

1. Program Name:

Master of Science Program in Dermatology (International Program)

2. Degree Awarded

Master of Science (Dermatology)

Program: Plan 1 (Academic Plan):

Coursework and Thesis of 2 years (4 regular semesters)

3. Philosophy

Integrate fundamental and emerging knowledge in dermatology to develop medical master's graduates with academic excellence and 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. Possess comprehensive knowledge and understanding of dermatology, with the ability to practice medicine accurately according to professional standards.
2. Possess the skills and competence to conduct and produce high-value research in the field of dermatology.
3. Possess a broad vision and strong motivation for continuous self-development.
4. Develop physicians who uphold professional ethics and moral conduct.
5. Promote career advancement and professional growth for graduates.
6. Inspire confidence and expressiveness in graduates, supporting them in presenting academic works, perspectives, or new knowledge at both national and international levels.

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 demonstrate comprehensive knowledge in dermatological sciences, including clinical dermatology, dermatopathology, and aesthetic dermatology, with an understanding of disease mechanisms and therapeutic advancements.
K2 :	Graduates will evaluate current literature and apply evidence-based concepts in clinical decision-making and dermatological research.

- **Skills**

S1 :	Apply research methodologies and technologies to design and conduct independent research that contributes to advancements in dermatological science.
S2 :	Perform specialized dermatological procedures and clinical assessments accurately, demonstrating sound reasoning and patient-centered care.

- **Ethics**

E1 :	Adhere to professional ethics and international standards in clinical and research practices, ensuring patient confidentiality, academic integrity, and regulatory compliance.
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- **Character**

C1 :	Demonstrate leadership and mentoring capabilities in academic and clinical dermatology settings.
C2 :	Collaborate effectively with multidisciplinary healthcare teams to enhance dermatological research and patient outcomes.

1.1 Year Learning Outcomes (YLOs)

Academic Year	Expected Learning Outcomes
Year 1	- Possess knowledge and understanding of fundamental and clinical dermatology, with the ability to perform procedures effectively. - Demonstrate a thorough understanding of research processes and practical execution.
Year 2	Acquire skills for in-depth research, cultivate out-of-the-box thinking, and effectively identify and solve problems.

1.2 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.

"This curriculum is supported by collaborations with medical schools, public hospitals, and private hospitals at both national and international levels, with a strong focus on producing medical master's graduates who possess competency in both clinical practice and research."

The teaching and learning facilities include:

Domestic Institutions

- Chulabhorn International College of Medicine, Thammasat University (Rangsit Campus)
- Thammasat University Hospital
- Pan-Suphan-Hong Foundation
- Bumrungrad International Hospital
- Samitivej Sukhumvit Hospital
- Rajavithi Hospital
- Samitivej 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
- Niigata University, Japan
- Hamamatsu University, Japan
- Nagoya City University, Japan
- Kizawa Memorial Hospital, Japan
- Yamanashi University, Japan

2. Curriculum Structure

Total Credits

- Plan 1 (Academic Plan): Coursework and Thesis
- Total Credits Required for Graduation: 36–42 credits

Students must register for a total of no less than 36/42 credits, completing all courses in accordance with the curriculum structure and requirements as follows:

Master of Science Program in Dermatology

Plan 1 (Academic Plan): Coursework and Thesis

Clinical Dermatology Total: 42 credits

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|--------------------------|------------|
| ○ Core Courses | 8 credits |
| ○ Major Required Courses | 18 credits |
| ○ Elective Courses | 4 credits |
| ○ Thesis | 12 credits |

Cosmetic Dermatology Total: 36 credits

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|--------------------------|------------|
| ○ Core Courses | 8 credits |
| ○ Major Required Courses | 14 credits |
| ○ Elective Courses | 2 credits |
| ○ Thesis | 12 credits |

3. Study Plan

Master of Science Program in Dermatology

Clinical Dermatology

Semester 1	Credit	Semester 2	Credit
CMB 600 Responsible Research and Ethics in Bioclinical Sciences	2	CMD 602 Dermatology Seminar	1
CMB 601 Statistical Methods in Bioclinical Sciences	2	CMD 614 Dermatopathology	2
CMD 601 Clinical Dermatology 1	2	CMD 616 Clinical Dermatology 2	2
CMD 603 Dermatology Journal Club	1	CMD 617 Dermatology Clinic 2	2
CMD 611 Dermatology Clinic 1	2	CMD 711 Dermatosurgery	2
CMD 612 Basic Dermatology	2	CMD 800 Thesis	2
Total Credits	11	Total Credits	11
Semester 3	Credit	Semester 4	Credit
CMD 613 Advanced Dermatology	2	Elective Course	2
CMD 615 Investigations in Dermatology	2	Elective Course	2
CMD 712 Hands-on Experiences in Dermatology	2	CMD 800 Thesis	6
CMD 800 Thesis	4		
Total Credits	10	Total Credits	10

Total Credits Required for Graduation 4 Semesters

Year	Semester	Credits
Year 1	Semester 1	11
	Semester 2	11
	Total Credits: Year 1	22
Year 2	Semester 3	10
	Semester 4	10
	Total Credits: Year 2	20
Total Credits Required for Graduation	4 Semesters	42 Credits

Cosmetic Dermatology

Semester 1	Credit	Semester 2	Credit
CMB 600 Responsible Research and Ethics in Bioclinical Sciences	2	CMD 602 Dermatology Seminar	1
CMB 601 Statistical Methods in Bioclinical Sciences	2	CMD 618 Cosmetic Dermatology Clinical I	2
CMD 601 Clinical Dermatology 1	2	CMD 711 Dermatosurgery	2
CMD 603 Dermatology Journal Club	1	CMD 751 Cosmetic Dermatology I	2
CMD 611 Dermatology Clinic 1	2	CMD 800 Thesis	2
CMD 612 Basic Dermatology	2		
Total Credits	11	Total Credits	9
Semester 3	Credit	Semester 4	Credit
CMD 752 Facial Design and Injection	2	Elective Course	2
CMD 619 Cosmetic Dermatology Clinical II	2	CMD 800 Thesis	6
CMD 712 Hands-on Experiences in Dermatology	2		
CMD 800 Thesis	4		
Total Credits	10	Total Credits	8

Total Credits Required for Graduation 4 Semesters

Year	Semester	Credits
Year 1	Semester 1	11
	Semester 2	9
	Total Credits: Year 1	20
Year 2	Semester 3	10
	Semester 4	8
	Total Credits: Year 2	18
Total Credits Required for Graduation	4 Semesters	38 Credits

**Note: Course MDC 712 Dermatological Procedures is graded on a two-level scale: P (Pass) and N (No Pass). It is a non-credit course and has no grade point value.*

4. Course List

Joint Core Courses

Students are required to complete all 5 joint core courses, totaling 8 credits, as follows:

- CMB600 Responsible Research and Ethics in Bioclinical Sciences
- CMB601 Statistical Methods in Bioclinical Sciences
- CMD601 Clinical dermatology I
- CMD602 Dermatology seminar
- CMD603 Dermatology journal club

Major Required Courses

Students are required to complete all 9 major required courses, totaling 18 credits, as follows:

Clinical Dermatology	Cosmetic Dermatology
CMD611 Dermatology clinic I	CMD611 Dermatology clinic I
CMD612 Basic dermatology	CMD612 Basic dermatology
CMD613 Advanced dermatology	CMD618 Cosmetic Dermatology clinic I
CMD614 Dermatopathology	CMD619 Cosmetic Dermatology clinic II
CMD615 Investigations and Innovations in dermatology	CMD711 Dermatosurgery
CMD616 Clinical dermatology II	CMD712 Hands-on experiences in Dermatology
CMD617 Dermatology clinic II	CMD751 Cosmetic Dermatology
CMD711 Dermatosurgery	CMD752 Facial design and injection
CMD712 Hands-on experiences in Dermatology	

Elective Courses

Students are required to complete elective courses according to the number of credits specified in the study plan of each major, as follows:

Clinical Dermatology: Students can select 4 credits from the following courses:

- CMD721 Practical Dermatology I
- CMD722 Practical Dermatology II
- CMD723 Laser and Injection

Cosmetic Dermatology: Students can select 2 credits from the following courses:

- CMD722 Practical Dermatology II
- CMD723 Laser and Injection

Thesis

- CMD800 Thesis

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 of skin lesions and fundamentals of clinical diagnosis; clinical manifestation of common skin diseases and their pathogenesis, etiology, prognosis and management.

CMD602 Dermatology Seminar

Discussion on problems pertaining to patient care, clinical diagnosis, pathological diagnosis, laboratory investigation and treatment of chronic and rare skin diseases.

CMD603 Dermatology Journal Club

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

CMD611 Dermatology Clinic I

History taking, physical examination of out-patients; common dermatologic conditions, complicated skin diseases; symptoms and signs, laboratory investigations, diagnosis, treatment and follow-up. (under the supervision of professors).

CMD612 Basic Dermatology

Structure and function of the skin; Epidermis and Keratinization; Cell-cell adhesion and epidermal-dermal junction and disease related; Dermis, fibroblast and extracellular matrix proteins; Eccrine and Apocrine glands; Melanocytes and pigmentation; Subcutaneous, fat and diseases related; Biology of Hair; Biology of Nails; Photobiology and Photoimmunology; Photoprotection; Principle of topical therapy; Principle of systemic therapy and immunosuppressive medications; Common investigations in dermatological practice.

CMD613 Advanced Dermatology

Innate immunity in the skin; Adaptive immunity in the skin; Cytokines, chemokines and antigen-antibody reaction; Humoral immunity and complement; Regulation of the production and activation of neutrophils; Regulation of the production and activation of eosinophils; Immunopathogenesis of atopic dermatitis and psoriasis; 20 Pruritus and neurobiology of the skin; Biologic drugs and targeted therapy; Stem cells and basic signaling pathways in the skin; in vitro model for investigative dermatology; in vivo model for investigative dermatology.

CMD614 Dermatopathology

Histopathological examination and interpretation of skin diseases.

CMD615 Investigations in Dermatology

Principle of molecular biology techniques; Dermoscopy for Dermatological conditions; Dermoscopy for Hair; Skin and soft tissue imaging 1; Skin and soft tissue imaging 2; Bioinformatics in Dermatology; AI in Dermatology; Dermatology and Cosmetology bio-based materials; Cell-based therapy; Exosome; Teledermatology; How to generate good research; Systematic review and meta-analysis; Clinic operating system; Health care communication and public speaking.

CMD616 Clinical Dermatology II

Structure of skin lesions and fundamentals of clinical diagnosis; clinical manifestation of complicated.

CMD617 Dermatology Clinic II

History taking, physical examination of out-patients; common dermatologic conditions, complicated skin diseases; symptoms and signs, laboratory investigations, diagnosis, treatment and follow-up. (under the supervision of professors).

CMD618 Cosmetic Dermatology clinic I

History taking, physical examination of out-patients; common aesthetic dermatologic conditions, symptoms and signs, laboratory investigations, diagnosis, treatment and follow-up. (under the supervision of professors).

CMD619 Cosmetic Dermatology clinic II

History taking, physical examination of out-patients; complicated aesthetic dermatologic conditions, symptoms and signs, laboratory investigations, diagnosis, treatment and follow-up. (under the supervision of professors).

CMD711 Dermatosurgery

Treatment of skin diseases, aging skin and skin tumors by surgery and laser; excision and repair; electrosurgery; cryosurgery; ablative laser and chemical peel; non ablative laser and light therapy; botox and soft tissue augmentation; vascular laser and treatment of varicose vein; cosmetic and skin care in dermatology (under the supervision of professors).

CMD712 Hands-on experiences in Dermatology

Practice in Dermatological Procedures; fruit lab and biopsy; cadaver work-shop; laser and injection.

Evaluation Methods:

Clinical program, evaluation is based on an average score.

Cosmetic program, evaluation is divided into 2 levels: P (Pass) and N (Not pass), without counting credit units and without assigned scores.

CMD751 Cosmetic Dermatology

Introduction to cosmetic dermatology focused on most common diseases such as acne, melasma, freckle and hair problems. Deeply in pathogenesis of disease, modalities of treatment, updated new technology and methods for treatment. This subject also studies about cosmeceuticals: type, trend, skin penetration and 23 enhancement, how to choose for patient. Anti-aging includes introduction, topical and oral antiaging, food, vitamin and basic investigation for

antiaging. Stem cell therapy in cosmetic practice. Marketing and experience in cosmetic practice.

CMD752 Facial design and injection

Cosmetic dermatology 2 focused on facial design and injection for cosmetic purposes such as facial analysis, how to select the good candidate for each treatment. Moreover, the participants will learn about botulinum toxin injection, filler injection and fat transfer focusing on facial and body anatomy, mechanism and basic pharmacology on each product, contraindication and indication. How to manage risk and complications. This course will also have hands-on sessions for basic indications for the participants to gain more experiences under supervision.

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)

CMD723 Laser and Injection

Learn about the treatment of aesthetic dermatology using state-of-the-art and up-to-date equipment and technology. Deeply from basic principles, clinical application to the prevention and treatment of complications. This subject also studies the use of laser, radiofrequency and other technology to treat the cosmetic conditions such as pigmentary disorder, tattoos, hair loss, acne, scar, hair loss, photoaging, wrinkle and hair removal

5.3 Academic Thesis

CMD800 Thesis

Extensive research and literature review Creating a research outline
Conducting research based on the system by emphasizing the ethics in research
that creates new knowledge in dermatology, writing a thesis, presenting research
results for publication research articles for publication research Ethics in the
dissemination of the results, Ethics in the dissemination of academic works Under
the guidance and control of the thesis advisory committee.

Requirements for Thesis

Thesis Execution

- 1) Students are eligible to register for the thesis only after completing at least 2 regular semesters of coursework, accumulating no less than 12 credits, and maintaining a cumulative grade point average (GPAX) of not less than 3.00.
- 2) Students must write and present their thesis in English.
- 3) After registering for the thesis, students must submit their thesis proposal to the Dermatology Program Committee for the Dean of Chulabhorn International College of Medicine to appoint a thesis advisory and examination committee consisting of at least 3 members. This committee will provide guidance to the student, as well as conduct the thesis proposal defense and the final thesis defense.
- 4) Thesis advisors must possess qualifications that meet the standard criteria for graduate-level curricula prescribed by the Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation (OPS MHESI).

Thesis Proposal Examination

- 1) Students must submit their thesis proposal to the Thesis Proposal Examination Committee in accordance with the rules and procedures specified in the Thammasat University Regulations on Thesis.
- 2) Upon the student's submission of the thesis proposal examination request, the Dean shall appoint a 3-member Thesis Proposal Examination Committee. This committee must consist of the thesis advisor, a Thammasat University faculty member, and an external expert. The committee will collaboratively review and vet the thesis proposal. The thesis advisor must hold a doctoral degree or equivalent, or hold an academic rank of not less than Associate Professor in that field or a related discipline.
- 3) Students must register for the thesis in the semester in which they wish to take the thesis proposal examination.
- 4) Students must prepare the thesis proposal and submit it to the Graduate Studies Program, Chulabhorn International College of Medicine, with the approval of the thesis advisor appointed by the Dean of Chulabhorn International College of Medicine.

- 5) Students must receive a unanimous vote of approval for their thesis proposal from the Thesis Proposal Examination Committee.

Thesis Defense

- 1) Thesis examiners must meet the standard criteria for graduate program curricula set by the Ministry of Higher Education, Science, Research and Innovation (MHESI).
- 2) Students are eligible to take the thesis defense only after passing the required foreign language proficiency examination.
- 3) The thesis defense must be conducted in accordance with the regulations and directives of Thammasat University. To achieve an "S" (Satisfactory) grade, the student must receive a unanimous vote of approval from the Thesis Defense Committee.

Program Quality Control:

The program defines its quality measurement methods as follows:

The stakeholders involved in the quality control of the program are as follows:

- 1. University and College Academic Committees**

Supervise and oversee the overall quality of the program's teaching and learning management.

- 2. Program Committee and Program Faculty Members**

Responsible for program development and administration; collaboratively define guidelines for learning management, including creating a supportive learning environment for students; and monitor, evaluate, and continuously improve program implementation under the AUN-QA quality assurance guidelines, with annual reporting to the university at the end of each academic year.

- 3. Course Coordinators**

Responsible for preparing course specifications, planning teaching and learning management in collaboration with instructors, executing the courses, and monitoring course evaluations to ensure high-quality delivery.
