

Program Structure and Specification
Master of Science Program in Cosmetic Science
Curriculum Last Revised in 2020
for
Students Entering in Academic Year 2022

1. **Program Title :** Master of Science Program in Cosmetic Science

2. **Name of Degree**

Full name : Master of Science (Cosmetic Science)

Abbreviation : M.Sc. (Cosmetic Science)

3. **Responsible Units**

3.1 School of Cosmetic Science , Mae Fah Luang University

3.2 Office of the Postgraduate Studies, Mae Fah Luang University

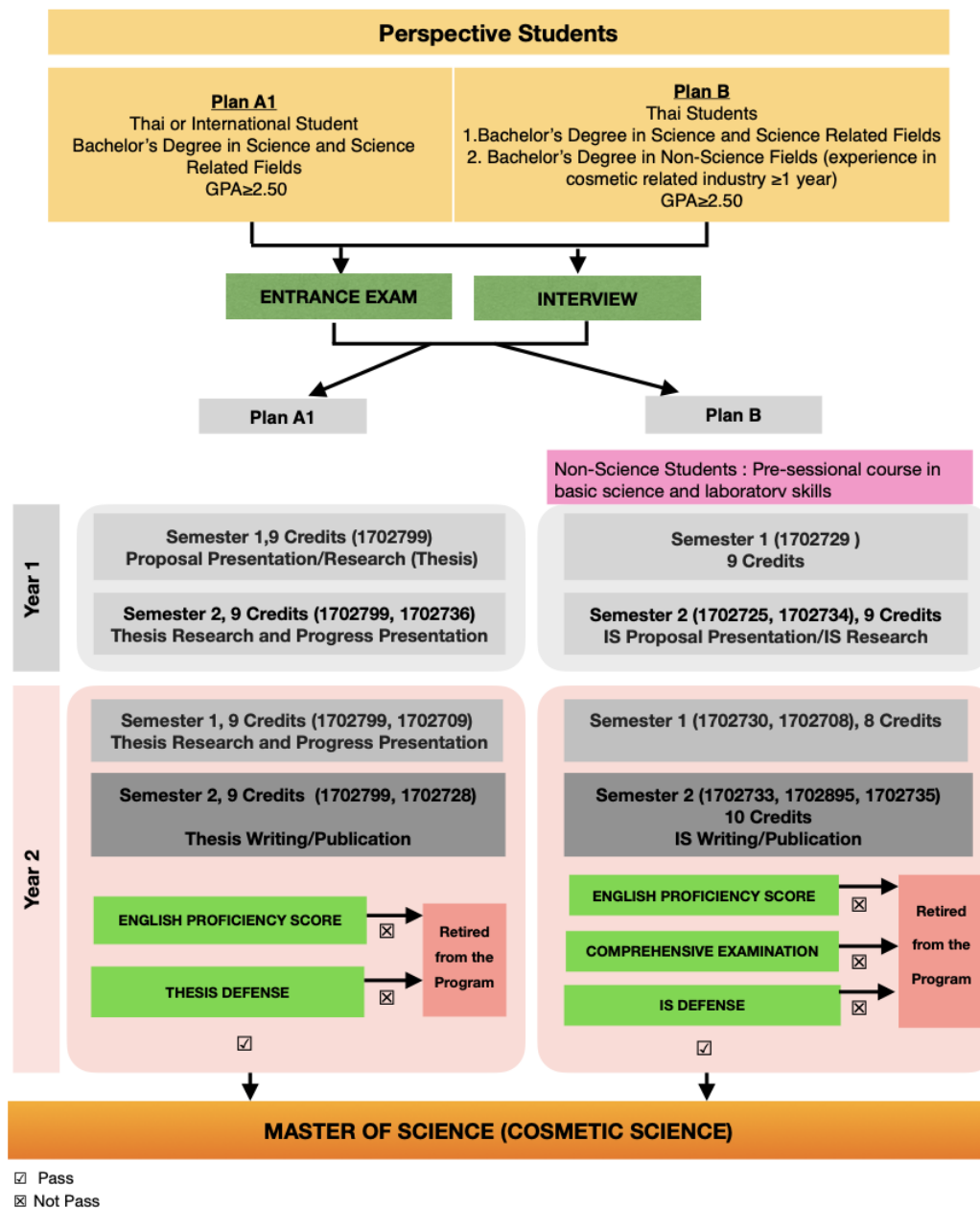
4. **Program Overview**

In 2009, Office of Higher Education Commission (OHEC), Ministry of Education, enforced the Outcome-Based Education (OBE) in Thailand in the form of Thailand Qualifications Framework (TQF), which is the regulation that all academic programs must follow. Our Master's Program in Cosmetic Science was subsequently revised in 2020 to comply with the TQF requirement and the adjusted curriculum was first applied to the students entering the program in the first semester of academic year 2021.

Here, a brief overview of the program structures and contents is explained. Figure 1 illustrates the overall structure of our program and the student path from entry to exit the program. Prospective students who meet the admission requirements of the program will be able to enter the program through the entrance exam and the interview process. Noteworthy, Plan B program has a unique feature that incoming students can be bachelor's degree student with Science Degree, related Science Degree or with other Degrees but having at least 1 year experience in cosmetic related fields. Students who enter Plan A1, in another word, is research plan, will start to propose their research proposal in Semester 1/Year 1 and if approved by Committee, they may start the research work. The thesis Advisory Committee will be appointed to provide guidance and monitor the student progress on their research. The progress of research will be accessed every semester. Upon completion of the thesis research with output achievement required by the programs, graduate students have to write and orally defend their thesis. The writing must be in English language. Before the defense, the English proficiency scored must be submitted and approved. By passing all the requirements, students are awarded their degree. For Plan B, the program is in the 4 main modules which each module is planed in one particular semester of the four semesters.

Pre-session course in basic science and laboratory skills is required for Non-Science Students prior to the first semester. In second semester of Year 1, the students proceed to Independent Student (IS) research. The IS Advisory Committee will be appointed to provide guidance and monitor the student progress on their research. Before the students can proceed

with their IS research, they must present IS proposal for approval by the committee. Upon completion of the research project with output achievement required by the programs, graduate students have to write and orally defend their IS. The writing can be in both Thai or English language. Before the defense, students are assessed for their ability to integrate knowledge via comprehensive exam and the English proficiency scored must be also submitted and approved. By passing all the requirements, students are awarded their degree. Failure to pass the comprehensive examination and English proficiency requirement will result in the students being



terminated from the program.

Figure 1 Diagram showing the structure of Master Program in Cosmetic Science with the path that students can go through, from application process toward completion or termination of the degree

5. Philosophy and Expected Learning Outcomes of the Program

5.1 Philosophy of the Program:

Constructivist Theory is used as an important foundation for developing this program. The concepts of social constructivism and cognitive constructivism are combined to help students assimilate new information into their existing knowledge and to enable them to make the necessary adjustments to their existing intellectual framework. Problem-based learning is crucial to teaching and learning management by using complicated real-world issues to enhance their critical thinking to solve the problem through instructor support and interaction with others.

5.2 Expected Learning Outcomes of the Program:

Upon completion of the master program, graduates must be able to:

1. Demonstrate ethical behavior for research
2. Develop cosmetic products based on regulatory requirements
3. Follow the guideline for cosmetic advertising
4. Describe knowledge in cosmetic science and the related fields
5. Describe knowledge of research and cosmetic product development
6. Explain knowledge management for cosmetic science
7. Describe connection between the cosmetic science knowledge and other related field.
8. Implement cosmetic formulation in laboratory scale
9. Demonstrate knowledge integration in cosmetic formulation
10. Formulate cosmetic products that can be commercial launch
11. Demonstrate responsibility for assigned tasks
12. Assume responsibility for assigned roles
13. Demonstrate adaptive behaviors
14. Demonstrate ability to search for body of knowledge from quality sources of information and synthesize main ideas from search results
15. Use information technology to search, collect, process and present information efficiently and appropriately for the situation
16. Communicate effectively in a range of situations pertinent to academic and professional contexts
17. Possess management conceptual framework
18. Integrate management principles with product development.
19. Design knowledge management in cosmetic science
20. Manage the cosmetic science knowledge

6. Admission Requirements

6.1 Applicants must be a bachelor's degree in science or science related fields or a bachelor's degree in non-science areas having at least 1 year cosmetic related experience, with GPA of at least 2.50.

6.2 Applicants are required to take entrance examinations arranged by the School of Cosmetic Science. The entrance examinations are 1) Cosmetic-specific test , 2) Analytical thinking ability test, and an interview.

7. Selection Method

Applicants are selected based on academic credentials and/or examination results and interview according to rules and regulation of the Postgraduate Studies, Mae Fah Luang University.

8. Academic System

7.1 Semester system

Semester

7.2 Credit Assignment

The number of credits assigned to each subject is determined as follows:

7.2.1 Lecture or discussion consuming 15 hours per semester is equal to 1 credit hour.

7.2.2 Laboratory or practice consuming 30 hours per semester is equal to 1 credit hour.

7.2.3 Thesis/IS consuming 45 hours per semester is equal to 1 credit hour.

9. Language

9.1 Plan A1 : English is used in teaching and learning. Lecture materials are in English as well as in the assessment processes.

9.2 Plan B : Thai is used in teaching and learning. Lecture materials are in English or Thai languages as well as in the assessment processes.

10. Registration

10.1 Students must register as full time students.

11. Evaluation and Graduation Requirements

11.1 Evaluation

Student evaluation is in accordance with the rules and regulations of Mae Fah Luang University (See details at <http://www.grad.mfu.ac.th>).

11.2 Graduation Requirements

All master's degree students must

11.2.1 Register credits

-Plan A1 :Register for 36 credits of Thesis.

-Plan B :Register for at least 31 credits of coursework and 5 credits of Indecent Study (IS).

Total credits acquired must at least 36 credits. A cumulative GPA must be 3.00 or more.

11.2.2 Pass the English Proficiency Examination offered by the Mae Fah Luang University or equivalent.

11.2.3 Present Thesis (Plan A1) or Independent Study or IS (Plan B) and pass the oral defense examination according to the rules and regulations of the Postgraduate Studies, Mae Fah Luang University.

11.2.4 Obtain at least one publication or a manuscript that has been accepted for publication as a journal article or a conference proceeding at the national or international level.

12. Library

Our Mae Fah Luang University Library possesses more than 10,000 books. Many journals can be accessed online. Besides, a lot of text books and journals (in both electronic and printed formats) are also available.

13. Program Structure

13.1 The number of credits required for the program

Number of credits required for the program is at least 36 credits

13.2 Curriculum Structure

13.2.1 Plan A1

- | | |
|---|-------------------|
| 1) Thesis | 36 Credits |
| 2) Non-credit required course (3 Courses) | |
| Total no less than | 36 Credits |

13.2.2 Plan B

- | | |
|---------------------------|-------------------|
| 1) Required Course | 31 Credits |
| 2) Independent Study | 5 Credits |
| Total no less than | 36 Credits |

13.3 Course Requirements

13.3.1 Plan A1

- | | |
|---|---|
| 1) Thesis | <u>Credits (lecture-lab-self study)</u> |
| 1702799 Thesis | 36 (0-108-36) |
| 2) Non-credit required course (3 Courses) | <u>Credits (lecture-lab-self study)</u> |
| 1702709 Seminar | 0 (0-3-1) |
| 1702736 Research Methodology | 0 (2-0-4) |
| 1702728 Cosmetic Entrepreneurship | 0 (1-0-2) |

13.3.2 Plan B

1) Required Courses	<u>Credits (lecture-lab-self study)</u>
1702729 Advanced Cosmetic Science for Skin Care	9 (8-3-17)
1702725 Advanced Cosmetic Science for Color and Make-up	7 (6-3-13)
1702730 Advanced Cosmetic Science for Hair, Nail, and Oral Care	7 (6-3-13)
1702733 Advanced Aromatic Science	4 (3-3-7)
1702734 Research Methodology	2 (2-0-4)
1702708 Seminar	1 (0-3-1)
1702735 Cosmetic Entrepreneurship	1 (1-0-2)

2) Independent Study	<u>Credits (lecture-lab-self study)</u>
1702895 Independent Study	5(0-15-5)

13.4 Course Description

13.4.1 Plan A (A1)

1) Thesis

36 Credits

1702799 Thesis

36 (0-108-36)

Extensive literature review related to research of interest; preparation of a research proposal draft including a research topic, significance of problems, research objectives, and research procedures under advising of the advisor; progress report preparation; preparing, defending and submitting the complete thesis.

2) Non-credit required course

1702709 Seminar

0 (0-3-1)

Presentation of academic and interesting research; discussion of the assigned topics; attendance of special lecture topics of interest in current research and developments in cosmetic science from academic and industrial lecturers.

1702736 Research Methodology

0 (2-0-4)

Research methodology and procedure; research plan and literature review methods; research design; data collection; data analysis and interpretation; Concept and statistical methodologies for research application; sampling; analysis of variance; statistical packages for data analysis and interpretation; research presentation and writing for publication; researcher ethics; ethics for clinical study.

1702728 Cosmetic entrepreneurship

0 (1-0-2)

Introduction to entrepreneurship; cosmetic knowledge and business management, cosmetic laws; business laws; market and operation feasibility; marketing and digital marketing; accounting and business tax; financial analysis and financial feasibility.

13.4.2 Plan B

1) Required Courses

31 Credits

1702729 Advanced Cosmetic Science for Skin

9 (8-3-17)

care
cosmetics.

Structure and functions of skin; classification of skin conditions and skin problems; raw materials; formulation and development of skin care cosmetics; evaluation of skin cosmetics; skin enhancer technology; trends, topics and issues related to skin care

1702725 Advanced Cosmetic Science for Color and Make-up

7 (6-3-13)

technologies
regulation on

Color theory; type of colorants in color cosmetics; raw materials; formulation and development of color cosmetics; evaluation of color cosmetics; trends, novel and innovations, topics and issues related to color cosmetics; laws and cosmetic products

1702730 Advanced Cosmetic Science for Hair, Nail, and Oral Care

7 (6-3-13)

related to their

Hair, nail, and oral cavity structure and functions; cosmetic products for hair; raw materials; formulation and development of cosmetics for hair, nail, and oral cares; evaluation of cosmetics for hair, nail and oral cares; trends, topics, and issues products.

1702733 Advanced Aromatic Science

4 (3-3-7)

related to

Olfactory system; history and development of fragrances; fragrance chemistry; types, preparation of fragrances; principle of aromatherapy and spa; types, formulation and development of spa and fragrance products; product evaluation; trends and topics aromatic science.

1702734 Research Methodology

2 (2-0-4)

statistical
statistical packages
for publication;

Research methodology and procedure; research plan and literature review methods; research design; data collection; data analysis and interpretation; concept and methodologies for research application; sampling; analysis of variance; for data analysis and interpretation; research presentation and writing researcher ethics; ethics for clinical study.

1702708 Seminar

1 (0-3-1)

Presentation of academic and interesting research; discussion of the assigned topics; attendance of special lecture topics of interest in current research and developments in cosmetic science from academic and industrial lecturers.

1702735 Cosmetic entrepreneurship

1 (1-0-2)

feasibility.

Introduction to entrepreneurship; cosmetic knowledge and business management, cosmetic laws; business laws; market and operation feasibility; marketing and digital marketing; accounting and business tax; financial analysis and financial

2) Independent Study

5 Credits

1702895 Independent Study

5 (0-15-5)

Extensive literature review related to research of interest; preparation of a research proposal draft consists of significance of problems, research objectives, and research procedures closely supervised by the supervisors; report preparation; defending and submitting the complete independent study.

13.5 Study Plan

13.5.1 Plan A (A1)

Year	Semester 1	Semester 2
1	1702799 Thesis 9 (0-3-1)	1702799 Thesis 9 (0-3-1)
	Total 9 Credits	1702736 Research Methodology 0 (2-0-4) Total 9 Credits
2	1702799 Thesis 9 (0-3-1)	1702799 Thesis 9 (0-3-1)
	1702709 Seminar 0 (0-3-1) Total 9 Credits	1702728 Cosmetic Entrepreneurship 0 (1-0-2) Total 9 Credits

13.5.1 Plan B

Year	Semester 1	Semester 2
1	1702729 Advanced Cosmetic Science for Skin Care 9 (8-3-17)	1702725 Advanced Cosmetic Science for Color and Make-up 7(6-3-13)
	Total 9 Credits	1702734 Research Methodology 2 (2-0-4) Total 9 Credits
2	1702730 Advanced Cosmetic Science for Hair, Nail, and Oral Care 7(6-3-13)	1702733 Advanced Aromatic Science 4 (3-3-7)
	1702708 Seminar 1(0-3-1) Total 8 Credits	1702895 Independent Study 5(0-15-5) 1702735 Cosmetic Entrepreneurship 1 (1-0-2) Total 10 Credits

13.6 Research Projects of the Program

Staff at the School of Cosmetic Science has received many research grants from local agencies (e.g. National Science and Technology Development Agency (NSTDA), Thailand Science Research and Innovation (TSRI) , and National Research Council of Thailand (NRCT). Major research interests in the School are:

- Phytochemical and Cosmeceuticals
- Natural Product and Bioactivities
- Nanotechnology in Cosmetics
- Cosmetic Formulation and Efficacy Evaluation

14. Proposal Presentation

By the second year of study, students must submit a document to the office of the Postgraduate Studies for appointment of Thesis (Plan A1) or Independent Study (IS) (Plan B) Committee consisting of one or two faculty members, one of which is student's major advisor while another one (or more) can be any academic staff either within or outside Mae Fah Luang University. After approval of research proposal, this same committee will serve as Advisory Committee monitoring and providing guidance to student regarding his/her research.

15. Defense

Upon completion of research and Thesis or IS writing along with approval from the Advisory Committee, students must submit a document to the office of the Postgraduate Studies for appointment of Defense Committee consisting of 3-4 members: a committee chair, an external examiner and the Advisory Committee (1 or 2 members). After passing the oral defense, students can submit final Thesis /IS to the office of the Postgraduate Studies.

16. Collaboration with Other Departments

We also have collaborations with scientists at other research institutes and universities in Thailand and overseas.

17. Students Job Opportunities

A large number of our student alumni work as scientists in cosmetic and chemical industries, technical specialists for scientific products, sales representative of scientific products or as teachers in school, researchers or research assistance in research institutes.