

## Master of Science Programme in Biopharmaceutical Science (International Programme)

หลักสูตร วิทยาศาสตร์มหาบัณฑิต สาขาวิชา เกษษศาสตร์ชีวภาพ (หลักสูตรนานาชาติ)(ภาคปกติ)

Faculty of Pharmacy

คณะเภสัชศาสตร์

1. Microbiology (วิชาเอกจุลชีววิทยา)

Admission No.

2	6	1	3	M	G	0	5
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Expected number of students to be accepted year round : 6 Students

2. Biochemistry (วิชาเอกชีวเคมี)

Admission No.

2	6	1	3	M	G	0	6
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Expected number of students to be accepted year round : 5 Students

3. Physiology (วิชาเอกสรีรวิทยา)

Admission No.

2	6	1	3	M	G	0	8
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Expected number of students to be accepted year round : 4 Students

### Admission Requirements

#### A candidate must:

1. Graduate / Fourth year student in Biology, Biomedical Sciences, Health Sciences and related areas
2. Have a minimum grade point average of 2.50;
3. pass the standard graduate entry requirement for a Master's in Science;
4. Have a TOEFL score of at least 480, TOEFL computer-based score of 157, TOEFL Internet-based score of 54, or IELTS score of 4.5 or pass the English Proficiency Examination arranged by the Faculty of Graduate Studies.

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.

Exemptions from the above conditions may be granted by the Doctoral Program Committee and the Dean of the Faculty of Graduate Studies.

### Written Examination (Microbiology)

(Applicants must attend the examination date accurately to your admission round.)

<u>Third Round</u> May 31, 2014	
Subjects for examination	Time
1. English	8.30 - 11.30 a.m.
2. General Knowledge	11.30 - 12.30 p.m.
3. Microbiology	1.30 - 2.30 p.m.
<b>Examination Place</b> Mahidol University , Salaya , Nakhonpathom more details : <a href="http://www.grad.mahidol.ac.th">www.grad.mahidol.ac.th</a> or Announcement at Faculty of Graduate Studies branches.	

**Written Examination (Biochemistry)**

(Applicants must attend the examination date accurately to your admission round.)

<b><u>Third Round</u></b> <b>May 31, 2014</b>	
<b>Subjects for examination</b>	<b>Time</b>
1. English	8.30 - 11.30 a.m.
2. General Knowledge	11.30 - 12.30 p.m.
3. Biochemistry of Pharmacy	1.30 - 4.30 p.m.
<b>Examination Place</b> Mahidol University , Salaya , Nakhonpathom more details : <a href="http://www.grad.mahidol.ac.th">www.grad.mahidol.ac.th</a> or Announcement at Faculty of Graduate Studies branches.	

**Written Examination (Physiology)**

(Applicants must attend the examination date accurately to your admission round.)

<b><u>Third Round</u></b> <b>May 31, 2014</b>	
<b>Subjects for examination</b>	<b>Time</b>
1. English	8.30 - 11.30 a.m.
2. General Knowledge	11.30 - 12.30 p.m.
3. Physiology	1.30 - 2.30 p.m.
<b>Examination Place</b> Mahidol University , Salaya , Nakhonpathom more details : <a href="http://www.grad.mahidol.ac.th">www.grad.mahidol.ac.th</a> or Announcement at Faculty of Graduate Studies branches.	

## Curriculum Structure

	<b>Credit</b>
Core Courses	10
Required Courses	8
Elective Courses	6
Thesis	12

	<b>Credit</b>
<b>Core Courses</b>	
GRID 603 Biostatistics	3(3-0-6)
SCID 500 Cell and Molecular Biology	3(3-0-6)
PYID 668 Seminar in Biopharmaceutical Sciences	1(1-0-2)
PYID 669 Special Topics in Biopharmaceutical Sciences	1(1-0-2)
PYID 685 Research Methodology in Pharmacy I	2(2-0-4)
<b>Required Courses</b>	
<b>Microbiology</b>	
PYMI 690 Pharmaceutical Microbiology I	3(2-3-5)
PYMI 691 Pharmaceutical Microbiology II	3(2-3-5)
PYMI 693 Screening for Bioactivities	2(1-3-3)
<b>Biochemistry</b>	
PYBC 667 Current Topics in Biochemistry	2(2-0-4)
PYBC 668 Instrumental Research Techniques	3(2-3-5)
PYBC 669 Biopharmaceutical Biochemistry	3(3-0-6)
<b>Physiology</b>	
PYPS 672 Cell Physiology	2(2-0-4)
PYPS 682 Human Physiological Regulation	3(3-0-6)
PYPS 683 Systematic Human Physiology	3(3-0-6)
<b>Elective Courses</b>	
<b>Microbiology</b>	
PYMI 664 Industrial Pharmaceutical Microbiology	3(2-3-5)
PYMI 665 Quality Assessment and Microbiological Control	3(2-3-5)
PYMI 694 Biomolecular Techniques for Biopharmaceutical Sciences	3(2-3-5)
PYMI 695 Basic Techniques in Animal Cell Culture	2(1-3-3)
<b>Biochemistry</b>	
PYBC 670 Human Metabolism	3(3-0-6)
PYBC 671 Biochemical Techniques for Drug Research and Development	2(0-6-2)
PYBC 672 Biochemical Technology Laboratory	2(0-6-2)
PYBC 673 Principle of Biomolecular Analysis	3(3-0-6)
<b>Physiology</b>	
PYPS 671 Membrane Transport	3(2-2-5)
PYPS 673 Current Topics in Pathophysiology	3(3-0-6)
PYPS 693 Aging and Anti-aging	3(3-0-6)

PYPS 695	Advanced Renal Physiology	3(3-0-6)
PYPS 696	Advanced Cardiovascular Physiology	3(3-0-6)
PYPS 697	Advanced Endocrine Physiology	3(3-0-6)
<b>Thesis</b>		
PYID 698	Thesis	12(0-36-0)
<b>* These may change in cases where there are suggestions for the improvement of the curriculum</b>		

#### Additional information for applicants

The course will start in Semester 2, Academic Year 2013 on 4 November 2013.  
(For more information please contact 02-345-3747)

#### Additional advantages of the program

##### Major : Microbiology

Research focuses on medical microbiology, microbial genetics and biotechnology, targeted therapy and immunomodulation, development of immunological diagnostic assays for food and health safety, antimicrobial resistant mechanisms, development of novel natural and synthetic antimicrobial compounds using antisense technology, molecular modeling of biomolecule in drug discovery, *in silico* simulations of biopolymer as drug delivery system and molecular virology.

##### Major : Biochemistry

Research focuses on pharmaceutical biochemistry, biopharmaceuticals, cancer biochemistry, biosensors, antiviral drugs, metagenomics and microbial diversity for drug discovery, bacterial systematics, discovery of thermostable enzymes from thermophiles, pharmaceutical uses of biodegradable plastics, antioxidants from medicinal plants, peptide and protein for pharmaceutical applications.

##### Major : Physiology

Research emphasizes on activities of medicinal plants in pathophysiological animal models.

#### Details of Scholarships

- Scholarship of the 60<sup>th</sup> Year of the Supreme Reign of His Majesty King Bhumibol Adulyadej.
- Research Assistance

#### 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 (for all)**

- Technical staff in government / private organization
- Researcher

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

**Major : Microbiology ;**

1. **Assoc.Prof.Chanpen Wiwat (E-mail : chanpen.wiw@mahidol.ac.th)**  
Ratcharatana Building, Floor 2,  
Department of Microbiology, Faculty of Pharmacy.  
Tel: 0 2644 8692 Fax: 0 2644 8692

**Major : Biochemistry**

1. **Dr.Jiraphun Jittikoon (E-mail : jiraphun.jit@mahidol.ac.th)**
2. **Dr. Montri Yasawong (E-mail : montri.yas@mahidol.ac.th)**  
Rajaratana Building, Floor 7,  
Department of Biochemistry, Faculty of Pharmacy,  
Tel: 0 2644 8677-91 Ext ; 5732 Fax: 0 2644 8693

**Program Coordinator**

1. **Mrs. Pajaree Pattapong (E-mail : pajaree.pat@mahidol.ac.th)**  
Ratcharatana Building, Floor 7,  
Department of Biochemistry, Faculty of Pharmacy.  
Tel: 0 2644 8682 Ext ; 5732 Fax: 0 2644 8693

**Major : Physiology ;**

1. **Assoc. Prof. Dr. Wisuda Suvitayawat (E-mail : visuda.suv@mahidol.ac.th)**  
Room 607, Rajaratana Building, Floor 6,  
Department of Physiology, Faculty of Pharmacy,  
Tel: 0 2644 8678-91 Ext ; 5602 Fax: 0 2644 8703
2. **Assoc. Prof. Dr. Penchom Peungvicha (E-mail : penchom.peu@mahidol.ac.th)**  
Room 607, Rajaratana Building, Floor 6,  
Department of Physiology, Faculty of Pharmacy,  
Tel: 0 2644 8678-91 Ext ; 5602 , 5607 Fax: 0 2644 8703

**Note** 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)