

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

### Faculty of Pharmacy

#### 1. Microbiology

Admission No.

2	6	1	3	M	G	0	5
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#### 2. Biochemistry

Admission No.

2	6	1	3	M	G	0	6
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#### 3. Pharmacology

Admission No.

2	6	1	3	M	G	0	7
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#### 4. Physiology

Admission No.

2	6	1	3	M	G	0	8
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### 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 ITP score of at least 480, TOEFL Internet-based score of 54 or IELTS score of 5 or MU GRAD TEST score of 60.

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

### Curriculum Structure

	Credit
Core Courses	10
Required Courses	8
Elective Courses	6
Thesis	12

	Credit
<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>Pharmacology</b>			
PYPM	680	Current Topics in Pharmacology	1(1-0-2)
PYPM	682	Systemic Pharmacology I	4(3-3-7)
PYPM	683	Systemic Pharmacology II	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>Pharmacology</b>			
PYPM	664	Essentials in Toxicology	3(2-3-5)
PYPM	666	Drug Screening Techniques I	3(2-3-5)
PYPM	678	Adverse Drug Actions	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)
* These may change in cases where there are suggestions for the improvement of the curriculum			

## Additional advantages of the programme

### 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

Readiness of equipment, research scholarships, and cooperation with leading national and international institutions from countries, such as Japan, U.K., Australia , and Singapore.

### Major : Pharmacology

1. Many research areas available for students to acquire knowledge and experience
2. Academic staffs are expertises in various fields of Pharmacology

### Major : Physiology

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

## Details of Scholarships

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

## 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:

1. Completed an Online Application at [www.grad.mahidol.ac.th](http://www.grad.mahidol.ac.th) which comprised with
  - Form A** : Application Form
  - Form B** : Background and Proposed Field of Study
  - Form C** : Recommendation Forms (directly submitted by at least 2 referees)
2. Two copies of Degree Certificate (with officially certified English translation)
3. Two copies of Academic Transcript (with officially certified English translation)
4. Two copies of Recent Photos (Passport size)
5. Two copies of Passport
6. Two copies of English certificate (TOEFL/ IELTS/ MU-Grad Test)

### (For Doctoral Program)

- TOEFL ITP score of at least 500, TOEFL Internet-based score of 61, or IELTS score of 5

### (For Master's Program)

- TOEFL ITP score of at least 480, TOEFL Internet-based score of 54, IELTS score of 5 or MU GRAD TEST score of 60.

## Notes

- Only accept TOEFL ITP score from examination center arranged by Faculty of Graduate Studies, Mahidol University.
- TOEFL ITP taken from other domestic and overseas institutes are invalid.
- The test date must be within previous 2 years before application date
- Applicant who obtained a valid English score must submit an **official score certificate** along with your application. Otherwise, your English score will not be considered.
- Detail of English Competency Standard for Admission:  
<http://www.grad.mahidol.ac.th/en/current-students/language-center.php>

7. Two copies of Curriculum Vitae

8. Two copies of Statement of Purposes and Career Goals
9. Two copies of Current bank statement / Scholarship letter (if any)
10. Two copies of Concept paper / research proposal (recommended for all applicants)
11. Two copies of additional documents may be requested by each program (such as letter of work experience / professional license/ related certificates and awards)

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.Primchanien Moongkarndi** (E-mail : [primchanien.Moo@mahidol.ac.th](mailto:primchanien.Moo@mahidol.ac.th))  
Ratcharatana Building, Floor 2,  
Department of Microbiology, Faculty of Pharmacy.  
Tel: 0 2644 8692 Fax: 0 2644 8692

**Major : Biochemistry ;**

1. **Lecturer Dr. Montri Yasawong** (E-mail : [montri.yas@mahidol.ac.th](mailto:montri.yas@mahidol.ac.th))  
Room Department of Biochemistry, Rajaratana Building, Floor 7,  
Department of Biochemistry, Faculty of Pharmacy.  
Tel: 0 2644 8678 Fax: 0 2644 8693

**Major : Pharmacology ;**

1. **Assoc. Prof. Srichan Phornchirasilp** (E-mail : [srichan.pho@mahidol.ac.th](mailto:srichan.pho@mahidol.ac.th))  
Department of Pharmacology, Rajaratana Building, Floor 6,  
Faculty of Pharmacy.  
Tel: 0 2644 8677-91 Ext 5630 Fax: 0 2644 8700

**Major : Physiology ;**

1. **Assoc. Prof. Dr. Wisuda Suvitayawat** (E-mail : [visuda.suv@mahidol.ac.th](mailto: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 PEUNGVICHAI** (E-mail : [Penchom.peu@mahidol.ac.th](mailto: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

**Notes**

1. The programme of Biopharmaceutical Science (Major ; Biochemistry) requires students to study the pre - requisite course:
  - SCID 500 Cell and Molecular Biology 3 Credits
2. 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 : [gradinter@mahidol.ac.th](mailto:gradinter@mahidol.ac.th)