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**Doctor of Philosophy Programme in Molecular Medicine (International Programme)**

หลักสูตร ปรัชญาดุษฎีบัณฑิต

สาขาวิชา เวชศาสตร์ระดับโมเลกุล (หลักสูตรนานาชาติ) (ภาคปกติ)

Faculty of Science, Faculty of Medicine, Ramathibodi Hospital, Faculty of Dentistry,

Faculty of Tropical Medicine, Faculty of Graduate Studies

คณะวิทยาศาสตร์, คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี, คณะทันตแพทยศาสตร์, คณะเวชศาสตร์เขตร้อน และ  
บัณฑิตวิทยาลัย

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

**Admission Requirements**

A candidate must:

**Plan 1**

1. Candidate must hold or is expected to hold a Bachelor's degree of Science in the discipline of Biological or Life Science, with a minimum GPA of 3.25.
2. Candidate must hold a Master's degree of Science, with a minimum GPA of 3.50.
3. Candidate graduated from School of Medicine or School of Dentistry, with a minimum GPA of 3.00.
4. Candidate graduated from School of Pharmacy or Veterinary Medicine, with a minimum GPA of 3.25.
5. Candidates who are currently studying in Ph.D/M.D. of Ph.D/D.D.S. program provided that they have a GPA of no less than 3.00 with approval from Doctoral Program Committee and Dean of Faculty of Graduate Studies.
6. 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.

Exceptions to the above mentioned conditions can be made only by the Programme Graduate Administrative Committee and the Dean of the Faculty of Graduate Studies, Mahidol University

**Plan 2**

1. Candidate must hold or is expected to hold a Bachelor's degree of Science in the discipline of Biological or Life Science, with a minimum GPA of 3.25.
2. Candidate must hold a Master's degree of Science, with a minimum GPA of 3.50.
3. Candidate graduated from School of Medicine or School of Dentistry, with a minimum GPA of 3.00.
4. Candidate graduated from School of Pharmacy or Veterinary Medicine, with a minimum GPA of 3.25.
5. Candidates who are currently studying in Ph.D/M.D. of Ph.D/D.D.S. program provided that they have a GPA of no less than 3.00 with approval from Doctoral Program Committee and Dean of Faculty of Graduate Studies.
6. 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.

Exceptions to the above mentioned conditions can be made only by the Programme Graduate Administrative Committee and the Dean of the Faculty of Graduate Studies, Mahidol University

## Curriculum Structure

	<b>Credit</b>
<b>Plan 1</b>	
<b>For students with Master's degree</b>	
Thesis no less than	48
<b>For students with Bachelor's degree</b>	
Thesis no less than	72
<b>Plan 2</b>	
<b>For students with Master's degree</b>	
Required Courses	10
Elective Courses no less than	2
Thesis	36
<b>For students with Bachelor's degree</b>	
Required Courses	12
Elective Courses no less than	12
Thesis	48

	<b>Credit</b>
<b>Plan 1</b>	
<b>Thesis</b>	
<b>For students with Master's degree</b>	
SCID 898 Dissertation	48(0-144-0)
<b>For students with Bachelor's degree</b>	
SCID 899 Dissertation	72(0-216-0)
<b>Qualifying Examination</b>	
1. Students are required to assess the qualifying examination availability and the ability to have a thesis proposal.	
2. Students who fail to qualifying examination for an excuse to have time to apply for re-examination excuse for an exam with the next semester since the first examination.	
<b>Plan 2</b>	
<b>Required Courses</b>	
<b>For students with Master's degree</b>	
SCID 502 Cell Science	2(2-0-4)
SCID 503 Systemic Bioscience	3(3-0-6)
SCID 506 Concepts of Molecular Bioscience	2(2-0-4)
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCID 519 Special Content in Molecular Medicine	3(2-3-5)
SCID 624 Molecular Medicine Seminar I	1(1-0-2)
SCID 625 Molecular Medicine Seminar II	1(1-0-2)

**For students with Bachelor's degree**

SCID	502	Cell Science	2(2-0-4)
SCID	503	Systemic Bioscience	3(3-0-6)
SCID	506	Concepts of Molecular Bioscience	2(2-0-4)
SCID	513	Animal Cell Culture Techniques	1(0-2-1)
SCID	518	Generic Skills in Science Research	1(1-0-2)
SCID	519	Special Content in Molecular Medicine	3(2-3-5)
SCID	624	Molecular Medicine Seminar I	1(1-0-2)
SCID	625	Molecular Medicine Seminar II	1(1-0-2)
SCID	626	Molecular Medicine Seminar III	1(1-0-2)

**Elective Courses****For students with Bachelor's degree**

SCID	500	Cell and Molecular Biology	3(3-0-6)
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	514	Animal Experimentation in Biomedical Research	1(0-2-1)
SCID	516	Biostatistics	3(3-0-6)
SCMI	602	Advanced Immunology	3(3-0-6)
SCMI	603	Advanced Parasitology	3(3-0-6)
SCMI	604	Advanced Virology	3(3-0-6)
SCPA	601	Cellular Pathology I	2(2-0-4)
SCPM	611	Advanced Pharmacology	3(3-0-6)
SCPS	631	Systems Physiology	4(3-2-7)
SCTX	601	Molecular Toxicology	3(3-0-6)

**For students with Master's degree**

SCID	500	Cell and Molecular Biology	3(3-0-6)
SCID	507	Microscopic Technique	3(3-0-6)
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	602	Advanced Immunology	3(3-0-6)
SCMI	603	Advanced Parasitology	3(3-0-6)

SCMI	604	Advanced Virology	3(3-0-6)
SCPA	601	Cellular Pathology I	2(2-0-4)
SCPM	611	Advanced Pharmacology	3(3-0-6)
SCPS	631	Systems Physiology	4(3-2-7)
SCTX	601	Molecular Toxicology	3(3-0-6)
<b>Thesis Plan 1</b>			
SCID	898	Dissertation	48(0-144-0)
SCID	899	Dissertation	72(0-216-0)
<b>Plan 2</b>			
SCID	699	Dissertation	36(0-108-0)
SCID	799	Dissertation	48(0-144-0)
<b>* These May Change in Cases Where There are Suggestions for The Improvement of The Curriculum</b>			

### Additional advantages of the programme

Doctor of Philosophy Programme in Molecular Medicine is a new multidisciplinary program aims to provide students with flexible and integrated approach to medical and dental disciplines using cutting edge molecular biology and genetics technologies.

### Additional information for applicants

Students will learn molecular biology, genetics, cell technologies, bioinformatics, - omics and - omics as pharmacogenomics, metabolomics and etc ; and applied the knowledge in the diagnosis, treatment and prevention of many diseases.

### 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.

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 MB)

### Job option after graduation

1. A lecturer, instructor, scientist, researcher and consultant in government or private sectors including in international organizations.
2. A research specialist in scientific products/equipment in the government or any private company.
3. An owner of a company or an organization that utilizes scientific background to assist in its success.

Further information may be obtained from the Secretary of Molecular Medicine :

1. **Assoc. Prof.Dr. Sukumal Chongthammakun** (E-mail : [sukumal.cho@mahidol.ac.th](mailto:sukumal.cho@mahidol.ac.th))  
Graduate Studies Room, R Building, Floor 1, Faculty of Science.  
Tel : 0 2201 5209
2. **Asst.Prof.Dr. Nathawut Sibmooh** (E-mail : [nathawut.sib@mahidol.ac.th](mailto:nathawut.sib@mahidol.ac.th))  
Room B512, Biology Building, Floor 5, Department of Pharmacology , Faculty of Science.  
Tel : 0 2201 5509

**Program Coordinator**

**Mrs. Patchara Ong-Ard** (E-mail : [patchara.ong@mahidol.ac.th](mailto:patchara.ong@mahidol.ac.th))  
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Tel. : 0 2201 5472 Fax. : 0 2644 5426

**Notes** 1. For more education information : [www.grad.mahidol.ac.th](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)