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Doctor of Philosophy Program in Medical Physiology (International Program)

Faculty of Medicine, Siriraj Hospital

Department of Physiology

Admission Requirements

A candidate must:

1. have got a Bachelor's degree in Medicine, Dentistry, Veterinary medicine, Pharmacy, Science, or related areas, with a cumulative GPA of at least 3.50; OR
2. have got a Master's degree in Science or related areas, such as Physiotherapy or Nursing, with a cumulative GPA of at least 3.50; AND
3. be a current students in M.Sc. (Physiology) can be upgraded to Doctoral students, provided they have passed at least 2/3 of the required course credits at the M.Sc. level, with a cumulative GPA of at least 3.50. The transfer must be jointly approved by the Master and Doctoral Program Committees as well as the Dean of the Faculty of Graduate Studies.
4. Have a TOEFL ITP score of at least 500, TOEFL Internet-based score of 61 or IELTS score of 5 .
5. Provide at least two letters of recommendation issued by advisor or supervisor and/or the educational portfolio.
6. Contact the Graduate Program Director for possible research of interest or research concept and/or available funding/scholarships prior to application process

Exemption from which the above conditions may be granted by the Program Committee and the Dean of Faculty of Graduate Studies.

Curriculum Structure

	Credit
Plan 2	
For students with Bachelor's degree	
Required Courses	20
Elective Courses	4
Thesis	48
For students with Master's degree	
Required Courses	3
Elective Courses	9
Thesis	36

For current Master's degree students who are qualified to change study plan from Master's degree to Doctorate degree

Required Courses (transfer credits from Master's degree)	
Required Courses (additionally required for Doctorate degree)	2
Elective Courses	4
Thesis	48

	Credit
Required Courses	
SIID 501 Molecular and Cellular Basis of Biomedicine	3(2-2-5)
SIPS 509 Medical Physiology I	3(2-2-5)
SIPS 510 Medical Physiology II	3(2-2-5)
SIPS 514 Seminar and Literature Review #	1(1-0-2)
SIPS 520 Scientific Article Analysis	1(1-0-2)
SIPS 522 Principles of Physiological Experimentation	2(2-0-4)
SIPS 523 Advanced Physiology and Pathophysiology	2(2-0-4)
SIPS 524 Professional Skills and Teaching in Physiology	1(1-0-2)
SIPS 601 Seminar in Medical Physiology I #	1(1-0-2)
SIPS 602 Seminar in Medical Physiology II #	1(1-0-2)
TMID 544 Research Methodology	2(2-0-4)
Elective Courses	
SIPS 518 Current Topics in Medical Physiology and Biophysics	2(2-0-4)
SIPS 519 Learning Styles and Brain-Based Learning	2(2-0-4)
SIPS 521 Physiological Biochemistry	2(2-0-4)
SIPS 603 Behavioral Neuroscience	2(2-0-4)
SIPS 604 Ion Channel Physiology	2(2-0-4)
SIPS 606 Advanced Respiratory Physiology	2(2-0-4)
SIPS 607 Cellular Pathophysiology	2(2-0-4)
Thesis	
SIPS 699 Dissertation	48/36(0-144/108-0)
* These may be changed in case of curriculum revision.	

The researches of this program will emphasize on:

1. Cellular electrophysiology: Study of ion channelopathy using heterologous expression systems including stem cells; endothelial ion channels in health, disease, response to herbal extracts and drugs and mechanisms; neurophysiology and patch clamp.
2. Cardiovascular research: Endothelial signaling and dysfunction; vascular smooth muscle contraction; cardiac biomarkers; cardiovascular autonomic function assessment; heart rate variability; baroreflex sensitivity.
3. Endocrine research: Hormones and metabolic disorders; physiology and pathophysiology of type 2 diabetes mellitus including searching for new agents for treatment; functional study of Thai MODY; appetite regulation; obesity; puberty.
4. Gastrointestinal research: Gastrointestinal motility assessment; gastrointestinal hormones.
5. Neuroscience research: Mechanisms of learning and memory; effects of chronic cerebral hypoperfusion on learning and memory; new approach to find a possible cure of memory-afflicted diseases; neuropathic pain and electrical stimulation treatment; discovery of biomarkers in neurological diseases: development of NeuromyelitisOptica diagnostic assay.
6. Renal research: Regulation of water channel in human; urine concentrating mechanism; regulation of membrane transporters in human kidney.
7. Respiratory research: Postnatal airspace development (alveolarization); animal models of emphysema; functional studies of genes implicating significant roles in chronic obstructive pulmonary disease (COPD) and asthma.
8. Nano safety research: Effects of silver nanoparticles on cell proliferation and differentiation.

Additional advantages of the programme

The program has emphasized on physiological researches which can be applied to medical sciences.

Details of Scholarships

1. The Siriraj Graduate Scholarships.
2. The Siriraj Graduate Thesis Scholarships.
3. The Graduate Scholarship Program for International Students from Neighboring Countries.
4. The 60th Year supreme Reign of His Majesty King BhumibolAdulyadej.

Application Process

Application is only available via online application at www.grad.mahidol.ac.th

Required Documents

Prepare the following required documents to submit via online admission system or post:

1. Completed an Online Application at www.grad.mahidol.ac.th which comprised with
 - Form A** : Application Form
 - Form B** : Background and Proposed Field of Study
 - Form C** : Recommendation Forms (directly submitted by at least 2 referees)
2. Two copies of Degree Certificate (with officially certified English translation)
3. Two copies of Academic Transcript (with officially certified English translation)
4. Two copies of Recent Photos (Passport size)
5. Two copies of Passport
6. Two copies of English certificate (TOEFL/ IELTS/ MU-Grad Test)

(For Doctoral Program)

- TOEFL ITP score of at least 500, TOEFL Internet-based score of 61, or IELTS score of 5

(For Master's Program)

- TOEFL ITP score of at least 480, TOEFL Internet-based score of 54, IELTS score of 5 or MU GRAD TEST score of 60.

Notes

- Only accept TOEFL ITP score from examination center arranged by Faculty of Graduate Studies, Mahidol University.
- TOEFL ITP taken from other domestic and overseas institutes are invalid.
- The test date must be within previous 2 years before application date

- Applicant who obtained a valid English score must submit an **official score certificate** along with your application. Otherwise, your English score will not be considered.
 - Detail of English Competency Standard for Admission:
<http://www.grad.mahidol.ac.th/en/current-students/language-center.php>
7. Two copies of Curriculum Vitae
 8. Two copies of Statement of Purposes and Career Goals
 9. Two copies of Current bank statement / Scholarship letter (if any)
 10. Two copies of Concept paper / research proposal (recommended for all applicants)
 11. Two copies of additional documents may be requested by each program (such as letter of work experience / professional license/ related certificates and awards)

Submitting documents via online admission system.

- All documents must be in pdf format (maximum size 2 MB)
- Recent photograph must be in jpeg format only (maximum size 2 MB)

Job option after graduation

- Instructor
- Researcher
- Research Project Manager

Further information may be obtained from the Graduate Program Director and Secretary of Physiology :

1. **Asst. Prof.Sorachai Srisuma, MD, PhD** (Email : sorachai.sri@mahidol.ac.th)
 Room 1321, Srisavarindira Building, Floor 13, Department of Physiology,
 Faculty of Medicine, Siriraj Hospital, Mahidol University.
 Tel: 0 2419 8510, 0 2419 8770 Fax: 0 2411 5009
2. **Asst. Prof.Reawika Chaikomin, MD, PhD** (Email : reawika.cha@mahidol.ac.th)
 Room 1322, Srisavarindira Building, Floor 13, Department of Physiology,
 Faculty of Medicine, Siriraj Hospital, Mahidol University.
 Tel: 0 2419 5264, 0 2419 8770 Fax: 0 2411 5009

Program Coordinator

1. **Ms. Soontaree Meechamnan** (Email : tookatigk@hotmail.com)
 Room 1301, Srisavarindira Building, Floor 13, Department of Physiology,
 Faculty of Medicine, Siriraj Hospital, Mahidol University.
 Tel: 0 2419 8770 Fax: 0 2411 5009

Note 1. For more education information :www.grad.mahidol.ac.th

For more information please contact: Student Admission Section.
 Tel . 0 2441 4125 ext. 208-210, 0 2441 9129, E-mail : gradinter@mahidol.ac.th

Request for a Letter of Recommendation

For an Applicant to the International MSc / PhD Program

Medical Physiology

At the Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND

Website: <http://www.ps.si.mahidol.ac.th/PSENG/>

To whom it may concern

Dear Referee,

You have been asked by a student of yours to provide a letter of recommendation for her/his application for a MSc or PhD post at the Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND, in the International MSc or PhD Program 'Medical Physiology').

Please fill in the form on the next page, print it and then sign and seal the document.

Please note that only signed and sealed recommendations using this form will be considered.

Thereafter, please scan the document into a PDF file or similar, and send it as an email attachment to: sorachai.sri@mahidol.ac.th

stating in the subject line "Recommendation" and "name of applicant"

(e.g. "Recommendation John Smith").

Your help is highly appreciated.

Sincerely yours,

SorachaiSrisuma, MD, PhD

Graduate Program Director

Medical Physiology Graduate Program

Department of Physiology

Faculty of Medicine Siriraj Hospital

Mahidol University

Note :The letter of Recommendation **Must be** submitted to the University within the deadline of each admission round.

Letter of Recommendation

Website: <http://www.ps.mahidol.ac.th/PSENG/>

E-mail: sorachai.sri@mahidol.ac.th

Name of applicant

Dates of association with the applicant (e.g. *March 2010 – January 2011*)

Position at that time (e.g. *teacher, supervisor, employer, etc.*)

I would consider the applicant to be in the following percentage of students I have encountered:

upper 5% upper 10% upper 20% upper 30% lower 70%

Please give your opinion of the candidate considering the following criteria: theoretical knowledge, adaptability/flexibility, technical proficiency, English language skills, motivation/commitment, creativity/originality, independence, interaction with colleagues, communication skills etc...(please continue on an extra page if necessary.):

(Date)

(Seal)

(Signature)

(Institution)

(Name, title and position)