

### Course Detail

#### Master of Science in Pharmacy Program in Pharmacology and Biomolecular Science

<b>Course Title:</b>	Master of Science in Pharmacy Program in Pharmacology and Biomolecular Science (International Program)
<b>Master Degree:</b>	Master of Science in Pharmacy (Pharmacology and Biomolecular Science)
<b>Academic Institution:</b>	Department of Biochemistry and Department of Pharmacology Faculty of Pharmacy
<b>Duration:</b>	2 year: August 2020 - July 2022
<b>Background and Rational:</b>	

The Master of Science in Pharmacy in Pharmacology and Biomolecular Science Program was approved for teaching as well as providing pharmacy graduates the academic and research skill, to fulfill the country's need. There are well-trained faculty members who have expertise and experience in the fields of Pharmacology and Biomolecular Sciences in this program. Moreover, the research works of these faculty members are internationally recognized. The most important issue is to ensure that graduates of this program will definitely have the capability comparable to those graduated abroad. This program is an international program, enrolled both Thai and international students. Curriculum, teaching methods and teaching materials are internationalized. Students graduated from this program are able to work in the field of pharmacology and biomolecular science as researcher, academic staff of government and private as well as pharmacists working in pharmaceutical industry, hospitals, drug stores, food and nutrition industry, cosmetic industry and other related industry.

#### **Objectives:**

The objective of this program is to provide knowledge and skill in the area of pharmacology and biomolecular sciences for research and development of novel drugs used for the treatment of tropical diseases, chronic diseases, and emerging diseases for supporting and enhancing the health system and promoting the community health care in the community.

**Course Synopsis and Methodology:****Study plan****Plan A2**

<b>Year</b>	<b>Semester 1</b>	<b>Semester 2</b>
1	PYID 685 Research Methodology in Pharmacy I 2(2-0-4) GRID 603 Biostatistics 3(3-0-6) Elective courses 6 credits  <p style="text-align: right;"><b>Total 11 credits</b></p>	PYID 696 Molecular Pharmacology 3(3-0-6) and Biomolecular Science PYPM 685 Seminar in Pharmacology 1(1-0-2) and Biomolecular Science I Elective courses 6 credits  <p style="text-align: right;"><b>Total 10 credits</b></p>
2	SCID 500 Cell and Molecular Biology 3(3-0-6) PYPM 686 Seminar in Pharmacology 1(1-0-2) and Biomolecular Science II PYID 698 Thesis 6(0- 18-0)  <p style="text-align: right;"><b>Total 10 credits</b></p>	PYID698 Thesis 6(0- 18-0)     <p style="text-align: right;"><b>Total 6 credits</b></p>

**Course Content**

1) Core Courses	7 credits
2) Required courses	12 credits
3) Elective courses not less than	6 credits
4) Thesis	12 credits
<b>Total not less than</b>	<b>37 credits</b>

**1) Core Courses****7 credits****Credits (lecture–practice–self-study)**

GRID 603	Biostatistics	3(3-0-6)
PYPM 685	Seminar in Pharmacology and Biomolecular Science I	1(1-0-2)
PYPM 686	Seminar in Pharmacology and Biomolecular Science II	1(1-0-2)
PYID 685	Research Methodology in Pharmacy I	2 (2-0-4)

<b>2) Required courses</b>	<b>12 credits</b>
	<b>Credits (lecture–practice–self-study)</b>
SCID 500 Cell and Molecular Biology	3(3-0-6)
PYID 696 Molecular Pharmacology and Biomolecular Science	3(3-0-6)
<b>Major Molecular and Biomolecular Science</b>	<b>6 credits</b>
PYBC 662 Drug Metabolism and Detoxification	3(3-0-6)
PYBC 665 Biomolecular Sciences in Pharmacy	3(3-0-6)
<b>Major Pharmacology</b>	<b>6 credits</b>
PYPM 663 Principle of Drug Therapy	3(3-0-6)
PYPM 687 Advanced Pharmacology	3(3-0-6)
<b>3) Elective courses not less than</b>	<b>6 credits</b>
	<b>Credits (lecture–practice–self-study)</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)
PYBC 670 Human Metabolism	3(3-0-6)
PYBC 671 Biochemical Techniques for Drug Research and Development	4(4-8-8)
PYBC 672 Biochemical Technology Laboratory	2(0-6-2)
PYBC 673 Principle of Biomolecular Analysis	3(3-0-6)
PYPM 664 Essentials in Toxicology	3(2-3-5)
PYPM 666 Drug Screening Techniques I	3(2-3-5)
PYPM 676 Receptor Pharmacology	3(3-0-6)
PYPM 678 Adverse Drug Reaction	3(3-0-6)
PYID 700 Biologics and Biosimilars	3(3-0-6)
<p>In addition to elective courses mentioned above, a student may register other courses in international program offered by other faculties' equivalent to graduate studies, Mahidol University or the ones offered by other universities according to the student's interest with the approval of the curriculum committee or the advisor.</p>	
<b>4) Thesis</b>	<b>12 credits</b>
	<b>Credits (lecture–practice–self-study)</b>
PYID 698 Thesis	12(0-36-0)

**Graduation Conditions:**

- 1) Total time of study should not exceed the study plan.
- 2) Students must complete courses as stated in the curriculum at least 37 credits including core courses (7 credits), required courses (12 credits), elective courses (not less than 6 credits) and thesis (12 credits) in total with a minimum CUM-GPA of 3.00.
- 3) Students must meet the English Competence Standard of Graduate Students, Mahidol University defined by the Faculty of Graduate Studies, Mahidol University.
- 4) Students must submit thesis and pass the thesis defense by following Regulations of Mahidol University on Graduate Studies.
- 5) A thesis or part of a thesis is published or at least be accepted for publication in the national or international quality journals recognized by the office of the higher education commission (OHEC), Ministry of Education or presented at least one full paper in the proceedings of academic meeting accepted by the Faculty of Graduate Studies, Mahidol University.

**Applicant Qualifications**

1. Hold a Bachelor's degree in Pharmacy and meet the requirements set by the Faculty of Graduate Studies;
2. Have a minimum grade point average of 2.50;
3. Good command in English (reading, writing and speaking);
4. Exemption from the above conditions may be granted by the Program Committee under exceptional circumstances.

**Document Required**

- 1 Photo
2. Passport
3. Curriculum Vitae (CV)
4. Recommendation Letters (to request via online admission system)
5. Additional documents: e.g. Statement of Purpose, Letter of Work Experience, Professional License, Publications, Scholarship Letter, Research Proposal, Concept Paper, etc. English Proficiency Score Report (directly sent by the test center)

**Contact:**

Contact person for more information of the program:

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Contact person for administrative and general data of the scholarship holder:

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\*\*\*Please remind that the application will complete when TICA receive the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible/territories.