Doctor of Philosophy Program in Dermatology (International Program)

Program Information

1. Degree and Field of Study: Doctor of Philosophy (Dermatology)

2. Program Type

Study Plan 1: Research-Oriented Program

- Plan 1.1: Minimum duration of 2 years (4 regular semesters)
- Plan 1.2: Minimum duration of 4 years (8 regular semesters)

Study Plan 2: Research-Oriented Program with Additional Coursework

- Plan 2.1: Minimum duration of 3 years (6 regular semesters)
- Plan 2.2: Minimum duration of 4 years (8 regular semesters)

3. Philosophy

The philosophy of the program is to integrate fundamental and emerging knowledge in dermatology to develop doctoral graduates with academic excellence and strong ethical values, enabling them to make the greatest possible contribution to society.

4. Program Educational Objectives (PEOs)

Graduates of the program are expected to possess the following characteristics:

1) Graduates possess knowledge and competencies in dermatology at an international level, with the ability to engage in continuous self-development and keep pace with advances in science, medical technology, and contemporary dermatological practice. They demonstrate academic leadership that contributes to the advancement of dermatology in the country.

2) Graduates possess advanced knowledge and competencies in dermatology and are equipped to address the shortage of qualified dermatology professionals in the country, including university faculty members and researchers in both public and private research institutions.

3) Graduates demonstrate vision, integrity, ethical responsibility, and academic leadership, enabling them to contribute effectively to the advancement of dermatology and society.

5. Career Opportunities

Graduates of the program may pursue careers in the following areas:

Academic and Teaching Careers – University lecturers, academic staff, and educators in higher education institutions, particularly in the fields of dermatology, medical sciences, health sciences, and related disciplines.

Research and Innovation – Researchers, research scientists, and research professionals in universities, government research institutions, private research organizations, and healthcare-related industries.

Clinical and Biomedical Research – Professionals involved in clinical research, biomedical research, clinical trials, and the development of knowledge and innovations related to dermatology and medical sciences.

Healthcare and Medical-Related Industries – Professionals working in pharmaceutical, medical device, cosmeceutical, aesthetic medicine, and other healthcare-related industries.

Academic and Research Leadership – Professionals who pursue careers in academic, research, and organizational leadership positions related to dermatology, medical sciences, health sciences, and related fields.

Curriculum

1. Program Learning Outcomes (PLOs)

- ### Knowledge

K1 :	Graduates will critically evaluate and synthesize comprehensive and advanced knowledge in dermatological sciences, including the molecular and cellular mechanisms of skin diseases, emerging therapies, and conceptual frameworks shaping the field.
K2 :	Graduates will develop and lead independent, high-impact research that advances global dermatological knowledge, contributing to paradigm shifts in the understanding, diagnosis, and treatment of skin disorders.

- ### Skills

S1 :	Demonstrate expertise in designing, conducting, and critically analyzing dermatological research using state-of-the-art methodologies, technologies, and interdisciplinary approaches.
S2 :	Exhibit mastery in specialized dermatological procedures and innovative interventions, integrating advanced patient assessment and management strategies to address complex clinical challenges.

- ### Ethics

E1 :	Uphold the highest ethical standards in dermatological research and clinical practice, ensuring rigorous compliance with international regulations, research integrity, and patient-centered ethical considerations.

- ### Character

C1 :	Lead and mentor junior researchers, clinicians, and healthcare professionals, fostering an environment of academic excellence and innovation in dermatology.
C2 :	Collaborate effectively within multidisciplinary and global research networks, integrating cross-disciplinary knowledge to drive advancements in dermatological science and patient care.

2. Year Learning Outcomes (YLOs)

Plan 1: Dissertation-Based Study (Plan 1.1)

Academic Year	Expected Learning Outcomes
Year 1	1. Demonstrate fundamental and clinical knowledge in dermatology and perform dermatological procedures effectively and safely. 2. Apply fundamental research principles and methods in conducting research.
Year 2	1. Analyze and synthesize advanced knowledge in dermatology through independent learning. 2. Demonstrate critical and creative thinking in identifying problems and developing appropriate solutions.

Plan 1: Dissertation-Based Study (Plan 1.2)

Academic Year	Expected Learning Outcomes
Year 1	1. Demonstrate fundamental and clinical knowledge in dermatology and perform dermatological procedures effectively and safely. 2. Apply fundamental research principles and methods in conducting research.
Year 2	1. Analyze and synthesize advanced knowledge in dermatology through independent learning. 2. Demonstrate critical and creative thinking in identifying problems and developing appropriate solutions.
Year 3	1. Conduct independent and in-depth study to acquire and synthesize advanced knowledge in dermatology. 2. Apply critical and creative thinking to address complex problems and advance research in dermatology.
Year 4	1. Synthesize knowledge and research findings to generate new knowledge or contribute to the advancement of dermatological sciences. 2. Demonstrate professional confidence and the ability to communicate and contribute effectively in an international academic and professional environment.

Plan 2: Coursework and Dissertation (Plan 2.1)

Academic Year	Expected Learning Outcomes
Year 1	1. Demonstrate fundamental and clinical knowledge in dermatology and perform dermatological procedures effectively and safely. 2. Apply fundamental research principles and methods in conducting research.
Year 2	1. Analyze and synthesize advanced knowledge in dermatology through independent learning. 2. Demonstrate critical and creative thinking in identifying problems and developing appropriate solutions.
Year 3	1. Conduct independent and in-depth study to acquire and synthesize advanced knowledge in dermatology. 2. Apply critical and creative thinking to address complex problems and advance research in dermatology.

Plan 2: Coursework and Dissertation (Plan 2.2)

Academic Year	Expected Learning Outcomes
Year 1	1. Demonstrate fundamental and clinical knowledge in dermatology and perform dermatological procedures effectively and safely. 2. Apply fundamental research principles and methods in conducting research.
Year 2	1. Analyze and synthesize advanced knowledge in dermatology through independent learning. 2. Demonstrate critical and creative thinking in identifying problems and developing appropriate solutions.
Year 3	1. Conduct independent and in-depth study to acquire and synthesize advanced knowledge in dermatology. 2. Apply critical and creative thinking to address complex problems and advance research in dermatology.
Year 4	1. Synthesize knowledge and research findings to generate new knowledge or contribute to the advancement of dermatological sciences. 2. Demonstrate professional confidence and the ability to communicate and contribute effectively in an international academic and professional environment.

3. Teaching and Learning Facilities

Teaching and learning activities are conducted using the facilities and instructional equipment of the Chulabhorn International College of Medicine, Thammasat University, Rangsit Campus, as well as those of collaborating institutions both in Thailand and abroad.

The teaching and learning facilities include:

Domestic Institutions

- Chulabhorn International College of Medicine, Thammasat University (Rangsit Campus)
- Pan-Suphan-Hong Foundation
- Bumrungrad International Hospital
- Samitivej Sukhumvit Hospital
- Queen Sirikit 84th Birthday Anniversary Hospital
- Rajavithi Hospital

International Institutions

- Aichi Medical University, Aichi, Japan
- Central Japan International Medical Center (CJIMC), Gifu, Japan
- Hokkaido University Hospital, Sapporo, Japan
- Nagoya City University, Nagoya, Japan
- Shonan Beauty Clinic, Tokyo, Japan
- Erasmus University, the Netherlands
- Mirabel Clinic, Seoul, South Korea
- Hautwerk Clinic, Zurich, Switzerland
- Greater Miami Skin and Laser Center, Miami, Florida, USA

4. Program Structure, Courses and Credits

1) Total Credits

Total Credits Required for the Entire Program

- At least 48 credits for students who have completed a Master's degree.
- At least 72 credits for students who have completed a Bachelor's degree.

The total credits required are categorized by study plan as follows:

Plan 1: Dissertation-Based Study

Plan 1.1: At least 48 credits

Plan 1.2: At least 72 credits

Plan 2: Coursework and Dissertation

Plan 2.1: At least 61 credits

Plan 2.2: At least 75 credits

2) Curriculum Structure

(1) Plan 1: Dissertation-Based Study

Plan 1.1: Students who have completed a Master's degree are required to complete a dissertation of at least 48 credits.

Plan 1.2: Students who have completed a Bachelor's degree are required to complete a dissertation of at least 72 credits.

In addition, students are required to enroll in the following course:

PDT 603: Dermatology Journal Seminar

This course is non-credit bearing and is assessed on a Pass (P) / Not Pass (N) basis. It does not carry credits or grade points. Students may also be required to enroll in additional courses as deemed appropriate by their dissertation advisor.

(2) Plan 2: Coursework and Dissertation

Plan 2.1: Students who have completed a Master's degree are required to complete a dissertation of at least 36 credits and undertake coursework of at least 12 credits, as follows:

Curriculum Component	Credits
Required Courses	19
Elective Courses	6
Dissertation	36

Plan 2.2: Students who have completed a Bachelor's degree are required to complete a dissertation of at least 48 credits and undertake coursework of at least 24 credits, as follows:

Curriculum Component	Credits
Required Courses	21
Elective Courses	6
Dissertation	48

In addition, students are required to enroll in the following courses:

PDT 603: Dermatology Journal Seminar
PDT 611: Clinical Dermatology I
PDT 617: Clinical Dermatology II

These courses are non-credit bearing and are assessed on a Pass (P) / Not Pass (N) basis. They do not carry credits or grade points. Students may also be required to enroll in additional courses as deemed appropriate by their dissertation advisor.

5. Course Descriptions

5.1 Required Courses

CMB600 Responsible Research and Ethics in Bioclinical Sciences

Introduction to responsible research; relevant information for initiating research; critical reading and analysis; guidelines for good practices, ethics and regulations in bioclinical sciences; responsible protocol writing; planning and setting up experiment/research; responsible peer review; good data management practice and quality standards; considerations for report and publication; ethical issues in publication; and presentation of research results.

CMB601 Statistical Methods in Bioclinical Sciences

Principles and application of biostatistics to bioclinical research; types of variable and data; data presentation and summarization; population and sample; probability distribution; research and statistical hypotheses; estimation and hypothesis testing; parametric and non-parametric statistics; statistical test for reliability and diagnosis; estimation of sample size; and application of computer softwares for statistical analysis.

CMD601 Clinical Dermatology I

Structure and morphology of skin lesions and principles of clinical diagnosis; clinical manifestations, pathogenesis, etiology, prognosis, and management of common dermatological disorders; principles of clinical dermatology and topical dermatologic therapy; papulosquamous disorders; vesiculobullous disorders; drug eruptions and dermatological emergencies; eczema and dermatitis; acne, rosacea, and adnexal disorders; urticaria and angioedema; hair and nail disorders; pigmentary disorders; cutaneous vasculopathies; benign and malignant skin tumors; bacterial, viral, fungal, and tropical dermatoses.

CMD602 Dermatology Seminar

Discussion of clinical problems related to patient care, clinical and pathological diagnosis, laboratory investigations, and the management of chronic and rare dermatological disorders.

CMD603 Dermatology Journal Club

Formal presentation and discussion of current research topics in dermatological sciences and clinical dermatology under the supervision of the course committee; presentation and discussion of research progress.

CMD611 Dermatology Clinic I

History taking and physical examination of outpatients; clinical evaluation of common and complicated dermatological conditions; assessment of signs and symptoms; laboratory investigations; diagnosis; treatment; and patient follow-up under the supervision of faculty members.

CMD612 Basic Dermatology

Development and structure of the epidermis; keratinocyte kinetics and epidermal differentiation; epidermal lipids; DNA repair and mechanisms of carcinogenesis; dermoepidermal junction and basement membrane zone, including their structure and function and the pathophysiology of blistering disorders; structure and components of the dermis, including collagen, elastin, ground substance, and fibroblasts; wound healing; nutrition and the skin; percutaneous absorption and thermoregulation; structure, physiological functions, and hormonal regulation of the sebaceous unit; structure and function of apocrine and eccrine sweat glands; biology and function of hair; structure and growth of nails; inflammation and inflammatory mediators; hormone receptors in the skin; and cutaneous stem cells.

CMD613 Advanced Dermatology

Innate and adaptive immune responses in the skin; cytokines and chemokines; humoral immunity and the complement system; regulation of neutrophil and eosinophil production and activation; common signaling pathways in the skin; mechanisms of carcinogenesis; immunopathogenesis of atopic dermatitis, contact dermatitis, psoriasis, blistering skin diseases, acne vulgaris, urticaria, graft-versus-host disease, lichen planus, and alopecia areata; immunosuppressive and biologic therapies; cutaneous thermoregulation; neurobiology and hormonal regulation of the skin; cosmeceutical products; and innovations in skin technology.

CMD614 Dermatopathology

Histopathological examination and interpretation of skin diseases.

CMD615 Investigations in Dermatology

Common laboratory investigations in dermatology; dermoscopy; common allergy testing; phototesting; cell culture techniques; protein and RNA extraction; protein quantification; mRNA quantification and polymerase chain reaction (PCR); immunohistochemical staining; immunofluorescence techniques; and principles of drug development in dermatology under the supervision of faculty members.

CMD616 Clinical Dermatology II

Structure and morphology of skin lesions and principles of clinical diagnosis; clinical manifestations, pathogenesis, etiology, prognosis, and management of common and

complex dermatological disorders; contact dermatitis; photodermatoses; pediatric dermatology; dermatological disorders associated with pregnancy and aging; non-

infectious inflammatory dermatoses; cutaneous manifestations of systemic diseases; autoimmune connective tissue diseases; leprosy and mycobacterial infections; sexually transmitted diseases and cutaneous manifestations of HIV infection; orogenital disorders; dermal connective tissue and subcutaneous tissue disorders; genodermatoses; systemic therapies; photoprotection; and complementary and alternative therapies.

Prerequisite: Successful completion of **CMD601**.

CMD617 Dermatology Clinic II

History taking and physical examination of outpatients; clinical evaluation of common and complex dermatological conditions; assessment of signs and symptoms; laboratory investigations; diagnosis; treatment; and patient follow-up under the supervision of faculty members.

CMD711 Dermatosurgery

Principles and techniques for the treatment of skin diseases, skin aging, and skin tumors using surgical and laser procedures; excision and repair; electrosurgery; cryosurgery; ablative laser procedures and chemical peels; non-ablative laser and light-based therapies; botulinum toxin and soft-tissue augmentation; vascular laser therapy and treatment of varicose veins; and cosmetic and skin care in dermatology under the supervision of faculty members.

5.2 Elective Courses

CMD721 Dermatological Practice I

Out-patient based observation in abroad; history taking and physical examination; common, complicated, rare, and endemic dermatological diseases; symptoms and signs, laboratory investigations, interpretation, diagnosis, treatment and follow-up. (under the supervision of professor)

CMD721 Dermatological Practice II

Out-patient based observation in abroad; history taking and physical examination; common, complicated, rare, and endemic dermatological diseases; symptoms and signs, laboratory investigations, interpretation, diagnosis, treatment and follow-up. (under the supervision of professor)

CMB653 Clinical Drug Development

Key elements of the clinical research study: quality standards and regulations, e.g., good manufacturing practice (GMP), good clinical laboratory practice (GCLP), good clinical practice (GCP), audits and inspections; clinical protocol; case report form; investigator brochure; informed consent; ethics committee and instiuional review boards; source document verification; monitoring visit types; drug accountabioity; laboratory and clinical supplies; and adverse events.

CMB654 Current Concepts in Dermatological Drug Discovery and Development

Processes of dermatological drug discovery and development: drug target identification; pre-clinical studies; chemistry manufacturing and control (CMC); clinical drug development (phases HV); roles of pharmacokinetics, toxicokinetics and pharmacogenomics; and regulatory requirements.

CMB655 Techniques in Dermatological Drug Research and Development

Essential scientific techniques applied to research in dematologgical drug discovery and development: chemical and physical stability testing; in vitro and in vivo models of drug penetration and absorption in skin and percutaneous; in vitro and in vivo models of dermal toxicity and efficacy assessments; and noninvasive bioengineering techniques.

CMB755 Research Protocol Design

The components of research protocol development and key issues to be addressed, including background and introduction; literature review; research questions; hypotheses; and study methodology, including study design, study site, study population, sample size, sampling techniques, research instruments, study procedures, proposed data analysis, ethical considerations, project timeline, budget and logistics, and dissemination and publication of research findings.

5.3 Academic Dissertation

CMD900 Dissertation

Development of bioclinical sciences research proposal related to student's dissertation; conduct of research in bioclinical sciences to generate new knowledge or innovation; writing up the dissertation; preparation of manuscripts and publication; research ethics; and publishing ethics.

CMD901 Dissertation

Development of bioclinical sciences research proposal related to student's dissertation; conduct of research in bioclinical sciences to generate new knowledge or innovation; writing up the dissertation; preparation of manuscripts and publication; research ethics; and publishing ethics.

CMD902 Dissertation

Development of bioclinical sciences research proposal related to student's dissertation; conduct of research in bioclinical sciences to generate new knowledge or innovation; writing up the dissertation; preparation of manuscripts and publication; research ethics; and publishing ethics.

6. Requirements for Dissertation and Qualifying Examination

6.1 Dissertation Requirements

(1) Eligibility for Dissertation Registration

Study Plan 1

Students may register for the dissertation from the first semester of enrollment, provided that they meet all requirements specified by the program and have passed the Qualifying Examination with a P (Pass) grade.

Study Plan 2

Students are eligible to register for the dissertation upon meeting the following requirements:

1) Having completed at least one regular semester of study and having passed the required courses as follows:

Study Plan 2.1: Having completed at least 14 credits of required courses with a cumulative grade point average (GPAX) of not less than 3.00.

Study Plan 2.2: Having completed at least 14 credits of required courses with a cumulative grade point average (GPAX) of not less than 3.00.

2) Having passed the Qualifying Examination with a P (Pass) grade.

(2) The dissertation must be written in English.

(3) After registering for the dissertation, students must submit a dissertation proposal to the dissertation Committee. The Dean of the Chulabhorn International College of Medicine shall appoint a dissertation advisor and a dissertation Committee consisting of at least five members. The committee shall provide guidance to the student and conduct the dissertation proposal examination and the final dissertation examination.

(4) The qualifications and appointment of the dissertation advisor shall comply with the Criteria and Standards for Graduate Studies prescribed by the Ministry of Higher Education, Science, Research and Innovation (MHESI).

6.2 Dissertation Examination

The procedures and examination of the dissertation shall comply with the Thammasat University Regulations on dissertation, Independent Study, and Related Academic Work, B.E. 2559 (2016), and the Thammasat University Regulations on Graduate Studies, B.E. 2568 (2025).

(1) Students must register for the dissertation for the full number of credits specified by the curriculum during the semester in which they submit a request to submit the dissertation for examination and express their intention to take the dissertation examination.

(2) Students are eligible to take the dissertation examination after passing the English language examination with a P (Pass) grade in accordance with the criteria prescribed by Thammasat University. The following students are exempt from the English language examination and shall be deemed to have received a P (Pass) upon admission:

International students whose official language is English.

Students who graduated from an English-medium program within two years prior to the date of application for admission.

(3) Upon submission of the request to take the dissertation examination, the Dean shall appoint a dissertation Examination Committee consisting of at least five members, comprising program faculty members and external experts. The Chair of the dissertation

Examination Committee must be an external expert. All committee members must possess the qualifications, academic credentials, and scholarly works in accordance with the Criteria and Standards for Graduate Programs, B.E. 2565 (2022).

(4) The dissertation examination shall be conducted publicly, and members of the public shall be permitted to attend and observe the examination.

(5) The qualifications of dissertation examiners shall comply with the Criteria and Standards for Graduate Programs prescribed by the Ministry of Higher Education, Science, Research and Innovation (MHESI).

(6) Students are eligible to take the dissertation examination only after passing the required foreign language examination.

(7) Students must receive an S (Satisfactory) grade, based on a unanimous decision of the dissertation Examination Committee.

6.3 Qualifying Examination (for Doctoral Students)

(1) Students may apply to take the Qualifying Examination from their first semester of study.

(2) Students must apply to take the Qualifying Examination within 4–6 regular semesters from the date of enrollment as a student.

(3) The Graduate Program of the Chulabhorn International College of Medicine shall administer the Qualifying Examination, consisting of written and oral examinations. The Dean of the Chulabhorn International College of Medicine shall appoint the Qualifying Examination Committee. The examination criteria shall comply with the criteria prescribed by the Ministry of Higher Education, Science, Research and Innovation (MHESI).

(4) Students must pass the Qualifying Examination within two consecutive attempts. The examination shall be administered twice per academic year. Failure to pass within the specified attempts shall result in the student's removal from the student registration.

(5) Students must pass the Qualifying Examination with a P (Pass) grade to be eligible to take the dissertation Proposal Examination

7. Monitoring of the Teaching and Learning Process

1) The Program Committee requires course coordinators to conduct teaching in accordance with the approved course syllabus. Instructors shall organize teaching topics in alignment with the course learning objectives and provide students with the course outline, teaching and learning activities, and assessment methods. These components shall be communicated to students as part of the orientation for each course.

2) During the teaching process, instructional sessions are recorded to enable the Program Committee to evaluate the effectiveness of teaching and learning. To support teaching and learning processes appropriate for the 21st century, the Program Committee emphasizes self-directed learning and the integration of communication technologies into teaching and learning. Platforms such as V-Cube and Moodle are used to facilitate learning and provide students with opportunities to communicate, discuss, and ask questions about course content with their peers and instructors at any time and from any location.