

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
Number of students accepted 16 persons									
2. Biochemistry (วิชาเอกชีวเคมี)	Admission No.	2	6	1	3	M	G	0	6
Number of students accepted 10 persons									
3. Pharmacology (วิชาเอกเภสัชวิทยา)	Admission No.	2	6	1	3	M	G	0	7
Number of students accepted 10 persons									
4. Physiology (วิชาเอกสรีรวิทยา)	Admission No.	2	6	1	3	M	G	0	8
Number of students accepted 10 persons									

Admission Requirements

A candidate must have:

Plan A1

1. bachelor's degree in the basic sciences or the applied sciences which involved in the health sciences or biological sciences from institutes approved by the Higher Education Accreditation Council.
2. research experience in the health sciences or related areas at least 3 years, including research publication(s) of non-graduate research work.
3. grade point average at least 2.75.
4. Submit a certificate of English proficiency with minimum admission score:
 - IELTS - at least 3 or
 - TOEFL INTERNET BASED - at least 32 or
 - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400 or
 - MU GRAD TEST (COMPUTER BASED) - at least 36

Important Notes:

- English proficiency score must be taken within 2 years up to the admission date.
 - Application without submitting a valid English certificate will NOT be considered.
 - MU English Competence Standards: www.grad.mahidol.ac.th
 - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies. Tel. 0-2441-4125 ext. 221-222
5. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

Plan A2

1. bachelor's degree in the health sciences or related areas from institutes approved by the Higher Education Accreditation Council.
2. grade point average at least 2.50.
3. Submit a certificate of English proficiency with minimum admission score:
 - IELTS - at least 3 or
 - TOEFL INTERNET BASED - at least 32 or
 - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400 or
 - MU GRAD TEST (COMPUTER BASED) - at least 36

Important Notes:

- English proficiency score must be taken within 2 years up to the admission date.
 - Application without submitting a valid English certificate will NOT be considered.
 - MU English Competence Standards: www.grad.mahidol.ac.th
 - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies. Tel. 0-2441-4125 ext. 221-222
4. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

Written Examination (For Microbiology) 2613MG05

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

Subjects for examination	Time (Morning session)
1. Microbiology	9.00 - 10.00 a.m.
Examination Place Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th	

Written Examination (For Biochemistry) 2613MG06

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

Subjects for examination	Time (Morning session)
1. Biochemistry of Pharmacy	9.00 -12.00 a.m.
Examination Place Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th	

Written Examination (For Pharmacology) 2613MG07

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

Subjects for examination	Time (Morning session)
1. Pharmacology	9.00 - 12.00 a.m.
Examination Place Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th	

Written Examination (For Physiology) 2613MG08

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

Subjects for examination	Time (Morning session)
1. Physiology	9.00 - 10.00 a.m.
Examination Place Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th	

Curriculum Structure

	Plan A1	Plan A2
Core Courses	-	10
Required Courses	-	8
Elective Courses	-	6
Thesis	36	12

Credit**Core Courses**

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)

Required Courses

Microbiology

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)

Biochemistry

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)

Pharmacology

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)

Physiology

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)

Elective Courses**Microbiology**

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)

Biochemistry

PYBC	670	Human Metabolism	3(3-0-6)
PYBC	671	Biochemical Techniques for Drug Research and Development	4(4-0-8)
PYBC	672	Biochemical Technology Laboratory	2(0-6-2)
PYBC	673	Principle of Biomolecular Analysis	3(3-0-6)

Pharmacology

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)

Physiology

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)

Thesis

Plan A1

PYID 798 Thesis 36(0-108-0)

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 60th 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

Required Documents

Applicants must upload all documents via online admission system. All documents must be in PDF format (maximum size 2 MB). Photograph must be in JPEG format

- 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)
- A letter certifying that an applicant is currently in the final year prior to graduation (for an applicant seeking for a degree)
- A detailed transcript of a degree (for an applicant with a degree completion)
- A grade report with course names and grades received from the first to the current semester prior to graduation

- A copy of identification card
- A copy of house registration certification
- A copy of Certificate of English proficiency :
IELTS / TOEFL INTERNET BASED / TOEFL ITP / MU GRAD TEST(Computer based)
- A copy of proof of payment.

Job option after graduation (for all)

- Technical staff in government private organization
- Researcher
- An expert person in Biopharmaceutical sciences

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

Major : Microbiology ;

1. **Assist. Prof. Dr. Krit Thirapanmethee** (E-mail : krit.thi@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)
Rajaratana Building, Floor 7,
Department of Biochemistry, Faculty of Pharmacy.
Tel: 0 2644 8678 Fax: 0 2644 8693

Major: Pharmacology ;

1. **Lecturer Dr. Krisada Sakchaisri** (E-mail : krisada.sak@mahidol.ac.th)
Rajaratana Building, Floor 6,
Department of Pharmacology, Faculty of Pharmacy.
Tel: 0 2644 8677-91 Ext 5630 Fax: 0 2644 8700

Major : Physiology ;

1. **Assoc. Prof. Dr. Suchitra Thongpraditchote** (E-mail : suchitra.tho@mahidol.ac.th)
Rajaratana Building, Floor 6,
Department of Physiology, Faculty of Pharmacy,
Tel: 0 2644 8678-91 Ext ; 5602 Fax: 0 2644 8703

Notes

1. The program 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

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