

## Major Course Requirements for Dept. of Biological Sciences

(For undergraduate students admitted in 2015 or before)

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**Please check the common graduation requirements.**

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■ **Credit Requirement for Graduation:** Required to complete a total of more than 130 credits

■ **Elective Basic Courses:** Including General Chemistry II (3) at least 9 credits  
※ Students having a double major should earn at least 6 credits including General Chemistry II.

■ **Major:** Required to complete more than 48 credits

○ **Mandatory major:** 18 credits

Molecular Biology, Biochemistry I, Biochemistry II, Biochemistry Experiment, Cell Biology, Cell Biology Experiment.

○ **Elective major:** 30 credits

Four Chemistry major courses (CH221 Organic Chemistry I, CH223 Organic Chemistry II, CH263 Analytical Chemistry, CH325 Biological Organic Chemistry) and three Bio&Brain Engineering major courses (BiS335 Biomedical Statistics & Statistical Learning, BiS438 Bioinformatics) are also considered as elective major courses.

■ **Minor:** Required to complete more than 21 credits

- 21 or more credits among the major courses have to be completed, including 12 credits among the mandatory courses.

※ A maximum of overlapping 9 credits earned in major courses offered by other academic organizations can be recognized.

■ **Double Major:** Required to complete more than 40 credits

- 40 credits including mandatory major courses

※ A maximum of overlapping 9 credits earned in major courses offered by other academic organizations can be recognized.

■ **Research Courses:** Required to complete more than 3 credits

- Thesis Research (Required): at least 3 credits (Students having a double major are exempt)

- Specified Research (Elective): at least 1 credits
- Seminar (Elective): at least 2 credits
- A maximum of 21 credits from the 24-week internship program BS Co-op 1 (INT482, INT495) can be used to substitute Graduation Research (3), Elective Major (3), and Elective (15)

#### ☐ **Transitional measure**

- Students admitted in 2015 or before may choose to be governed by the completion requirements applicable to students admitted in 2016 and onward if desired.
- The above requirements for completion of minor apply to students starting his/her undergrad in 2020. Undergraduate students entering the school year before 2019 can choose either the revised minor requirements or the pre-amendment requirement.
- The BS Co-op 1 Internship program requirements apply to all enrolled students.
- After the spring semester of 2024, completion of the elective major "BS208 Metabolism-inspired Drug Discovery" can be recognized as the mandatory major "BS208 Biochemistry II".
- After the spring semester of 2024, completion of the mandatory major "BS223 Introductory Biotechnology" can be recognized as the elective major.
- After the spring semester of 2024, mandatory major credits exceeding the required credits by completing both "BS208 Biochemistry II" and "BS223 Introductory Biotechnology" can be recognized as the elective major credits.

## Major Course Requirements for Dept. of Biological Sciences

(For undergraduate students admitted in 2016 and after)

■ **Credit Requirement for Graduation:** Required to complete a total of more than 136 credits

※ Required to complete one among an advanced major, double major, minor and individually designed major

■ **Elective Basic Courses:** Including General Chemistry II (3) at least 9 credits

※ Students having a double major should earn at least 6 credits including General Chemistry II.

■ **Major:** Required to complete more than 42 credits

○ **Mandatory major:** 18 credits

Molecular Biology, Biochemistry I, Biochemistry II, Biochemistry Experiment, Cell Biology, Cell Biology Experiment.

○ **Elective major:** 24 credits

Four Chemistry major courses (CH221 Organic Chemistry I, CH223 Organic Chemistry II, CH263 Analytical Chemistry, CH325 Biological Organic Chemistry) and three Bio&Brain Engineering major courses (BiS335 Biomedical Statistics & Statistical Learning, BiS438 Bioinformatics) are also considered as elective major courses.

■ **Advanced Major:** Required to complete a total of more than 12 credits

■ **Individually Designed Major:** Required to complete a total of more than 12 credits

- Required to more than 12 credits in major courses offered by more than two academic organizations

■ **Minor:** Required to complete at least 21 credits

- 21 or more credits among the major courses have to be completed, including 12 credits among the mandatory courses.

※ A maximum of overlapping 9 credits earned in major courses offered by other academic organizations can be recognized.

■ **Double Major:** Required to complete a total of more than 40 credits

- 40 credits including mandatory major courses

※ A maximum of overlapping 6 credits earned in major courses offered by other academic

organizations can be recognized

■ **Research Courses:** Required to complete more than 3 credits

- Thesis Research (Required): at least 3 credits (Students having a double major are exempt)
- Specified Research (Elective): at least 1 credits
- Seminar (Elective): at least 2 credits
  - A maximum of 21 credits from the 24-week internship program BS Co-op 1(INT482, INT495) can be used to substitute Graduation Research (3), Elective Major (3), and Elective (15)

□ **Transitional measure**

- Students admitted in 2015 or before may choose to be governed by the completion requirements listed above if desired.
- The above requirements for completion of minor apply to students starting his/her undergrad in 2020. Undergraduate students entering the school year before 2019 can choose either the revised minor requirements or the pre-amendment requirement.
- The BS Co-op 1 Internship program requirements apply to all enrolled students.
- After the spring semester of 2024, completion of the elective major "BS208 Metabolism-inspired Drug Discovery" can be recognized as the mandatory major "BS208 Biochemistry II".
- After the spring semester of 2024, completion of the mandatory major "BS223 Introductory Biotechnology" can be recognized as the elective major.
- After the spring semester of 2024, mandatory major credits exceeding the required credits by completing both "BS208 Biochemistry II" and "BS223 Introductory Biotechnology" can be recognized as the elective major credits.

## Major Course Requirements for Dept. of Biological Sciences

(For undergraduate students admitted in 2023 and after)

■ **Credit Requirement for Graduation:** Required to complete a total of more than 138 credits

※ Required to complete one among an advanced major, double major, minor and individually designed major

■ **Elective Basic Courses:** Including General Chemistry II (3) at least 9 credits

※ Students having a double major should earn at least 6 credits including General Chemistry II.

■ **Major:** Required to complete more than 42 credits

○ **Mandatory major:** 18 credits

Molecular Biology, Biochemistry I, Biochemistry II, Biochemistry Experiment, Cell Biology, Cell Biology Experiment.

○ **Elective major:** 24 credits

Four Chemistry major courses (CH221 Organic Chemistry I, CH223 Organic Chemistry II, CH263 Analytical Chemistry, CH325 Biological Organic Chemistry) and three Bio&Brain Engineering major courses (BiS335 Biomedical Statistics & Statistical Learning, BiS438 Bioinformatics) are also considered as elective major courses.

■ **Advanced Major:** Required to complete a total of more than 12 credits

■ **Individually Designed Major:** Required to complete a total of more than 12 credits

- Required to more than 12 credits in major courses offered by more than two academic organizations

■ **Minor:** Required to complete at least 21 credits

- 21 or more credits among the major courses have to be completed, including 12 credits among the mandatory courses.

※ A maximum of overlapping 9 credits earned in major courses offered by other academic organizations can be recognized.

■ **Double Major:** Required to complete a total of more than 40 credits

- 40 credits including mandatory major courses

※ A maximum of overlapping 6 credits earned in major courses offered by other academic

organizations can be recognized

■ **Research Courses:** Required to complete more than 3 credits

- Thesis Research (Required): at least 3 credits (Students having a double major are exempt)
- Specified Research (Elective): at least 1 credits
- Seminar (Elective): at least 2 credits
- A maximum of 21 credits from the 24-week internship program BS Co-op 1 (INT482, INT495) can be used to substitute Graduation Research (3), Elective Major (3), and Elective (15)

□ **Transitional measure**

- Students admitted in 2015 or before may choose to be governed by the completion requirements listed above if desired.
- The above requirements for completion of minor apply to students starting his/her undergrad in 2020. Undergraduate students entering the school year before 2019 can choose either the revised minor requirements or the pre-amendment requirement.
- The BS Co-op 1 Internship program requirements apply to all enrolled students.
- After the spring semester of 2024, completion of the elective major "BS208 Metabolism-inspired Drug Discovery" can be recognized as the mandatory major "BS208 Biochemistry II".
- After the spring semester of 2024, completion of the mandatory major "BS223 Introductory Biotechnology" can be recognized as the elective major.
- After the spring semester of 2024, mandatory major credits exceeding the required credits by completing both "BS208 Biochemistry II" and "BS223 Introductory Biotechnology" can be recognized as the elective major credits.

## Major Course Requirements for Dept. of Biological Sciences

(For undergraduate students admitted in 2024 and after)

■ **Credit Requirement for Graduation:** Required to complete a total of more than 138 credits

※ Required to complete one among an advanced major, double major, minor and individually designed major

■ **Elective Basic Courses:** Including BS122 Diversity of Life (3) at least 9 credits

※ Students having a double major should earn at least 6 credits including BS122 Diversity of Life.

■ **Major:** Required to complete more than 42 credits

○ **Mandatory major:** 18 credits

Molecular Biology, Biochemistry I, Biochemistry II, Biochemistry Experiment, Cell Biology, Cell Biology Experiment.

○ **Elective major:** 24 credits

Four Chemistry major courses (CH221 Organic Chemistry I, CH223 Organic Chemistry II, CH263 Analytical Chemistry, CH325 Biological Organic Chemistry) and three Bio&Brain Engineering major courses (BiS335 Biomedical Statistics & Statistical Learning, BiS438 Bioinformatics) are also considered as elective major courses.

■ **Advanced Major:** Required to complete a total of more than 12 credits

■ **Individually Designed Major:** Required to complete a total of more than 12 credits

- Required to more than 12 credits in major courses offered by more than two academic organizations

■ **Minor:** Required to complete at least 21 credits

- 21 or more credits among the major courses have to be completed, including 12 credits among the mandatory courses.

※ A maximum of overlapping 9 credits earned in major courses offered by other academic organizations can be recognized.

■ **Double Major:** Required to complete a total of more than 40 credits

- 40 credits including mandatory major courses

※ A maximum of overlapping 6 credits earned in major courses offered by other academic

organizations can be recognized

■ **Research Courses:** Required to complete more than 3 credits

- Thesis Research (Required): at least 3 credits (Students having a double major are exempt)
- Specified Research (Elective): at least 1 credits
- Seminar (Elective): at least 2 credits
- A maximum of 21 credits from the 24-week internship program BS Co-op 1 (INT482, INT495) can be used to substitute Graduation Research (3), Elective Major (3), and Elective (15)

□ **Transitional measure**

- The BS Co-op 1 Internship program requirements apply to all enrolled students.
- This completion requirements applies to students admitted in 2024. Students admitted before 2023 can meet either the former or new completion requirements.



## Major Course Requirements for Dept. of Biological Sciences (For Master's Degree)

### Research Master's Degree

■ **Credit Requirement for Graduation:** Required to complete a total of more than 33 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits, Special Lecture on Leadership (CC010), and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 15 credits

■ **Research Courses:** Required to complete at least 15 credits

○ The courses must include more than 2 credits of the Seminar classes (BS966 or BS986) and more than 13 credits of the Thesis Research.

○ The general scholarship students need to complete more than 1 credit of the Seminar class (BS966) and more than 14 credits of the Thesis Research.

※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

### Coursework Master's Degree

■ **Credit Requirement for Graduation:** Required to complete a total of more than 33 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits, Special Lecture on Leadership (CC010), and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 21 credits

■ **Research Courses:** Required to complete at least 9 credits

- The courses must include more than 2 credits of the Seminar classes (BS966 or BS986) and more than 7 credits of the Specified Research
- The general scholarship students need to complete more than 1 credit of the Seminar class (BS966) and more than 8 credits of the Specified Research
- ※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

☐ **Transitional Measure**

- The above completion requirements apply to students starting his/her graduate program of the Department of Biological Sciences in 2022.

## **Major Course Requirements for Dept. of Biological Sciences**

### **(For Doctoral Degree)**

■ **Credit Requirement for Graduation:** Required to complete a total of more than 60 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 21 credits

■ **Research Courses:** Required to complete a total of more than 36 credits

- Seminar (BS986) : More than 4 credits (General scholarship students need to complete more than 1 credit of the Seminar)
- Graduate students' Seminar (BS990): More than 2 credits (at least 1 presentation)

※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

- Thesis Research : More than 30 credits  
(General scholarship students need to complete more than 33 credits)
- Instead of completing Graduate students' Seminar (BS990), general scholarship students can obtain the credits by completing thesis research, and foreign students can obtain the credits by completing Korean language classes to obtain required credits.

#### ☐ **Transitional Measure**

- The above completion requirements apply to students who start his/her graduate program of the Department of Biological Sciences in 2022.
- The credits completed in the Master's degree can be cumulatively added to the obtained credits for Doctoral degree (except for research credits).

## **Major Course Requirements for Dept. of Biological Sciences**

### **(For Doctoral Degree admitted in 2023)**

■ **Credit Requirement for Graduation:** Required to complete a total of more than 60 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 18 credits

■ **Research Courses:** Required to complete a total of more than 39 credits

- Seminar (BS986) : More than 4 credits (General scholarship students need to complete more than 1 credit of the Seminar)
- Graduate students' Seminar (BS990): More than 2 credits (at least 1 presentation)

※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

- Thesis Research : More than 30 credits

(General scholarship students need to complete more than 33 credits)

#### ☐ **Transitional Measure**

- The above completion requirements apply to students who start his/her graduate program of the Department of Biological Sciences in 2023.
- The credits completed in the Master's degree can be cumulatively added to the obtained credits for Doctoral degree (except for research credits).

## **Major Course Requirements for Dept. of Biological Sciences**

### **(For MS-PhD Integrated Program)**

■ **Credit Requirement for Graduation:** Required to complete a total of more than 60 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits, Special Lecture on Leadership (CC010), and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 21 credits

■ **Research Courses:** Required to complete a total of more than 36 credits

- Seminar (BS966 or BS986): More than 4 credits (General scholarship students need to complete more than 1 credit)
- Graduate students' Seminar (BS990): More than 2 credits (at least 1 presentation)

※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

- Thesis Research : More than 30 credits  
(General scholarship students need to complete more than 33 credits)
- Instead of completing Graduate students' Seminar (BS990), general scholarship students can obtain the credits by completing thesis research, and foreign students can obtain the credits by completing Korean language classes to obtain required credits.

#### ☐ **Transitional Measure**

- The above completion requirements apply to students starting his/her graduate program of the Department of Biological Sciences in 2022.
- The credits completed in the Master's degree can be cumulatively added to the obtained credits for Doctoral degree (except for research credits).
- The integrated master's and doctoral program does not operate a separate curriculum, and it organizes a curriculum combining the master's program and the doctoral program.

## **Major Course Requirements for Dept. of Biological Sciences**

**(For MS-PhD Integrated Program admitted in 2023)**

■ **Credit Requirement for Graduation:** Required to complete a total of more than 60 credits

■ **Mandatory General Courses:** Required to complete more than 3 credits, Special Lecture on Leadership (CC010), and Ethics and Safety

■ **Mandatory Major Courses:** N.A.

■ **Elective Courses:** Required to complete a total of more than 18 credits

■ **Research Courses:** Required to complete a total of more than 39 credits

- Seminar (BS966 or BS986): More than 4 credits (General scholarship students need to complete more than 1 credit)
- Graduate students' Seminar (BS990): More than 2 credits (at least 1 presentation)

※ In case of students who transfer from other departments and request for acquiring credits from the completed Seminar classes in the previous department, the Undergraduate Education Committee in the Department can evaluate similarity between the subjects and decide whether it can be accepted or not.

- Thesis Research : More than 30 credits

(General scholarship students need to complete more than 33 credits)

### ☐ **Transitional Measure**

- The above completion requirements apply to students starting his/her graduate program of the Department of Biological Sciences in 2023.
- The credits completed in the Master's degree can be cumulatively added to the obtained credits for Doctoral degree (except for research credits).
- The integrated master's and doctoral program does not operate a separate curriculum, and it organizes a curriculum combining the master's program and the doctoral program.