

## 微生物及免疫學研究所博士班

110 學年度

最低修業年限	二年
應修學分數	至少應修畢 18 學分，其中包含本所訂定之必修科目
逕博應修學分數	逕修讀博士學位研究生至少應修畢 30 學分
應修（應選）課程及符合畢業資格之修課相關規定	<p><b>本國生</b> <b>一般生組</b> <b>必修課程：</b></p> <p>①下列 a、b、c、d 必修課程四選二： a. 高等微生物及免疫學通論-免疫學(2 學分)或高等微生物及免疫學通論-免疫學(全英語)(2 學分)(中、英文版二擇一) b. 高等微生物及免疫學通論-病毒學(2 學分)或高等微生物及免疫學通論-病毒學(全英語)(2 學分)(中、英文版二擇一) c. 高等微生物及免疫學通論-細菌學(2 學分)或高等微生物及免疫學通論-細菌學(全英語)(2 學分)(中、英文版二擇一) 註：上述的中、英文版請擇一選修，若中、英二版都選修，其中一門不能計入畢業學分內。 d. 基因體科學(2 學分)</p> <p>②下列課程三選一： 現代生物學研究方法(2 學分)、分子生物學(3 學分)、細胞生物學(3 學分)</p> <p>③學術研究倫理(0 學分)</p> <p><b>必選課程：</b></p> <p>①博一生必選「生命科學院-生物醫學講座」(1 學分)，至少兩學期。 ②每學期需選修「微生物及免疫學專題討論」(2 學分)，直至博三結束。 ③自博一下學期起，每學年需選修「微生物及免疫學研究」。但當學年若舉行博士學位候選人資格考核，則可免修「微生物及免疫學研究」(2 學分)。 ④修畢及格必修課程後，需修兩學期之「微生物及免疫學教學(一)(實驗助教)」(1 學分)及「微生物及免疫學教學(二)(實驗助教)」(1 學分)。 ⑤博四、博五生可自由選擇於四年級或五年級舉行公開的全英語進度報告，並於舉行的學期選修「微生物及免疫學研究」(二學分)。</p> <p><b>在職生組</b> <b>必修課程：</b></p> <p>①下列 a、b、c 必修課程三選一： a. 高等微生物及免疫學通論-免疫學(2 學分)或高等微生物及免疫學通論-免疫學(全英語)(2 學分)(中、英文版二擇一) b. 高等微生物及免疫學通論-病毒學(2 學分)或高等微生物及免疫學通論-病毒學(全英語)(2 學分)(中、英文版二擇一) c. 高等微生物及免疫學通論-細菌學(2 學分)或高等微生物及免疫學通論-細菌學(全英語)(2 學分)(中、英文版二擇一) 註：上述的中、英文版請擇一選修，若中、英二版都選修，其中一門不能計入畢業學分內。 ②學術研究倫理(0 學分)</p> <p><b>必選課程：</b></p> <p>①每學期需選修「微生物及免疫學專題討論」(2 學分)，直至博三結束。 ②自博二起，每學年需選修「微生物及免疫學研究」。但當學年若舉行博士學位候選人資格考核，則可免修「微生物及免疫學研究」(2 學分)。 ③畢業前需舉行公開演講，並於舉行的學期選修「微生物及免疫學研究」(二學分)</p>

學分)。  
**選修課程：**  
經指導教授認可之3學分(含)以上之課程(不包括「微生物及免疫學專題討論」、「微生物及免疫學研究研」)。

**外籍生  
必修課程**

①下列 a、b、c 必修課程三選二：

a. 高等微生物及免疫學通論-免疫學(全英語)(2 學分)

b. 高等微生物及免疫學通論-病毒學(全英語)(2 學分)

c. 高等微生物及免疫學通論-細菌學(全英語)(2 學分)

②下列課程二選一

現代生物學研究方法(中文版)(2 學分)、生醫科學實驗技術(英文版)(2 學分)

③學術研究倫理，0 學分

**必選課程**

①每學期需選修「微生物及免疫學專題討論」(2 學分)，直至博三結束。

②自博一下學期起，每學年需選修「微生物及免疫學研究」。但當學年若舉行博士學位候選人資格考核，則可免修「微生物及免疫學研究」(2 學分)。

③修畢及格必修課程後，需修兩學期之「微生物及免疫學教學(A)(全英語課助教)」(1 學分)及「微生物及免疫學教學(B)(全英語課助教)」(1 學分)。

④博四、博五生可自由選擇於四年級或五年級舉行公開的全英語進度報告，並於舉行

的學期選修「微生物及免疫學研究」(二學分)。

# Institute of Microbiology & Immunology Ph. D. Program

## Academic Year 2021

Mini. Term of Study	Two years
Minimum Credits	To obtain the degree, students must complete at least eighteen credits, including all required courses.
Minimum Credits for Direct-Entrance Ph.D.	For master students who directly advance to the Ph.D. program, at least thirty credits must be completed.
Curriculum and Regulations	<p><b><u>Native students</u></b>  <b>General students</b>  <b>Required courses:</b></p> <p>① Among the following courses: a, b, c and d, please choose two courses.</p> <p>a. “Advanced Microbiology and Immunology-Immunology” (2 credits), or  “Advanced Microbiology and Immunology-Immunology (in English)” (2 credits), choose one.</p> <p>b. “Advanced Microbiology and Immunology-Virology” (2 credits), or  “Advanced Microbiology and Immunology-Virology (in English)” (2 credits), choose one.</p> <p>c. “Advanced Microbiology and Immunology-Bacteriology” (2 credits) or  “Advanced Microbiology and Immunology-Bacteriology (in English)” (2 credits), choose one.</p> <p style="padding-left: 40px;">Note: Among the above courses: a, b, and c, please choose between Chinese class or English class; if choosing both Chinese and English classes, the credit of one class cannot be added in the total required credits for graduation.</p> <p>d. “Genomic Science” (2 credits)</p> <p>② One of the following courses:</p> <p>e. “Research Methods for Modern Microbiology &amp; Immunology” ( 2 credits).  f. “Biochemistry and molecular biology” (3 credits),  g. “Cell Biology” (3 credits).</p> <p>③ “Research ethics” course (0 credit)</p> <p><b>Required elective courses:</b></p> <p>① 1st year Ph.D. students must choose “School of Life Sciences - Biomedical Lecture” (1 credit), at least in 2 semesters.</p> <p>② Students must enroll in the elective course “Seminars in Microbiology and Immunology” (2 credits) for 6 semesters.</p> <p>③ Upon commitment to thesis advisor, starting from the second semester of the first year in every academic year, Ph.D. students must enroll in the course “Microbiology and Immunology Research” (2 credits) every first semester of the academic year. However, a waiver of the regulation for the whole academic year is granted to Ph.D. students who have scheduled a Ph.D. candidacy examination in that year.</p> <p>④ After completing the required compulsory course, students must enroll in the course “Teaching in Microbiology and Immunology(1)( Experimental Teaching Assistant)” (1 credits) and “Teaching in Microbiology and Immunology(1)( Experimental Teaching Assistant)” (1 credits) two semesters (2 credits).</p> <p>⑤ 4th year or 5th year Ph.D. students may choose whether they want to have opening full English review on their fourth year or the fifth year, and they also need to choose “Microbiology and Immunology Research” course ( 2 credit) in the same semester that they have opening review.</p> <p><b>In-service students</b>  <b>Required courses:</b></p>

- ① Among the following courses: a, b, c, please choose one course.
- “Advanced Microbiology and Immunology-Immunology” (2 credits), or  
“Advanced Microbiology and Immunology-Immunology (in English)” (2 credits),  
choose one.
  - “Advanced Microbiology and Immunology-Virology” (2 credits), or  
“Advanced Microbiology and Immunology-Virology (in English)” (2 credits), choose  
one.
  - “Advanced Microbiology and Immunology-Bacteriology” (2 credits) or  
“Advanced Microbiology and Immunology-Bacteriology (in English)” (2 credits),  
choose one.
- Note: Among the above courses: a, b, and c, please choose between Chinese class or  
English class; if choosing both Chinese and English classes, the credit of one  
class cannot be added in the total required credits for graduation.
- ② “Research ethics” course (0 credit)
- Required elective courses:
- Students must enroll in the elective course “Seminars in Microbiology  
and Immunology” (2 credits) for 6 semesters.
  - Upon commitment to thesis advisor, starting from the third semester of the second  
year, in every academic year, Ph.D. students must enroll in the course “Microbiology  
and Immunology Research” (2 credits) every first semester of the academic year.  
However, a waiver of the regulation for the whole academic year is granted to Ph.D.  
students who have scheduled a Ph.D. candidacy examination in that year.
  - Public lectures are required before graduation, and "Microbiology and  
Immunology Research" (two credits) is required during the semester.
- Elective courses:  
Courses approved by the instructor are required at least 3 credits (or more) (excluding  
“Seminars in Microbiology and Immunology”、 “Microbiology and Immunology  
Research”)
- International students
- Required courses:
- Among the following courses: a, b, c and d, please choose two courses.
    - “Advanced Microbiology and Immunology-Immunology(in English)” (2 credits),
    - “Advanced Microbiology and Immunology-Virology(in English)” (2 credits),
    - “Advanced Microbiology and Immunology-Bacteriology(in English)” (2 credits)
  - One of the following courses:
    - “Experimental techniques for biomedical science” (2 credits)
    - “Molecular Cell Biology” (2 credits)
  - “Research ethics” course (0 credit)
- Required elective courses:
- Students must enroll in the elective course “Seminars in Microbiology  
and Immunology” (2 credits) for 6 semesters.
  - Upon commitment to thesis advisor, starting from the second semester of the first  
year, in every academic year, Ph.D. students must enroll in the course “Microbiology  
and  
Immunology Research” (2 credits) every first semester of the academic year. However,  
a waiver of the regulation for the whole academic year is granted to Ph.D. students who  
have scheduled a Ph.D. candidacy examination in that year.
    - After completing the required compulsory course, students must enroll in the  
course “Teaching in Microbiology and Immunology(A)( Teaching Assistant in  
Full English Class)”(1 credits) and “Teaching in Microbiology and  
Immunology(B)( Teaching  
Assistant in Full English Class)”(1 credits) two semesters (2 credits).

	<p>④4th year or 5th year Ph.D. students may choose whether they want to have opening full English review on their fourth year or the fifth year, and they also need to choose “Microbiology and Immunology Research” course ( 2 credit) in the same semester that they have opening review.</p>
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