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Doctor of Philosophy Programme in Microbiology (International Programme)

หลักสูตร ปรัชญาดุษฎีบัณฑิต

สาขาวิชา จุลชีววิทยา (หลักสูตรนานาชาติ) (ภาคปกติ)

Faculty of Science

Department of Microbiology

คณะวิทยาศาสตร์

ภาควิชา จุลชีววิทยา

Expected number of students to be accepted all year round : 10 Students

### Admission Requirements

A candidate must:

1. Receive a bachelor degree in Science such as Microbiology, Biology, Biochemistry, Biotechnology, Medical technology, Public Health, Chemical, Food Science, Veterinary, Medicine, Dentistry, Pharmacology, Biological science etc with an average GPA of at least 3.50
2. Receive a master degree in Science such as Microbiology, Biology, Biochemistry, Biotechnology, Medical technology, Public Health, Dentistry, Pharmacology, Chemistry, Food Science, Biological science etc with an average GPA of at least 3.50
3. have a TOEFL score of at least 500, TOEFL computer-based score of 173, TOEFL Internet-based score of 61, or IELTS score of 5.

Those who do not have any of the test scores specified above will have to take the English Proficiency Examination of the Faculty of Graduate Studies on the specified examination day.

Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

### Curriculum Structure

	Credit
<b>For students with Bachelor's degree</b>	
Required courses	19
Elective courses not less than	5
Dissertation	48
<b>For students with Master's degree in Microbiology</b>	
<b>Immunology or related fields that are approved by the program Committees</b>	
Required courses	7
Elective courses not less than	5
Dissertation	36
<b>For student with Master degree in other related fields</b>	
Required courses	9
Elective courses not less than	3
Dissertation	36

<b>Required courses</b>	<b>Credit</b>
<b>For students with Bachelor's degree</b>	
GRID 521 Research Ethics	1(1-0-2)
SCID 502 Cell Science	2(2-0-4)
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCMI 514 Immunology	1(1-0-2)
SCMI 515 Bacteriology and Mycology	1(1-0-2)
SCMI 516 Virology	1(1-0-2)
SCMI 517 Parasitology	1(1-0-2)
SCMI 602 Advanced Immunology #	3(3-0-6)
SCMI 603 Advanced Parasitology #	3(3-0-6)
SCMI 604 Advanced Virology #	3(3-0-6)
SCMI 605 Microbial Genetics #	3(3-0-6)
SCMI 611 Special Topics in Microbiology	1(1-0-2)
SCMI 612 Microbiology Seminar	1(1-0-2)
SCMI 621 Special Topics in Microbiology II	1(1-0-2)
SCMI 622 Microbiology Seminar II	1(1-0-2)
SCMI 623 Ph.D. Seminar	1(1-0-2)
# For SCMI 602-605 The students need to register only 2 courses One of the two has to be related to the student' s research topic	
<b>For students with Master's degree</b>	
<b>1. For students with Master's degree in Microbiology</b>	
<b>Immunology or related fields that are approved by the program committees</b>	
SCMI 602 Advanced Immunology #	3(3-0-6)
SCMI 603 Advanced Parasitology #	3(3-0-6)
SCMI 604 Advanced Virology #	3(3-0-6)
SCMI 605 Microbial Genetics #	3(3-0-6)
SCMI 623 Ph.D. Seminar	1(1-0-2)
# For SCMI 602-605 The students need to register only 2 courses One of the two has to be related to the student' s research topic.	
<b>2. For student with Master degree in other related fields</b>	
SCMI 514 Immunology \$	1(1-0-2)
SCMI 515 Bacteriology and Mycology \$	1(1-0-2)
SCMI 516 Virology \$	1(1-0-2)
SCMI 517 Parasitology \$	1(1-0-2)
SCMI 602 Advanced Immunology #	3(3-0-6)
SCMI 603 Advanced Parasitology #	3(3-0-6)
SCMI 604 Advanced Virology #	3(3-0-6)
SCMI 605 Microbial Genetics #	3(3-0-6)
SCMI 623 Ph.D. Seminar	1(1-0-2)

# For SCMI 602-605 The students need to register only 2 courses One of the two has to be related to the student' s research topic.

§ For SCMI 514-517 The students need to register only 2 courses One of the two has to be related to the student' s research topic.

### **Elective courses**

#### **For students with Bachelor's degree**

SCID 500	Cell and Molecular Biology	3(3-0-6)
SCID 506	Concepts of Molecular Bioscience	2(2-0-4)
SCID 507	Microscopic Technique	1(0-2-1)
SCID 508	Biomolecular and Spectroscopy Techniques	1(0-2-1)
SCID 509	Separation Techniques	1(0-2-1)
SCID 510	Immunological Methods	1(0-2-1)
SCID 511	Gene Technology	1(0-2-1)
SCID 512	Receptor Binding and Enzyme Kinetic Assays	1(0-2-1)
SCID 513	Animal Cell Culture Techniques	1(0-2-1)
SCID 514	Animal Experimentation in Biomedical Research	1(0-2-1)
SCID 516	Biostatistics	3(3-0-6)

#### **For students with Master's degree**

##### **1. For students with Master's degree in Microbiology**

##### **Immunology or related fields that are approved by the program committees**

GRID 521	Research Ethics	1(1-0-2)
SCID 518	Generic Skills in Science Research **	1(1-0-2)
SCID 502	Cell Science	2(2-0-4)
SCID 506	Concepts of Molecular Bioscience	2(2-0-4)
SCID 507	Microscopic Technique	1(0-2-1)
SCID 508	Biomolecular and Spectroscopy Techniques	1(0-2-1)
SCID 509	Separation Techniques	1(0-2-1)
SCID 510	Immunological Methods	1(0-2-1)
SCID 511	Gene Technology	1(0-2-1)
SCID 512	Receptor Binding and Enzyme Kinetic Assays	1(0-2-1)
SCID 513	Animal Cell Culture Techniques	1(0-2-1)
SCID 514	Animal Experimentation in Biomedical Research	1(0-2-1)
SCID 516	Biostatistics	3(3-0-6)
SCMI 621	Special Topics in Microbiology II	1(1-0-2)
SCMI 622	Microbiology Seminar II	1(1-0-2)

\*\* Only in the case that the student have, never taken this or related course.

<b>2. For student with Master degree in other related fields</b>	
GRID 521 Research Ethics	1(1-0-2)
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCID 502 Cell Science	2(2-0-4)
SCID 506 Concepts of Molecular Bioscience	2(2-0-4)
SCID 507 Microscopic Technique	1(0-2-1)
SCID 508 Biomolecular and Spectroscopy Techniques	1(0-2-1)
SCID 509 Separation Techniques	1(0-2-1)
SCID 510 Immunological Methods	1(0-2-1)
SCID 511 Gene Technology	1(0-2-1)
SCID 512 Receptor Binding and Enzyme Kinetic Assays	1(0-2-1)
SCID 513 Animal Cell Culture Techniques	1(0-2-1)
SCID 514 Animal Experimentation in Biomedical Research	1(0-2-1)
SCID 516 Biostatistics	3(3-0-6)
SCMI 621 Special Topics in Microbiology II	1(1-0-2)
SCMI 622 Microbiology Seminar II	1(1-0-2)
** Only in the case that the student have, never taken this or related course.	
<b>Dissertation</b>	
<b>For students with Bachelor's degree</b>	
SCMI 799 Dissertation	48(0-144-0)
<b>For students with Master's degree</b>	
SCMI 699 Dissertation	36(0-108-0)
* These may change in cases where there are suggestions for the improvement of the curriculum	

### **Additional advantages of the programme**

The high quality and excellence of the programme is evidenced by the high number of publications published by staff members in international journals.

### **Details of Scholarships**

1. Scholarship of the 60<sup>th</sup> Year Supreme Reign of His Majesty King Bhumibol Adulyadej.
2. The Royal Golden Jubilee Ph.D. Program (RGJ)

### **Additional information for applicants**

Well-equipped laboratory facilities.

### **Application Process**

Application is only available via online application at [www.grad.mahidol.ac.th](http://www.grad.mahidol.ac.th)

## Required Documents

Prepare the following required documents to submit via online admission system or post :

- Two (2) recent photographs (1x1 inch in size)
- A copy of an applicant's degree certificate or a letter of graduation certification (for an applicant with a degree completion) 2 copies
- A letter certifying that an applicant is currently in the last semester prior to graduation (for an applicant seeking for a degree) 2 copies
- A detailed transcript of a degree (for an applicant with a degree completion) 2 copies
- A grade report with course names and grades received from the first to the current semester prior to graduation 2 copies
- A copy of identification card 2 copies
- A copy of house registration certification 2 copies
- A copy of proof of payment.
- Three letters of recommendation (for International students) 1 copy each

Submitting documents via online admission system.

- All documents must be in pdf format (maximum size 2 MB)
- Recent photograph must be in jpeg format only (maximum size 2 M)

## Job option after graduation

- Lecturer or Academic
- Researcher
- Academic
- Advanced academic specialists in related fields in academic universities or both in medical sciences and applied sciences
- Advanced researchers or research consultants in Molecular genetics, Microbiology and scientific Instruments in Government institutions, State enterprises and Private sections
- Advanced specialists or academic consultants of private sections concerning products that are Related to molecular genetic, microbes and scientific instruments
- Freelance

Further information may be obtained from the Director of Graduate Studies, Microbiology :

1. **Lect. Dr. Padungsri Dubbs** (E-mail : [padungsri.vic@mahidol.ac.th](mailto:padungsri.vic@mahidol.ac.th))

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2. **Lect. Dr. Soraya Chaturongakul** (E-mail : [sorayachaturongakul@gmail.com](mailto:sorayachaturongakul@gmail.com))

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**Program Coordinator**

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Tel. : 0 2201 5673

Fax. : 0 2644 5411

- Notes**
1. The programme of Microbiology requires students to study the pre - requisite course:  
- SCID 500 Cell and Molecular Biology 3 Credits
  2. For more education information : <http://www.grad.mahidol.ac.th>

**For more information please contact The Student Admission Section.  
Tel . 0 2441 4125 ext. 208-210 , 0 2441 9129, E-mail : [gradthai@mahidol.ac.th](mailto:gradthai@mahidol.ac.th)**