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**Doctor of Philosophy Programme in Toxicology (International Programme)**

หลักสูตร ปรัชญาดุษฎีบัณฑิต

สาขาวิชา พิษวิทยา (หลักสูตรนานาชาติ) (ภาคปกติ)

Faculty of Science

Department of Toxicology

คณะวิทยาศาสตร์

ภาควิชา พิษวิทยา

**Expected number of students to be accepted all year round : 5 Students**

**Admission Requirements**

**A candidate must:**

1. The applicants must hold a Bachelor's degree in Medicine, Dentistry, Veterinary Medicine, Veterinary Science, Pharmaceutical Science, any Science discipline (e.g. Biology, Chemistry) or an equivalent or one of the allied Health Sciences with a minimum GPA of 3.50 from Institutes approved by the Office of the Higher Education Commission or
2. The applicants must hold Master Degree or equivalent from Institutes approved by the Office of the Higher Education Commission Sciences with a minimum GPA of 3.50
3. Submit a certificate of English proficiency with minimum admission score:
  - IELTS - at least 3 or
  - TOEFL INTERNET BASED - at least 32 or
  - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400

**Important Notes:**

- English proficiency score must be taken within 2 years up to the admission date.
  - Application without submitting a valid English certificate will NOT be considered.
  - MU English Competence Standards: [www.grad.mahidol.ac.th](http://www.grad.mahidol.ac.th)
  - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies. Tel. 0-2441-4125 ext. 221-222
4. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

**Written Examination**

There is NO written examination for this program. Applicants must check their eligibility for interview upon the announcing date of the interview list which is scheduled for each admission round.

## Curriculum Structure

	Credit
<b>Plan 1</b>	
<b>For students with Master's degree in Toxicology</b>	
Thesis	48
<b>Plan 2</b>	
<b>For students with Bachelor's degree</b>	
Required Courses	19
Elective Courses	5
Thesis	48
<b>For students with Master's degree in related fields</b>	
Required Courses	6
Elective Courses	6
Thesis	36
	<b>Credit</b>
<b>Required Courses</b>	
<b>For students with Bachelor's degree</b>	
SCID 502 Cell Science	2(2-0-4)
SCID 503 Systemic Bioscience	3(3-0-6)
SCID 516 Biostatistics	3(3-0-6)
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCTX 603 Experimental Methods in Toxicology	1(0-3-1)
SCTX 604 Molecular Toxicology and Genetic	2(2-0-4)
SCTX 628 Fundamental of Toxicology	3(3-0-6)
SCTX 629 Systemic Toxicology	2(2-0-4)
SCTX 691 Seminar in Toxicology I	1(1-0-2)
SCTX 692 Seminar in Toxicology II	1(1-0-2)
<b>For students with Master's degree in related fields</b>	
SCID 516 Biostatistics	3(3-0-6)
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCTX 604 Molecular Toxicology and Genetic	2(2-0-4)
<b>For students with Master's degree in Toxicology</b>	

Students must register for courses SCTX 691 Seminar in Toxicology I and SCTX 692 Seminar in Toxicology II The non-credit (Audit)

**Elective Courses**

SCID	500	Cell and Molecular Biology	3(3-0-6)
SCID	505	Systematic Ecology and Disease Emergence	3(3-0-6)
SCID	507	Microscopic Technique	1(0-2-1)
SCID	508	Biomolecular and Spectroscopy Techniques	1(0-2-1)
SCID	509	Separation Techniques	1(0-2-1)
SCID	510	Immunological Methods	1(0-2-1)
SCID	511	Gene Technology	1(0-2-1)
SCID	512	Receptor Binding and Enzyme Kinetic Assays	1(0-2-1)
SCID	513	Animal Cell Culture Techniques	1(0-2-1)
SCID	514	Animal Experimentation in Biomedical Research	1(0-2-1)
SCTX	633	Clinical Toxicology	2(2-0-4)

**Thesis**

SCTX	699	Dissertation	36(0-108-0)
SCTX	799	Dissertation	48(0-144-0)
SCTX	898	Dissertation	48(0-144-0)

\* These may change in cases where there are suggestions for the improvement of the curriculum

**Strength and Special Features of Graduate Program in Toxicology, Faculty of Science, Mahidol University, Bangkok, Thailand****Strength/Strategic Advantages****Teaching and Learning**

- Taking teaching course across institutes: Mahidol University and Chulabhorn Graduate Institute

**Research Collaboration: National and International**

1. Collaborative research activity and supervisors from colleagues within Faculty of Science and other institutes
  - Within Faculty of Science: Pharmacology, Anatomy, Physiology, Pathobiology
  - Between Faculties: Faculty of Science and Faculty of Medicine Ramathibodi Hospital
2. The MOU and collaboration between Faculty of Science and Faculty of Graduate Studies with other Institutes (USA, Australia, Japan, student's own expense or grant, no bench fee) allowing competent students to have to present their research or being trained abroad

**Details of Scholarship**

1. Scholarship of the 60<sup>th</sup> Year Supreme Reign of His Majesty King Bhumibol Adulyadej.
2. Faculty of Science Teaching Assistantship.
3. Science Achievement Scholarship.
4. Research support for materials for each student.
5. Research Assistantship (Depending on supervisor)
6. Partial support scholarship.

### **Additional Information**

1. All classes in the Program are conducted in English.
2. Each faculty member, either from Faculty of Science or Faculty of Medicine Ramathibodi Hospital, is a leader who involves in research area including impact of chemicals on human health, molecular mechanisms of biological and toxicological actions of chemicals, factors modulating health and environmental impact of chemicals including toxicogenomics.
3. Textbooks to support the research initiatives of graduate students are available.
4. The results of the research activities conducted by the faculty are publicized through international symposia and publications which are higher in number and impact than those of other institutes offering similar graduate programs.

Visit : <http://www.sc.mahidol.ac.th/MDU/>

Select :Toxicology Program

### **Special features**

1. Graduate education is tightly integrated with a variety of research areas and activities and opportunity to take internationally-recognized research training course with the Inter-University Program;
2. Research facility and small classes conducted by approachable faculty members who are eager to enhance students' graduate education experience;
3. Internationally-recognized faculty members and research output;
4. A partial or full support scholarship (depending on the condition) from Faculty of Science, Mahidol University and the Center for Toxicology, Environmental Health and Management of Toxic Chemicals (ETM);

### **Application Process**

Application is only available via online application at [www.grad.mahidol.ac.th](http://www.grad.mahidol.ac.th)

### **Required Documents**

Applicants must upload all documents via online admission system. All documents must be in PDF format (maximum size 2 MB). Photograph must be in JPEG format.

- Recent photographs (1x1 inch in size)
- A copy of an applicant's degree certificate or a letter of graduation certification (for an applicant with a degree completion)
- A letter certifying that an applicant is currently in the final year prior to graduation (for an applicant seeking for a degree)
- A detailed transcript of a degree (for an applicant with a degree completion)
- A grade report with course names and grades received from the first to the current semester prior to graduation
- A copy of identification card

- A copy of house registration certification
- A copy of Certificate of English proficiency : IELTS / TOEFL INTERNET BASED / TOEFL ITP
- A copy of proof of payment.

#### **Job option after graduation**

- Experts in Toxicology (Toxicologist)
- Scientist, researcher, academic staff in both governmental and private institutes

**Further information may be obtained from the Director of Graduate Studies, Toxicology,**

- 1. Assoc.Prof.Krongtong Yoovathaworn** (E-mail : [krongtong.yoo@mahidol.ac.th](mailto:krongtong.yoo@mahidol.ac.th))

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- 2. Asst.Prof.Artthi Chairoungdua** (E-mail : [artthi.cha@mahidol.ac.th](mailto:artthi.cha@mahidol.ac.th))

Room PR.415, PR. Building, Floor 4,  
Department of Physiology, Faculty of Science.  
Tel: 0 2201 5615-9

#### **Program Coordinator**

**Prof.Skorn Mongkolsuk** (E-mail : [skorn.mon@mahidol.ac.th](mailto:skorn.mon@mahidol.ac.th))

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Tel: 0 2201 5471

- Notes**
1. The programme of Toxicology requires students to study the pre - requisite course:
    - SCID 500 Cell and Molecular Biology 3 Credits
  2. For more information : [www.grad.mahidol.ac.th](http://www.grad.mahidol.ac.th)

**For more information please contact The Student Admission Section.**  
**Tel . 0 2441 4125 ext. 208-210 , 0 2441 9129, E-mail : [gradthai@mahidol.ac.th](mailto:gradthai@mahidol.ac.th)**