

| CURRICULUM |

Required Courses 18 units	
Pharma 201	Pharmacodynamics 2
Pharma 202	Pharmacokinetics 2
Pharma 210	Readings in Advanced Pharmacology 1
Pharma 220	Pharmacologic Techniques 3
Pharma 234	Advanced Molecular Pharmacology 3
Pharma 235	Biologic Fate of Drugs 3
Pharma 236	Advanced Comparative Pharmacology and Pharmacogenetics 2
Pharma 241	Advanced Behavioral Pharmacology 2
Pharma 242	Advanced Muscle Pharmacology 2
Pharma 243	Teratology and Developmental Pharmacology 2
Pharma 244	Clinical Pharmacology 3
Pharma 245	Advances in Autonomic Pharmacology 2
Pharma 246	Endocrine Pharmacology 2
Pharma 247	Cancer Chemotherapy 3
Pharma 248	Toxicology 3
Pharma 250	Introduction to Pharmacoepidemiology 2
Pharma 251	Intermediate Pharmacoepidemiology 3
Pharma 252	Intermediate Pharmacoepidemiology 4
Pharma 299	Research Methods in Pharmacology 3

Cognates 6 units

Students may enroll in graduate courses offered by the Colleges of Medicine, Pharmacy, Public Health and College of Science upon approval of the Graduate Program Committee.

Thesis 6 units

Total 30 units

DESCRIPTION OF COURSES

Pharma 201 Pharmacodynamics

Basic principles of pharmacology, particularly pharmacodynamics, including interaction of drugs in physiological/pathological states, classification of drugs, ethics of the study and use of drugs.

Pharma 202 Pharmacokinetics

Basic principles of pharmacokinetics. The correlation of pharmacokinetics to the action, dosification and adverse effects of drugs in physiologic and pathologic states.

Pharma 210 Readings in Advanced Pharmacology

Discussion and evaluation of articles appearing in publications of pharmacologic interest.

Pharma 220 Pharmacologic Techniques

Physiological, biochemical and chemical methods of analysis and evaluation of drug effects.

Pharma 234 Advanced Molecular Pharmacology

Interactions of pharmacologic agents with biological systems at the molecular level.

Pharma 235 Biologic Fate of Drugs

Concepts and mechanisms of absorption, distribution, biotransformation and excretion of drugs.

Pharma 236 Advanced Comparative Pharmacology and Pharmacogenetics

Biological variation in response to drugs.

Pharma 241 Advanced Behavioral Pharmacology

Drugs which affect behavior. Laboratory exercises in spontaneous motor activity, aversive conditioning and operant conditioning techniques. Biologic assay of drugs affecting behavior

Pharma 242 Advanced Muscle Pharmacology

Mechanisms of drug action on different types of muscles at physiologic and biochemical levels. Special techniques in the experimental evaluation of drug effects on muscles.

Pharma 243 Teratology and Developmental Pharmacology

Effects of drugs on development of the fetus and newborn; effect of maturation on the capability of the young to respond to drugs.

Pharma 244 Clinical Pharmacology

Drug effects in man, their measurement and evaluation; correlation with pharmacologic observation in lower animals.

Pharma 245 Advances in Autonomic Pharmacology

Latest advances in pharmacology of neurohormones of the peripheral and central autonomies.

Pharma 246 Endocrine Pharmacology

Biochemical and metabolic effects of hormones and related substances and their underlying mechanisms

Pharma 250 Introduction to Pharmacoepidemiology

Concepts, principles and methods of Pharmacoepidemiology.

Pharma 251 Intermediate Pharmacoepidemiology

Application of the principles of Pharmacoepidemiology and its allied disciplines namely Social Science and Health Economics.

Pharma 252 Advanced Pharmacoepidemiology

Research methods and practicum in Pharmacoepidemiology.

Further inquiries may be sent to:
The DEPARTMENT OF PHARMACOLOGY
College of Medicine
 Tel nos: 526-4248, 526-4834 Fax: 821-8251
 E-mail : deanupcm@epic.net



CONTACT US

Application forms may be obtained from and returned to:
 THE DIRECTOR
 NATIONAL GRADUATE OFFICE FOR THE HEALTH SCIENCES

 (632) 526-5870, 523-1495

 (632) 523-1498

 ngohs.upm.edu.ph

 ngohs@post.upm.edu.ph

 [ngohs@post.upm.edu.ph](https://twitter.com/ngohs@post.upm.edu.ph)



NATIONAL GRADUATE OFFICE
 FOR THE HEALTH SCIENCES



MASTER OF SCIENCE IN PHARMACOLOGY

A PROGRAM OFFERING OF THE
 COLLEGE OF MEDICINE
 UNIVERSITY OF THE PHILIPPINES
 MANILA



THE COLLEGE OF MEDICINE

The College of Medicine is the oldest unit in UP Manila. It was established in answer to the pressing need for more doctors in the country. As the college fast approaches the end of its first one hundred years, it renews its dedication to excellence and leadership in medical education, research and service which is community-oriented and directed to underserved areas.

PROGRAM OBJECTIVES

The primary objective of the masters program in Pharmacology is to provide students with an in-depth knowledge of pharmacology and to cultivate the proper attitudes and advanced skills for tertiary level teaching, research and specialty service. The program is offered by the Department of Pharmacology of the College of Medicine.

ACADEMIC INFORMATION

The academic year is divided into 2 semesters of 16 weeks each, excluding registration and final examination periods. The 1st semester starts in August and ends in December, while the 2nd semester covers the period from January to May, with a two-week Christmas vacation in December. The short term session of 6 weeks following the 2nd semester is usually in June and July.

English is generally used as the medium of instruction. A full time student's normal load is 12-15 units per semester and 6 units during summer; a part-time student enrolls in half of these.

At present, the tuition fee is P990.00 per unit and the miscellaneous fee is around P1,215.00 per semester. A student with a load of 15 in a semester matriculates P16,250.00 on the average while a foreign student pays an additional Educational Development Fund of US \$ 500.00 (US \$100.00 for residency only) for every semester.

There is a processing fee of P300.00 for Filipino applicants while interested foreigners are charged US\$ 30.00. Application materials can be submitted not later than the second Friday of May of each year.

The following are the grade requirements for each student to be of good standing in the program: 1) general weighted average of 2.00 or better, 2) weighted average of 2.00 or better for the major/required courses, and 3) no grade of 5.00 in any academic course. A maximum of 5 years is given to a student to finish the program.

Living accommodations for students may be provided in privately-owned housing units/dorms/apartment hotels. Dorms offer lodging and/or board. There are privately-owned eateries around the school.

Pharmacology 201 and Pharmacology 202 are entry requirements to the master's program. Medical graduates of UP are exempted from taking these required courses while medical graduates of other schools shall be required to enroll in these courses, unless they are able to validate the same. Nonmedical graduates shall be required to enroll in these courses.



ADMISSION REQUIREMENTS

The following are the minimum NGOHS requirements:

1. Good scholastic record from any recognized institution of higher learning
2. Holders of a Bachelor of Science degree or its equivalent and preferably with a background in biology, chemistry, mathematics and physics; holders of the degree of Doctor of Medicine or related sciences (e.g., Pharmacy, Dentistry, Veterinary Medicine)
3. 1 – 2 years' work experience in the related field
4. Duly accomplished Application Form (available at the Graduate Office or through ngohs.upm.edu.ph) together with the following documents:
 - * original copy of the official Transcript of Records
 - * 2 letters of reference from former professors, supervisors or employers
 - * receipt of processing fee paid at the UPM Cashier's Office
 - * certified true copy of college diploma with the seal of the university and the signature of the registrar in ink
 - * photocopy of birth certificate and marriage certificate for married female applicant only (NSO paper)
 - * marriage certificate (present original for verification)
 - * 4 passport-size photos
5. For foreign applicants, additional requirements include:
 - * original Transcript of Records duly authenticated by consulate/embassy
 - * certified true copy of the English translation of the diploma with the seal of the university and the signature of the registrar in ink, duly authenticated by the consulate/embassy
 - * Official TOEFL score of at least 550 (written test) or 173 (computerized test); 61 (internet based) or other Certification of English proficiency equivalent to TOEFL (e.g. IELTS (band 6)); a certificate that English is the medium of instruction in the university where the student has graduated from is sufficient to waive this requirement
 - * affidavit of support or certification of financial capability
 - * photocopy of passport (present original for verification)

GRADUATION REQUIREMENTS

1. Residency of at least one full academic year prior to granting of degree
2. Completion of 30 units of course work
3. Successful completion and submission of 6 bound copies of a master's thesis
4. GWA of 2.00 or better in major courses and in all courses taken , provided there is no grade of 5.00 in any of these courses.