**Doctor of Philosophy Program in Pharmacology**

**Name of the degree**

**Full : Doctor of Philosophy (Pharmacology)**

**Abbreviation : Ph.D. (Pharmacology)**

Type 1.1: Student with Master’s Degree

Total credit 48 credits

A. Thesis 48 credits

 320899 Dissertation 48 credits

B. Academic Activities

1. A student has to organize and present a seminar in English at least once every semester and has to attend seminar every semester that the course is offered.
2. A student must present his/her research data once every semester that the course is offered.
3. At least 2 dissertation work or a part of dissertation work must be published or at least accepted to publish in an international journal, and at least one of the two must be listed in ISI, Scopus, IEEE, PubMed or Web of Science database, and at least 1 dissertation work or a part of dissertation work must be presented in an international conference accepted by the field of study.
4. At least 1 main publication of the thesis work must specify the student as the first author with the affiliation of Graduate School, Chiang Mai University
5. A student has to report dissertation progression to the Graduate School every semester, for approval by the Chairman of the Graduate Study Committee.

C. Non-credit course

1. The Graduate School requirement : a foreign language
2. Program requirement : none

D. Qualifying examination

1. A student must complete a qualifying examination to evaluate his/her ability before presenting a dissertation proposal.
2. An unsuccessful examinee may take a re-examination once. The examinee must make formal request for re-examination and the re-examination must take place within the regular semester following the initial examination.
3. A student who has completed a master degree program in Pharmacology from other institutes but fails the doctoral qualifying examination may file a petition with the Graduate Program Administrative Committee in the field to make a request to the Graduate School for approval to study for a master of Science Program in Pharmacology or master degree in a related field at Chiang Mai University. If a student who has completed a master degree program in Pharmacology from Chiang Mai University but fails the doctoral qualifying examination may file a petition with the Graduate Program Administrative Committee in the field to make a request to the Graduate School for approval to study for a master degree in a related field.

E. Comprehensive examination

1. A student must complete a comprehensive examination to evaluate his/her knowledge beyond the subject of their dissertation.
2. An unsuccessful examinee may request to take a re-examination.
3. A student who has completed a master degree program in Pharmacology from other institutes but fails the a comprehensive examination may file a petition with the Graduate Program Administrative Committee in the field to make a request to the Graduate School for approval to study for a master of Science Program in Pharmacology or master degree in a related field at Chiang Mai University. If a student who has completed a master degree program in Pharmacology from Chiang Mai University but fails a comprehensive examination may file a petition with the Graduate Program Administrative Committee in the field to make a request to the Graduate School for approval to study for a master degree in a related field.

Type 2.1: Students with Master’s Degree

Total credit a minimum of 48 credits

A. Course work: a minimum of 12 credits

 1. Graduate course: a minimum of 12 credits

 1.1 Field of concentration courses a minimum of 12 credits

 1.1.1 Required courses 6 credits

 320801 Molecular Pharmacology 2 credits

 320802 Steps in Drug Research and Development 1 credit

 320891 Ph.D. Seminar in Pharmacology I 1 credit

 320892 Ph.D. Seminar in Pharmacology II 1 credit

 320893 Ph.D. Seminar in Pharmacology III 1 credit

 1.1.2 Elective courses: a minimum of 6 credits

 320711 Application of Pharmacology in Traditional 3 credits

 Medicine Research

 320712 Adverse Drug Effects 3 credits

 320713 New Drugs in Medical Practice 3 credits

 320714 Molecular Cell Biology for Pharmacological Research 3 credits

 320789 Selected Topics in Pharmacology 3 credits

 320803 Experimental Methods in Pharmacology 3 credits

 320811 Medical Pharmacokinetics and Therapeutic 3 credits

 Drug Monitoring

 320812 Immunopharmacology 2 credits

 320813 Clinical Pharmacology 3 credits

 320895 Special Problem in Pharmacology 3 credits

Notes

1. An elective course and other courses must not be the one that he/she had already been completed for his/her Master’s degree.

2. A student with Master’s degree in other fields must take pharmacology courses 320701 PHCO 701 and 320702 PHCO 702 or with consent of the Graduate Program Administrative Committee. A student who has never taken the course Research Techniques in Pharmacology must take course 320803 PHCO 803.

3. A student who had completed courses 320707 PHCO 707 is not allowed to take course 320811 PHCO 811.

 1.2 Other courses None

 2. Advanced Undergraduate Courses None

B. Thesis 36 credits

 320898 Dissertation 36 credits

C. Academic Activities

1. A student has to organize and present a seminar in English at least once every semester for at least six semesters and has to attend seminar every semester that the course is offered.
2. A student must present his/her research data once every semester that the course is offered.
3. At least 1 dissertation work or a part of dissertation work must be published or at least accepted to publish in an international journal listed in ISI, Scopus, IEEE, PubMed or Web of Science database, and at least 1 dissertation work or a part of dissertation work must be presented in an international conference accepted by the field of study.
4. At least 1 main publication of the thesis work must specify the student as the first author with the affiliation of Graduate School, Chiang Mai University
5. A student has to report dissertation progression to the Graduate School every semester, for approval by the Chairman of the Graduate Study Committee.

D. Non-credit course

1. The Graduate School requirement: a foreign language
2. Program requirement: none

E. Qualifying examination

1. A student must complete a qualifying examination to evaluate his/her ability before presenting a dissertation proposal.
2. An unsuccessful examinee may take a re-examination once. The examinee must make formal request for re-examination and the re-examination must take place within the regular semester following the initial examination.
3. A student who has completed a master degree program in a field other than pharmacology but fails to pass the doctoral qualifying examination may be allowed to study for a master degree in pharmacology with the approval of the Graduate Program Administrative Committee.

F. Comprehensive examination

1. A student must complete a comprehensive examination to evaluate his/her knowledge beyond the subject of their dissertation.
2. An unsuccessful examinee may request to take a re-examination.
3. Student must fulfill all courses required by the program with grade point average (GPA) in the field of concentration of not less than 3.00.
4. A student who has successfully completed a master program in a field other than pharmacology but fails to complete a successful comprehensive examination may be allowed to study for a master degree in pharmacology with the approval of the Graduate Program Administrative Committee.

*Note: Courses in the field of concentration are courses in Pharmacology (PHCO, 320)*

Type 2.2: Students with Bachelor’s Degree

Total credit a minimum of 72 credits

A. Course work: a minimum of 24 credits

 1. Graduate course: a minimum of 24 credits

 1.1 Field of concentration courses a minimum of 24 credits

 1.1.1 Required courses 19 credits

 320701 Principles of Pharmacology 4 credits

 320702 Advanced Pharmacology 4 credits

 320703 Literature Review for Research in Pharmacology 2 credits

 320801 Molecular Pharmacology 2 credits

 320802 Steps in Drug Research and Development 1 credit

 320803 Experimental Methods in Pharmacology 3 credits

 320891 Ph.D. Seminar in Pharmacology I 1 credit

 320892 Ph.D. Seminar in Pharmacology II 1 credit

 320893 Ph.D. Seminar in Pharmacology III 1 credit

 1.1.2 Elective courses: a minimum of 5 credits

 320711 Application of Pharmacology in Traditional 3 credits

 Medicine Research

 320712 Adverse Drug Effects 3 credits

 320713 New Drugs in Medical Practice 3 credits

 320714 Molecular Cell Biology for Pharmacological Research 3 credits

 320789 Selected Topics in Pharmacology 3 credits

 320811 Medical Pharmacokinetics and Therapeutic 3 credits

 Drug Monitoring

 320812 Immunopharmacology 2 credits

 320813 Clinical Pharmacology 3 credits

 320895 Special Problem in Pharmacology 3 credits

 1.2 Other courses None

 2. Advanced Undergraduate Courses None

B. Thesis 48 credits

 320899 Dissertation 48 credits

C. Academic activities

1. A student has to organize and present a seminar in English at least once every semester for at least eight semesters and has to attend seminar every semester that the course is offered.
2. A student must present his/her research data once every semester that the course is offered.
3. At least 2 dissertation work or a part of dissertation work must be published or at least accepted to publish in an international journal, and at least one of the two must be listed in ISI, Scopus, IEEE, PubMed or Web of Science database, and at least 1 dissertation work or a part of dissertation work must be presented in an international conference accepted by the field of study.
4. At least 1 main publication of the thesis work must specify the student as the first author with the affiliation of Graduate School, Chiang Mai University
5. A student has to report dissertation progression to the Graduate School every semester, for approval by the Chairman of the Graduate Study Committee.

D. Non-credit course

1. The Graduate School requirement: a foreign language
2. Program requirement: none

E. Qualifying examination

1. A student must complete a qualifying examination to evaluate his/her ability before presenting a dissertation proposal.
2. An unsuccessful examinee may take a re-examination once. The examinee must make formal request for re-examination and the re-examination must take place within the regular semester following the initial examination.
3. An unsuccessful examinee may be transferred to Master’s Degree studies with the approval of the Graduate Program Administrative Committee.

F. Comprehensive examination

1. A student must complete a comprehensive examination to evaluate his/her knowledge beyond the subject of their dissertation.
2. An unsuccessful examinee may request to take a re-examination.
3. Student must fulfill all courses required by the program with grade point average (GPA) in the field of concentration of not less than 3.00.
4. An unsuccessful examinee may be transferred to Master’s Degree studies with the approval of the Graduate Program Administrative Committee.

*Note: Courses in the field of concentration are courses in Pharmacology (PHCO, 320)*

**Study plan**

**Type 1.1**

**First Year**

 **First Semester Credits**

 Register for University Services -

 Seminar and present -

 Pass foreign language examination requirement -

 Qualifying examination -

 Total 0

 **Second Semester Credits**

 Seminar and present -

 Present thesis proposal -

320899 PHCO 899 Dissertation 8

 Total 8

**Second Year**

 **First Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

 Second Semester Credits

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

**Third Year**

 **First Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

 **Second Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Comprehensive examination -

 Total 10

**Type 2.1**

**First Year**

 **First Semester Credits**

 Pass foreign language examination requirement -

320801 PHCO 801 Molecular pharmacology 2

320802 PHCO 802 Steps in drug research and development 1

320891 PHCO 891 Ph.D. Seminar in pharmacology 1 1

 Elective course 3

 Qualifying examination -

 Total 7

 **Second Semester Credits**

320892 PHCO 892 Ph.D. Seminar in pharmacology 2 1

320… Elective course 3

 Present thesis proposal -

320898 PHCO 898 Dissertation 10

 Total 14

**Second Year**

 **First Semester Credits**

320893 PHCO 893 Ph.D. seminar in pramacology 3 1

320898 PHCO 898 Dissertation 10

 Total 11

 **Second Semester Credits**

 Seminar and present -

320898 PHCO 898 Dissertation 8

 Total 8

**Third Year**

 **First Semester Credits** Seminar and present -

320898 PHCO 898 Dissertation 8

 Total 8

 **Second Semester Credits**

 Seminar and present -

 Comprehensive examination -

 Total 0

**Type 2.2**

**First Year**

 **First Semester Credits**

 Pass foreign language examination requirement -

320701 PHCO 701 Principles of Pharmacology 4

320802 PHCO 802 Steps in drug research and development 1

320891 PHCO 891 Ph.D. Seminar in pramacology 1 1

 Total 6

 **Second Semester Credits**

320702 PHCO 702 Advanced pharmacology 4

320703 PHCO 703 Literature review for research in pharmacology 2

320803 PHCO 803 Experimental methods in pharmacology 3

320892 PHCO 892 Ph.D. Seminar in pramacology 2 1

 Total 10

**Second Year**

 **First Semester Credits**

320801 PHCO 801 Molecular pharmacology 2

320893 PHCO 893 Ph.D. Seminar in pramacology 3 1

320… Elective course 2

 Qualifying examination -

 Present thesis proposal -

 Total 5

 **Second Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 8

320… Elective course 3

 Total 11

**Third Year**

 **First Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

 **Second Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

**Fourth Year**

 **First Semester Credits**

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Total 10

 Second Semester Credits

 Seminar and present -

320899 PHCO 899 Dissertation 10

 Comprehensive examination -

 Total 10