals and Systems<br>EE204 Electromagnetics<br>EE209 Programming for Electrical Engineering<br>EE305 Introduction to Electronics Design Lab.<br>EE405 Electronics Design Lab. | 18<br>EE201 Circuit Theory<br>EE202 Signals and Systems<br>EE204 Electromagnetics<br>EE209 Programming for Electrical Engineering<br>EE305 Introduction to Electronics Design Lab.<br>EE405 Electronics Design Lab. |
| Elective       | 41<br><u>EE201 Circuit Theory</u><br><u>EE202 Signals and Systems</u><br><u>EE203 Digital System</u><br><u>EE204 Electromagnetics I</u><br><u>EE206 Electronic Circuits I</u><br><u>EE209 Programming for Electrical Engineering</u><br><u>EE301 Electronic Circuits II</u><br><u>EE302 Introduction to Physical Electronics</u> | 29  | 35  |
| Research       | EE490 B.S. Thesis Research<br>EE496 Seminar  | EE490 B.S. Thesis Research<br>EE496 Seminar   | EE490 B.S. Thesis Research<br>EE496 Seminar   |

- ※ Students who were admitted between 2004 and 2008 should take 4 courses among the underlined 8 courses.
- In case the interim measures are difficult to be applied, Head of EE shall decide through Education Committee.

## Major Course Requirements for School of Electrical Engineering (For undergraduate students admitted in 2016 and after)

Please check the common graduation requirements

- **Credit Requirement for Graduation:** Required to complete a total of more than 136 credits
  - ※ Required to choose and complete one among Advanced Major, Double Major, Minor, and Individually Designed Major.
  
- **Note for General Courses (Only for EE Students)**
  - **Elective Basic Courses:** at least 9 credits
    - at least two courses among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  - ※ Requirement for a Double Major : at least 3 credits
    - at least one course among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  
- **Major:** at least 50 credits
  - **Mandatory Major Courses:** 18 credits
    - EE305 Introduction to Electronics Design Lab.(3), EE405 Electronics Design Lab.(3), EE201 Circuit Theory(3), E202 Signals and Systems(3), EE204 Electromagnetics(3), EE209 Programming Structure for Electrical Engineering(3)
  - **Elective Major Courses:** at least 32 credits
    - Individual Study counts up to 4 credits.
  
- **Advanced Major :** at least 12 credits
  
- **Individually Designed Major:** at least 12 credits
  - 12 credits of two or more major courses other than EE
  
- **Minor:** at least 21 credits
  - At least 12 credits from mandatory major courses including EE305 Introduction to Electronics Design Lab.
  - ※ Duplication of credits is not allowed.
  
- **Double Major:** at least 40 credits including 18credits of mandatory major courses
  
- **Research Courses:** at least 3 credits
  - B.S. Thesis Research 3 credits
  - Students having a double major are exempt.
  
- ◎ Maximum of 9 credits of 24-Week Internship Program <EE Co-op 1> can be substituted for Introduction to Electronics Design Lab.(3), B.S. Thesis Research(3) and Elective Courses(3).  
If Introduction to Electronics Design Lab.(3) or B.S. Thesis Research(3) has been

completed before participating in 24-Week Internship Program <EE Co-op 1>, the corresponding credits can be recognized as Elective Courses.  
Maximum of 3 credits of 24-Week Internship Program <EE Co-op 2> can be granted as graduation credits.

**Transitional measures**

- Students admitted in 2015 or before may choose to be governed by the completion requirements listed above if desired.
- The credit grant policy of 24-Week Internship Program <EE Co-op 1,2> are applicable to all students.

## Major Course Requirements for School of Electrical Engineering (For undergraduate students admitted in 2018 and after)

Please check the common graduation requirements

- **Credit Requirement for Graduation:** Required to complete a total of more than 136 credits
  - ※ Required to choose and complete one among Advanced Major, Double Major, Minor, and Individually Designed Major.
  
- **Note for General Courses (Only for EE Students)**
  - **Elective Basic Courses:** at least 9 credits
    - at least two courses among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  - ※ Requirement for a Double Major : at least 3 credits
    - at least one course among MAS109 Introduction to Linear Algebra, MAS201 Differential Equations and Applications, and MAS202 Applied Mathematical Analysis
  
- **Major:** at least 50 credits
  - **Mandatory Major Courses:** 15 credits
    - Mandatory 2 subjects : EE305 Introduction to Electronics Design Lab.(3), EE405 Electronics Design Lab.(3),
    - Select 3 subjects : EE201 Circuit Theory(3), EE202 Signals and Systems(3), EE204 Electromagnetics(3), EE209 Programming Structure for Electrical Engineering(3), EE210 Probability and Introductory Random Processes (3), EE211 Introduction to physical electronics(3)
    - Accredited more than 15 mandatory credit will be counted as elective requirement credit
  - **Elective Major Courses:** at least 35 credits
    - Individual Study counts up to 4 credits.
  
- **Advanced Major :** at least 12 credits
  
- **Individually Designed Major:** at least 12 credits
  - 12 credits of two or more major courses other than EE
  
- **Minor:** at least 21 credits
  - At least 12 credits from mandatory major courses including EE305 Introduction to Electronics Design Lab.
  - ※ Duplication of credits is not allowed.
  
- **Double Major:** at least 40 credits including 15 credits of mandatory major courses
  
- **Research Courses:** at least 3 credits
  - B.S. Thesis Research 3 credits
  - Students having a double major are exempt.

- ◎ Maximum of 9 credits of 24-Week Internship Program <EE Co-op 1> can be substituted for Introduction to Electronics Design Lab.(3), B.S. Thesis Research(3) and Elective Courses(3). If Introduction to Electronics Design Lab.(3) or B.S. Thesis Research(3) has been completed before participating in 24-Week Internship Program <EE Co-op 1>, the corresponding credits can be recognized as Elective Courses.  
Maximum of 3 credits of 24-Week Internship Program <EE Co-op 2> can be granted as graduation credits.

**Transitional measures**

- These requirements apply to all students admitted in 2018 and thereafter.
- Students admitted in 2015 or before may choose to be governed by the completion requirements listed above if desired.
- The credit grant policy of 24-Week Internship Program <EE Co-op 1,2> are applicable to all students.

- **Major course requirement for every admission year**

|                 | Year of '2016~2017   | Year of 2018 after   |
|-----------------|--|--|
|                 | 18 credit  | 15 credit  |
| Major Mandatory | EE201 Circuit Theory(3),<br>EE202 Signals and Systems(3),<br>EE204 Electromagnetics(3),<br>EE209 Programming Structure for Electrical Engineering(3),<br>EE305 Introduction to Electronics Design Lab.(3),<br>EE405 Electronics Design Lab.(3) | EE305 Introduction to Electronics Design Lab.(3),<br>EE405 Electronics Design Lab.(3),<br>6 credits mandatory  |
|                 |  | EE201 Circuit Theory(3),<br>EE202 Signals and Systems(3),<br>EE204 Electromagnetics(3),<br>EE209 Programming Structure for Electrical Engineering(3),<br>EE210 Probability and Introductory Random Processes(3),<br>EE211 Introduction to Physical Electronics(3)<br>Selcet 9 credits among listed above |
| Major Elective  | 32   | 35   |
| Research        | EE490 B.S. Thesis Research   | EE490 B.S. Thesis Research   |

## Major Course Requirements for School of Electrical Engineering (For Master's Program)

### Thesis Master's Degree Program

[Please check the common graduation requirements](#)

■ **Credit Requirement for Graduation**

: Required to complete a total of more than 33 credits

■ **Mandatory General Courses:** At least 3 credits

- Including one course among CC500 Scientific Writing, CC510 Introduction to Computer Application, CC511 Probability and Statistics (Substitutive subject: EE528), CC512 Introduction to Materials and Engineering, CC513 Engineering Economy and Cost Analysis, CC530 Entrepreneurship and Business Strategies, CC531 Patent Analysis and Invention Disclosure, CC532 Collaborative System Design and Engineering and CC533 Entrepreneurial Leadership.

■ **Mandatory Major Courses:** None

■ **Elective Courses:** At least 21 credits

- EE509 Technical Writing (1 credit) must be included.  
(Technical Writing is elective for International students)
- At least 9 credits from the EE500-level or above.
- EE400-level courses (However, the courses must be mutually recognized courses for undergraduate and graduate.),xx500-level or above courses from other majors.
- Credits earned from other graduate schools by dual degree students are counted as 500-level or above courses of other departments.

■ **Research Courses:** At least 6 credits including

- M.S. Thesis (at least 4 credits)
- EE966 Seminar(M.S.)<Colloquium> 2 credits mandatory  
(only courses with the subtitle <Colloquium> are accepted.)

### Coursework Master's Degree Program

[Please check the common graduation requirements](#)

■ **Credit Requirement for Graduation**

: Required to complete a total of more than 33 credits

■ **Mandatory General Courses:** At least 3 credits

(Same as Thesis Master's Degree requirements)

■ **Mandatory Major Courses:** None

■ **Elective Courses:** At least 27 credits

- EE509 Technical Writing (1 credit) must be included.  
(Technical Writing is elective for International students)
- At least 9 credits from the EE500-level or above.
- EE400-level courses (However, the courses must be mutually recognized courses for undergraduate and graduate.) xx500-level or above courses from other majors.
- Credits earned from other graduate schools by dual degree students are counted as 500-level or above courses of other departments.

■ **Research**

- EE966 Seminar(M.S.)<Colloquium> 2 credits mandatory  
(only courses with the subtitle <Colloquium> are accepted.)
  - Individual Study counts up to 1 credit
- ◎ Coursework Master's Degree Program is offered only for students who joined to dual degree program.

□ **Transitional Measures**

- This requirement is applied to the students who were admitted in 2018 and thereafter. Students who were admitted in 2017 and before should follow the requirements for the year of admission and the curriculum reduction regulations enforced in Feb. 2009.
- Research subject requirements may differ depending on the entrance year of the student, as separately specified on the requirement. However, the article related to recognizing the credits earned from other graduate schools by dual degree students, and the requirement on general required courses are applicable to all students.
- Requirements for Research Courses

|                              | 2015~2017  | 2018~   |
|------------------------------|--|---|
| Research Course Requirements | <ul style="list-style-type: none"> <li>■ Research credits: 5 credits or more</li> <li>- M.S. Thesis Research: 4 credits or more</li> </ul> | <ul style="list-style-type: none"> <li>■ Research credits: 6 credits or more</li> <li>- M.S. Thesis Research: 4 credits or more</li> <li>- EE966 Seminar(M.S.)&lt;Colloquium&gt; 2 credit mandatory<br/>(Open in Spring and Fall semesters, only courses with the subtitle &lt;Colloquium&gt; are accepted.)</li> </ul> |



## Major Course Requirements for School of Electrical Engineering (For Doctoral Program)

Please check the common graduation requirements

**■ Credit Requirement for Graduation**

: Required to complete a total of more than 60 credits

**■ Mandatory General Courses: 3 credits**

(Same as Thesis Master's Degree Program requirement)

**■ Mandatory Major Courses: None**

**■ Elective Courses: At least 27 credits**

- At least 6 credits from the EE600-level or above.
- Remaining credits can be earned from the xx-500 level or above courses from any department.
- Credits taken in the master's program, except the research and seminar credits, can be accumulatively counted. (EE400-level courses designated as mutually recognized courses for undergraduate and graduate are also counted.)
- Credits earned from other graduate schools by dual degree students are counted as 500-level or above courses of other departments.

**■ Research Courses: at least 30 credits (the following credits must be included)**

- EE986 Seminar(Ph.D.)<Colloquium> 4 credits mandatory  
(Only courses with the subtitle <Colloquium> are accepted.)

**□ Transitional Measures**

- This requirement is applied to the students who were admitted in 2018 and thereafter. Students who were admitted in 2017 and before should follow the requirements for the year of admission and the curriculum reduction regulations enforced in Feb. 2009.
- Research subject requirements may differ depending on the entrance year of the student, as separately specified on the requirement. However, the article related to recognizing the credits earned from other graduate schools by dual degree students, and the requirement on general required courses are applicable to all students.
- Requirements of Ph.D. Thesis Seminar is applied to students who were admitted in 2014 ~2017.

- Requirements for Research Courses

|                              | ~2013   | 2014~2017   | 2018~  |
|------------------------------|---|---|--|
| Research Course Requirements | <p>■ Research credits: 30 credits or more</p> | <p>■ Research credits: 30 credits or more<br/>- EE989 Thesis Seminar (Ph.D.) 1 credit mandatory [Replacement: EE986 Seminar(Ph.D.)&lt;Colloquium&gt;]</p> <p>① If the student had not taken the Thesis Seminar (Ph.D.) course at all<br/>→ 2 credits of EE986 Seminar(Ph.D.) &lt;Colloquium&gt; mandatory</p> <p>② If the student had taken 0.5 credits of the Thesis Seminar (Ph.D.) course<br/>→ 1 credit of EE986 Seminar(Ph.D.) &lt;Colloquium&gt; required in addition</p> <p>* Only the courses with the subtitle &lt;Colloquium&gt; are accepted as replacement for Thesis Seminar</p> | <p>■ Research credits: 30 credits or more<br/>-EE986Seminar(Ph.D.)&lt;Colloquium&gt; 4 credits mandatory</p> <p>(Open in Spring and Fall semesters, only courses with the subtitle &lt;Colloquium&gt; are accepted.)</p> |

## Major Course Requirements for School of Electrical Engineering (For MS-PhD Integrated Program)

Please check the common graduation requirements

■ **Credit Requirement for Graduation**

: Required to complete a total of more than 60 credits

■ **Mandatory General Courses:** 3 credits

(Same as Thesis Master's Degree Program requirements)

■ **Mandatory Major Courses:** None

■ **Elective Courses:** At least 27 credits

- EE509 Technical Writing (Technical Writing is elective for international students)
- At least 6 credits from the EE600-level or above.
- Remaining credits can be earned from the xx500-level or above courses from any department.
- Credits taken in the master's program, except the research and seminar credits, can be accumulatively counted. (EE400-level courses designated as mutually recognized courses for undergraduate and graduate are also counted.)
- Credits earned from other graduate schools by dual degree students are counted as 500-level or above courses of other departments.

■ **Research Courses:** at least 30 credits (the following credits must be included)

- Seminar: 5 credits in total made up of any combination of EE966 Seminar(M.S.)<Colloquium> and EE986 Seminar(Ph.D.)<Colloquium>  
(Only courses with the subtitle <Colloquium> are accepted.)

□ **Transitional Measures**

- This requirement is applied to the students who were admitted in 2018 and thereafter. Students who were admitted in 2017 and before should follow the requirements for the year of admission and the curriculum reduction regulations enforced in Feb. 2009.
- Research subject requirements may differ depending on the entrance year of the student, as separately specified on the requirement. However, the article related to recognizing the credits earned from other graduate schools by dual degree students, and the requirement on general required courses are applicable to all students.
- Requirement of Ph.D. Thesis Seminar is applied to students who were admitted

in 2014~2017

- Requirements for Research Courses

|                                     | ~2013   | 2014~2017  | 2018~   |
|-------------------------------------|---|--|---|
| <b>Research Course Requirements</b> | <p>■ Research credits: 30 credits or more</p> | <p>■ Research credits: 30 credits or more<br/>- EE989 Thesis Seminar (Ph.D.)</p> <p>1 credit mandatory [Replacement: EE986 Seminar(Ph.D.) &lt;Colloquium&gt;]</p> <p>① If the student had not taken the Thesis Seminar (Ph.D.) course at all<br/>→ 2 credits of EE986 Seminar(Ph.D.) &lt;Colloquium&gt; mandatory</p> <p>② If the student had taken 0.5 credits of the Thesis Seminar (Ph.D.) course<br/>→ 1 credit of EE986 Seminar(Ph.D.) &lt;Colloquium&gt; required in addition</p> <p>* Only the courses with the subtitle &lt;Colloquium&gt; are accepted as replacement for Thesis Seminar.</p> | <p>■ Research credits: 30 credits or more</p> <p>- Seminar: 5 credits in total made up of any combination of EE966 Seminar(M.S.) &lt;Colloquium&gt; and EE986 Seminar(Ph.D.) &lt;Colloquium&gt; Open in Spring and Fall semesters, only courses with the subtitle &lt;Colloquium&gt; are accepted.)</p> |