



Graduate Student Guide

***Doctor of Philosophy Program  
in Physiology  
(International Program)***

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## INTRODUCTION

The PhD. Program in Physiology (International Program) is a research oriented thesis-based degree which is dedicated to preparing its graduates to become effective and knowledgeable researchers, capable of leading research labs, publishing and presenting their research, and writhing successful research proposals to funding agencies and complete a dissertation in the fields of human physiology and medical sciences.

This doctoral program is run in the Department of Physiology, Faculty of Medicine, Chiang Mai University, Thailand which includes a numbers of research groups organized into the following research fields.

1. Cardiac Electrophysiology
2. Herbs, Nutrition, and Insulin Resistance in Obesity Diabetes Mellitus
3. Membrane physiology and cell signaling
4. Mitochondrial functions and metabolism
5. Neuro-eletrophysiology and the central nervous system
6. Neuromuscular Physiology
7. Neuronal degeneration, metabolism and repair
8. Renal Physiology
9. Reproductive physiology

This Student guide provides necessary information and support you need. It includes advice and guidance on program specifications and regulations, registration, dissertation, graduation, and includes other information essential for a meaningful experience.

Wishing you a good start at Chiang Mai University and a lot of fun and success in your doctoral studies.

# 1. PROGRAM SPECIFICATIONS

## 1.1 General Information

### Name of the Program

Doctor of Philosophy Program in Physiology (International program)

### Name of the Degree

Full: Doctor of Philosophy (Physiology)

Abbreviated: Ph.D. (Physiology)

### Total Credit Hours in the Program

Type 1.1: Total 48 Credits for students with Master's degree

Type 1.2: Total 72 Credits for students with Bachelor's degree

### Period of Study

**Type 1.1:** The program is designed to be 3 academic years, and the period of study shall not exceed 5 academic years.

**Type 1.2:** The program is designed to be 5 academic years, and the period of study shall not exceed 7 academic years.

**Language:** English

### Faculty members responsible for the curriculum

- 1) Associate Professor Dr. Krekwit Shinlapawittayatorn
- 2) Distinguished Professor Dr. Nipon Chattipakorn
- 3) Associate Professor Dr. Wasana Pratchayasakul

## 1.2 Program Structure

### Type 1.1: Student with Master's Degree (Total credit 48 credits)

#### A. Thesis 48 Credits

321898 Dissertation 48 credits

#### B. Academic activities

- 1) A student has to organize a seminar and present scientific articles related to his/her thesis in both department and each research unit at least twice per semester for at least 6 semesters and attend every seminar throughout the entire study period.
- 2) A student must attend special lectures and/or workshops arranged by the department as determined necessary during the entire study period. (e.g. students must learn how to handling laboratory animals, radiation, chemical and biological safety, ethical issues in both research conduct and publication)
- 3) A student must present at least 1 abstract related to his/her research works at the peer-reviewed international scientific meeting.
- 4) A student must present his/her thesis progression to the Administrative Committee of Graduate Program in Physiology at least once per regular semester throughout the entire study period and report study progression to the Graduate School every semester with the approval of the Chairman of the Faculty of Graduate Studies Committee.
- 5) The whole or part of his/her dissertation must be published/accepted for publishing in academic journals/publications listed in the standard scientific database, such as SCOPUS, PubMed, ISI and JCR for at least 2 publications and at least one publication must be published with the students' name as a first author or an international patent of the finding(s) or product(s).

#### C. Non-credit Courses

- 1) Graduate School requirement: English language
- 2) Program requirement: None

#### D. Qualifying Examination

- 1) A student must complete a qualifying examination to evaluate his/her ability before presenting a thesis proposal.
- 2) An unsuccessful examinee may take re-examination within the following regular semester.
- 3) A student who has inadequate knowledge for doing a thesis may take extra course(s) without credit upon an approval of the Thesis Advisory Committee.

### Type 1.2 : Student with Bachelor's Degree (Total credit 72 credits)

#### A. Thesis 72 credits

321899 Dissertation 72 credits

#### B. Academic Activities

- 1) A student must organize a seminar and present scientific articles related to his/her thesis in both department and each research unit at least twice per semester for at least 10 semesters and attend every seminar throughout the entire study period.
- 2) A student must attend special lectures and/or workshops arranged by the department as determined necessary during the entire study period. (e.g. students must learn how to handling laboratory animals, radiation, chemical and biological safety, ethical issues in both research conduct and publication)
- 3) A student must present at least 2 abstracts related to his/her research works at the peer-reviewed scientific meetings and one of them must be at an international scientific meeting.
- 4) A student must present his/her thesis progression to the Administrative Committee of Graduate Program in Physiology at least once per regular semester throughout the entire study period and report study progression to the Graduate School every semester with the approval of the Chairman of the Faculty of Graduate Studies Committee.
- 5) The whole or part of his/her dissertation must be published/accepted for publishing in academic journals/publications listed in the standard scientific database such as SCOPUS, PubMed ISI and JCR for at least 2 publications with the students' name as a first author or an international patent of the finding(s) or product(s).

C. Non-credit Courses

- 1) Graduate School requirement: English language
- 2) Program requirement: None

D. Qualifying Examination

- 1) A student must complete a qualifying examination to evaluate his/her ability before presenting a thesis proposal.
- 2) An unsuccessful examinee may take re-examination within the following regular semester.
- 3) A student who has inadequate knowledge for doing a thesis may take extra course(s) without credit upon an approval of the Thesis Advisory Committee.
- 4) An unsuccessful examinee will be transferred to Master's Degree studies with the approval of the Administrative Committee of Graduate Program in Physiology.

### 1.3 Study Plan

#### Type 1.1 : Student with Master's Degree (Total 48 Credits)

##### First Year

First Semester	Credits	Second Semester	Credits
Registration for university services	-	Registration for university services	-
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Pass the foreign language requirement	-	Attend special lectures and/or workshops (if any)	-
Preliminary Laboratory work/ research	-	Pass qualifying examination	-
Present progress report	-	Preliminary Laboratory work/ research	-
		Present progress report	-
<b>Total</b>	<b>-</b>	<b>Total</b>	<b>-</b>

##### Second Year

First Semester	Credits	Second Semester	Credits
321898 Dissertation	12	321898 Dissertation	12
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Pass research proposal	-	Present progress report	-
Present progress report	-		
<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

Third Year

First Semester	Credits	Second Semester	Credits
321898 Dissertation	12	321898 Dissertation	12
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Present progress report	-	Defend Dissertation	-
<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

## Type 1.2 Student with Bachelor's Degree (Total 72 Credits)

### First Year

First Semester	Credits	Second Semester	Credits
Registration for university services	-	Registration for university services	-
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Pass the foreign language requirement	-	Attend special lectures and/or workshops (if any)	-
Preliminary Laboratory work/ research	-	Pass qualifying examination	-
Present progress report	-	Preliminary Laboratory work/ research	-
		Present progress report	-
<b>Total</b>	<b>-</b>	<b>Total</b>	<b>-</b>

### Second Year

First Semester	Credits	Second Semester	Credits
Registration for university services	-	321899 Dissertation	12
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Pass research proposal	-	Present progress report	-
Present progress report	-		
<b>Total</b>	<b>-</b>	<b>Total</b>	<b>12</b>

Third Year

First Semester	Credits	Second Semester	Credits
321899 Dissertation	12	321899 Dissertation	12
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Present progress report	-	Present progress report	-
<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

Fourth Year

First Semester	Credits	Second Semester	Credits
321899 Dissertation	12	321899 Dissertation	12
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Present progress report	-	Present progress report	-
<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

Fifth year

First Semester	Credits	Second Semester	Credits
321899 Dissertation	6	321899 Dissertation	6
Organize a seminar and present scientific articles	-	Organize a seminar and present scientific articles	-
Attend special lectures and/or workshops (if any)	-	Attend special lectures and/or workshops (if any)	-
Present progress report	-	Defend Dissertation	-
<b>Total</b>	<b>6</b>	<b>Total</b>	<b>6</b>

## 1.4 Constraints for Project or Research Work

Student must do research in the field of Physiology or related fields by which his/her research proposal must be approved by the Administrative Committee of Graduate Program in Physiology, the Administrative Committee of Graduate program of Faculty of Medicine and the Graduate School, Chiang Mai University.

## 1.5 Preparation of Research Funds and Facilities

Thesis advisor is primarily responsible for seeking research funds to support the student's work, arranging a thesis advisory committee to supervise the student, and making contact with various organizations when needed, in order to aid the corresponding student to succeed in his/her research. The Department of Physiology and the Faculty of Medicine also provide certain instruments necessary for common research methodology and acquire new and cutting- aged instruments every year.

## 1.6 Evaluation Process

- 1) Evaluation by the qualifying examination to assess whether students meet the qualifications specified in the regulations of the Graduate School of Chiang Mai University.
- 2) Evaluation of the participation and presentations of students in academic seminars/conferences.
- 3) Evaluation by the English language proficiency test scores. Students must meet the qualifications specified in the criteria of the Graduate School of Chiang Mai University.
- 4) Evaluation of the research proposal document and an oral presentation by the Administrative Committee of the Graduate Program in Physiology.
- 5) Assessment of reporting/presentation of the thesis research progression every semester after students pass the draft dissertation research.
- 6) Evaluation of the Research

Presentation: Type 1.1

A student must present **at least 1 abstract** related to his/her research works at the peer-reviewed international scientific meeting.

Type 1.2

A student must present **at least 2 abstracts** related to his/her research works at the peer-reviewed scientific meetings and one of them must be at an international scientific meeting.

## 7) Evaluation of the Research

### Publication Type 1.1

The whole or part of his/her dissertation must be published/accepted for publishing in academic journals/publications listed in the standard scientific database such as SCOPUS, PubMed, ISI and JCR for **at least 2 publications** and **at least one publication must be published with the students' name as a first author** or an international patent of the finding(s) or product(s).

### Type 1.2

The whole or part of his/her dissertation must be published/accepted for publishing in academic journals/publications listed in the standard scientific database such as SCOPUS, PubMed ISI and JCR for **at least 2 publications with the students' name as a first author** or an international patent of the finding(s) or product(s).

- 8) Evaluation of the Dissertation by the defended committee and expertise in the fields.

## 2. DISSERTATION

### 2.1 Doctoral Advisors

All new students are provided with information on the faculty members involved in the program as well as possible research themes. Depending upon students' research interest, individual meetings are arranged between students and potential advisors. Your main advisor is responsible for providing guidance in the planning, research and completion of your dissertation.

### 2.2 Submission of Dissertation Research Proposal

When the student successfully passes all the program requirements, she/he must submit a research proposal and PhD Advisor/Committee form and oral defense to the administrative committee of the graduate program in Physiology. If the review committee found the written proposal unacceptable, it will be returned to the student with comments for revision. If found to be appropriate with respect to topic, format, and technical production, the proposal will then be approved by the graduate school committee.

### 2.3 Dissertation Course Enrollment

Enrollment for Dissertation course is done during the term to be allowed to apply for dissertation proposal defense or within the next two semesters after the approval of the research proposal.

Student who has already registered for her/his dissertation course and need to continue working on her/his research, must register to use the university services and pay the fee as outlined in the university announcement every semester activities.

### 2.4 Changing the Title and Research Proposal

In exceptional circumstances, student sometimes need to change the title of his/her dissertation after she/he submitted the title form.

If you wish to change the title and/or research proposal of your dissertation, you should download the changes of thesis title/research proposal form and fill in all revised title and ask your advisor to sign the form to approve the change. The form should then be returned to the department secretary.

## 2.5 Plagiarism

The Graduate School and the Department of Physiology take plagiarism and other forms of academic dishonesty very seriously. Every case of plagiarism must be brought forward to the Dean of the Faculty of Medicine and Graduate school.

## 2.6 Final Examination (Dissertation Defense)

As part of the degree requirements for the PhD program in Physiology, student must pass a final examination (dissertation defense) given by her/his Examining Committee as described in the graduate school regulation.

When the main advisor determines that the student's dissertation is complete and student is ready to defend the dissertation, the student must begin the process of preparing for and scheduling the dissertation defense. Student will be requested to submit a complete draft of the dissertation without a cover page to the Graduate School for correcting the dissertation formatting and plagiarism policy.

The dissertation defense is scheduled after the student's advisor and the Administrative Committee of Graduate School have approved the dissertation. An application form for dissertation examination must be submitted to chair of the administrative committee of the graduate program in Physiology **at least 2 weeks in advance of the dissertation defense date**. The Examining Committee established by the Dean of the Faculty of Graduate School will evaluate the student's dissertation and meet for the dissertation oral presentation and defense.

Specific steps in this process are outlined below:

- 1) This PhD program requires that all dissertations be written and defended in English.
- 2) The student should distribute a complete draft of the dissertation to the Examining Committee at least 2 weeks before the defense date.
- 3) The student's dissertation defense is publicly advertised so that all who are interested in the research may attend.
- 4) The Dissertation Defense is designed to assess two aspects of the student's performance:
  - 4.1 The Dissertation: The overall merit and quality of the dissertation.
  - 4.2 The Oral Defense: The student's performance while presenting the synopsis, and responding to questions from the Examining Committee and members of the audience.

- 5) An oral presentation and defense of the dissertation typically lasting for 3 hours.
- 6) An oral presentation presented by the student usually about 30-45 minutes in length if uninterrupted-covering the main conclusions of the dissertation research.
- 7) At the end of the presentation, members of the audience are invited to ask questions.
- 8) The committee chair asks each committee members if they have additional questions.
- 9) At the end of the defense, the student and all visitors are asked to leave and the Examining Committee discusses the results of the defense and formulate a recommendation concerning the outcome of the examination.
- 10) The Chair informs the student of the recommendation of the Examining Committee.
- 11) If the Examining Committee considers the dissertation satisfactory and the overall recommendation is “Pass”, the Chair will arrange for members of the Examining Committee to sign the Dissertation Approval Report form (CMR6) and immediately submit it to the Chair of the administrative committee of the graduate program in Physiology and Dean of the Faculty of Medicine.
- 12) Any revisions to the dissertation required by the Examining Committee must be clearly communicated to the student.
- 13) In case the dissertation defense is not sustained, the student may stand for it a second time after at least 6 months has passed. If unsuccessful a second time, the student is not permitted another opportunity to retake the defense, and Ph.D. candidacy is terminated.
- 14) Registration as a graduate student is required the semester that a Final Examination is taken and the semester the dissertation is submitted.

## 2.7 Submission of the final copy of the Dissertation

- 1) After passing the Final Examination, student must submit the final version of the dissertation with the committee signature page to the Graduate School.
- 2) The time allowed for **dissertation revisions is 30 days after defense date**. Those who fail to complete revisions and submit her/his dissertation within 30 days, Graduate School will allow to extend for another 30 days. The student’s advisor will retain the Dissertation Approval Report form until all revisions have been completed.

3) After successful defend, student is required to submit the following to the Department Secretary:

- 3.1 Unbound copy of dissertation with original signature page (approval page) inserted and a CD containing the contents of revised dissertation in word file for final format-check procedure.
- 3.2 After the dissertation formatting is correctly check by Graduate School, the student must submit three final unbound approved dissertations and six CDs containing the contents of final approved dissertation in non-editable PDF (Portable Document File) format.
- 3.3 The CDs and the transparent cases are labeled as: Title of graduate dissertation Program, Name of Department and Faculty, Name of student, Month and year of completion, and Name of adviser.
- 3.4 The dissertation will not be accepted and the student's degree will not be conferred if an item from this list is missing or incomplete.
- 3.5 The Graduate School will ask for approval of the degree when it receives the report of the Dissertation Defense and other documentation in accordance with the conditions of the particular curriculum and regulations, in addition to receiving a request form (CMR 22) to approve the degree.

## 2.8 Graduation

Once the student has submitted her/his defended, correctly formatted dissertation to Graduate School, the student must submit the following to graduate:

1. A request form for graduation
2. Photocopy of Official Receipt (payment of graduation and other fees)
3. Dissertation abstract with the Graduate School seal on it.
4. Documents that shows that the dissertation research work or part of the dissertation research work has been published or accepted for publication in an international peer-reviewed academic journal.
5. The result of non-native language proficiency requirement

**Important remarks:** All the regulations may be subjected to change at any time. The students are advised to visit the Graduate School website ([https://www.grad.cmu.ac.th/grad\\_wp2/](https://www.grad.cmu.ac.th/grad_wp2/)) for updating all the announcements.

### 3. PROGRAM REGULATIONS

#### 3.1 Leave (Sick and errand leave)

Leaves for short duration during dissertation research work and other academic activities, the student must submit a Request for a Leave form in person to her/his advisor or the department secretary.

- 1) Student who intend to take an errand leave should submit the request for a leave form in advance.
- 2) For sickness leave which is unable to submit in advance because of some specific incidents, the request for leave should be submitted within one week with the descriptions of reason and the related documents from hospital or clinic as attachments.
- 3) Other leaves must be followed the Graduate School announcements. Leaves without permission may affect the student study program and status.

#### 3.2 Progress report

The department will evaluate graduate student progress every semester until graduation. Students will be asked to submit a progress report of Student Activities before the end of each semester. Reports are to be signed by the general and thesis advisor and submitted to the Department secretary office by the date announced.

The progress report form can be downloaded from the Department of Physiology website.

## 4. STUDY RESOURCES

### 4.1 Classroom and laboratory

The Department of Physiology has adequate spaces providing for teaching and learning activities as following:

- 1) Graduate classroom 1 and 2
- 2) Central laboratory room of Physiology
- 3) Cardiac Electrophysiology Research and Training Center
- 4) Neuromuscular Physiology Research Unit
- 5) Neurophysiology Research Unit
- 6) Nutritional Physiology & Exercise Research Unit
- 7) Renal Physiology & Epithelial Transport Research Unit
- 8) Reproductive Physiology Research Unit

### 4.2 Learning materials and media and data-searching resources

- 1) Laboratory tools and equipment are amply provided for teaching and research which belong to both the department of Physiology and the Medical Equipment Center, Faculty of Medicine.
- 2) Provide computers and Internet servers for query.
- 3) Department of Physiology Library (Robert L Hazelwood Library)
- 4) Faculty of Medicine Libraries

## 5. USEFUL LINKS AND ADDRESS

Chiang Mai University

<https://www.cmu.ac.th/>

Graduate School Chiang Mai University

[https://www.grad.cmu.ac.th/grad\\_wp2/](https://www.grad.cmu.ac.th/grad_wp2/)

Faculty of Medicine, CMU

<https://www.med.cmu.ac.th/main/>

Educational services, Faculty of Medicine, CMU

<https://w1.med.cmu.ac.th/edserv/>

Department of Physiology, CMU

<https://w1.med.cmu.ac.th/physio/index.php?lang=en>