

M.S. IN COSMETIC SCIENCE AND FORMULATION DESIGN

Code	Title	Hours
Required Courses		
PHPR 5800	Cosmetic Ingredients and Product Forms	3
PHPR 5820	Cosmetic Trends and Claims	3
PHPR 5830	Cosmetic Regulations, Ethics, and Practices	3
PHPR 5840	Formulating Skin and Sun Care Products	3
PHPR 5850	Formulating Makeup, Hair Care, and Oral Care Products	3
PHPR 6710	Skin Delivery of Cosmetic Actives	3
PHPR 6770	Cosmetic Science Project	3
PHCL 6710	Fundamentals of Biostatistics and Research Analysis	3
Electives		6
PHPR 6720	Global Cosmetic Regulations	
PHPR 6730	Sustainable Product Development	
PHPR 6740	Skin Microbiome	
PHPR 6750	Cosmetic Science Formulation Lab	
Total Hours		30

Combined Bachelor's to master's - Cosmetic Science and Formulation Design, BSPS to MS in Cosmetic Science and Formulation Design

Undergraduate students accepted to the University of Toledo's Cosmetic Science and Formulation Design Pipeline Program option will be admitted to the MS in Cosmetic Science and Formulation Design and allowed to complete up to three graduate level classes (nine credit hours) during their final academic year of undergraduate studies. Students admitted into the pipeline program must apply for admission to the College of Graduate Studies for the semester that they intend to matriculate. They will then continue into the graduate program upon completion of the undergraduate degree requirements. The graduate coursework (up to nine hours) may be applied to completion of both undergraduate and graduate degree requirements. It will be the joint responsibility of the faculty and administrators in the undergraduate and graduate programs to supervise students admitted to the combined program option, to ensure that the limit of nine hours taken as an undergraduate is strictly enforced, and to request that the College of Graduate Studies change their matriculation from Undergraduate to Graduate when they meet all undergraduate degree requirements.

The following provisions apply for classes taken for graduate credit: 1) graduate classes taken at The University of Toledo only after the student is accepted in the program, 2)PHPR 5800 Cosmetic Ingredients and Product Forms, PHPR 5820 Cosmetic Trends and Claims, and PHPR 5830 Cosmetic Regulations, Ethics, and Practices may be included in the approved nine semester hours of graduate credit taken as an undergraduate. Students interested in the combined program must submit a graduate admission application to the College of Graduate Studies.

Combined Bachelor's to master's - BSPS in drug discovery and design to MS in Cosmetic Science and Formulation Design

Undergraduate students accepted to the University of Toledo's Cosmetic Science and Formulation Design Pipeline Program option will be admitted to the MS in Cosmetic Science and Formulation Design and allowed to complete up to three graduate level classes (nine credit hours) during their final two academic years of undergraduate studies. Students admitted into the pipeline program must apply for admission to the College of Graduate Studies for the semester that they intend to matriculate. They will then continue into the graduate program upon completion of the undergraduate degree requirements. The graduate coursework (up to nine hours) may be applied to completion of both undergraduate and graduate degree requirements. It will be the joint responsibility of the faculty and administrators in the undergraduate and graduate programs to supervise students admitted to the combined program option, to ensure that the limit of nine hours taken as an undergraduate is strictly enforced, and to request that the College of Graduate Studies change their matriculation from Undergraduate to Graduate when they meet all undergraduate degree requirements.

The following provisions apply for classes taken for graduate credit: 1) graduate classes taken at The University of Toledo only after the student is accepted in the program, 2)PHPR 5800 Cosmetic Ingredients and Product Forms, PHPR 5830 Cosmetic Regulations, Ethics, and Practices, and PHCL 6710 Fundamentals of Biostatistics and Research Analysis may be included in the approved nine semester hours of graduate credit taken as an undergraduate. Students interested in the combined program must submit a graduate admission application to the College of Graduate Studies.

Combined bachelor's to master's - B.S. in Chemistry(ACS-Certified Concentration or Materials Chemistry Concentration)/M.S. in Cosmetic Science and Formulation Design

Undergraduate students in the B.S. in Chemistry (ACS-Certified Concentration or Materials Chemistry Concentration) program who are accepted into the accelerated degree pipeline program option will be admitted to the PH-CSFM-MS (M.S. in Cosmetic Science and Formulation Design) and allowed to complete up to nine credit hours or graduate courses after reaching junior status. Students must request admission into the pipeline program through their advisor no earlier than the spring of their sophomore year and no later than the summer after their junior year. To qualify for the pipeline program, an undergraduate student must have a GPA of at least 2.7 and have the permission of their advisor. Students accepted into the pipeline program will develop a plan of study in consultation with their advisors in Chemistry and Cosmetic Science and must apply for admission to the College of Graduate Studies for the semester that they intend to matriculate.

Once the student is admitted to the graduate program, there will be two matriculations, (1) undergraduate program will remain primary and (2) graduate program becomes secondary. They will then continue into the graduate program upon completion of the undergraduate degree requirements. The graduate coursework (up to nine hours) completed in the final undergraduate year may be applied to completion of both undergraduate and graduate degree requirements. It will be the joint responsibility of the faculty and administrators in the undergraduate

and graduate programs to supervise students admitted to the combined program option, to ensure that the limit of nine hours taken as an undergraduate is strictly enforced, and to request that the College of Graduate Studies change their matriculation from Undergraduate to Graduate when they meet all undergraduate degree requirements. When the student applies for graduation from the undergraduate program an automatic registration hold is placed on student records. However, as there is a second active program tied to the student's record, the Registrar's Office will send the list of students with an active graduate matriculation to COGS to ensure that future registration at the graduate-level is not restricted.

The following provisions apply for classes taken for graduate credit: 1) Graduate classes taken at The University of Toledo only after the student is accepted in the BS/MS program, 2) For students in the B.S. in Chemistry/M.S. in Cosmetic Science and Formulation Design pipeline, the following courses may be included in the approved nine semester hours of graduate credit taken as an undergraduate:

PHPR 5800	Cosmetic Ingredients and Product Forms
PHPR 5820	Cosmetic Trends and Claims
PHPR 5830	Cosmetic Regulations, Ethics, and Practices

These will count as electives towards 120 credit hours for the B.S. in Chemistry and are required courses for the M.S. in Cosmetic Science and Formulation Design.

MS in Cosmetic Science and Formulation Design Hybrid Program - Thesis and non-thesis Option

Student's seeking the MS Hybrid option need to complete the following courses as partial fulfillment of their requirement for an MS degree: 1) PHPR 5800 - Cosmetic Ingredients and Product Forms, PHPR 5830 - Cosmetic Regulations, Ethics, and Practices, 3) PHPR 5850 - Formulation Makeup, Hair Care, and Oral Products, 4) PHPR 5840 Formulating Skin and Sun Care Products, PHPR 6960 M.S. THesis Research in Pharmacy (minimum 12 credit hours) and Elective courses up to 6 credit hours.

Elective Courses are from the following list: PHPR 6730 - Sustainable Product Development, PHPR 5820 Cosmetic Trends and Claims, PHPR 6740 Skin Microbiome, PHPR 6710 - Skin Delivery of Cosmetic Actives, PHPR 6720 Global Cosmetic Regulations, PHCL 6710 Fundamentals of Biostatistics and Research Analysis.

Additional Requirements for Hybrid Option:

- Total number of credit hours at the graduate level (course numbers of 5000 and 6000) must be at least 30.
- Maintenance of a cumulative graduate GPA of 3.0 or higher.

In addition, the following items also must be completed for the thesis option:

- Preparation of a written MS thesis based upon the results of an original research investigation performed by the student during the MS program at UToledo
- Acceptance of this thesis by the MS thesis adviser and the thesis advisory committee

- Successful oral defense of the thesis before the thesis advisory committee

Or, the following items must be completed for the non-thesis option:

- Preparation of a written project report performed by the student during the MS program at UToledo.
- Acceptance of this project by the MS project adviser and the project advisory committee
- Successful oral presentation of the project report before a committee

First Year		
First Term		Hours
PHPR 5800	Cosmetic Ingredients and Product Forms	3
PHPR 5830	Cosmetic Regulations, Ethics, and Practices	3
Hours		6
Second Term		
PHPR 5850	Formulating Makeup, Hair Care, and Oral Care Products	3
PHPR 5820	Cosmetic Trends and Claims	3
Hours		6
Third Term		
PHCL 6710	Fundamentals of Biostatistics and Research Analysis	3
PHPR 5840	Formulating Skin and Sun Care Products	3
Hours		6
Second Year		
First Term		Hours
PHPR 6710	Skin Delivery of Cosmetic Actives	3
Elective		3
Hours		6
Second Term		
PHPR 6770	Cosmetic Science Project	3
Elective		3
Hours		6
Total Hours		30

MS in Cosmetic Science and Formulation Design Hybrid Program - Thesis and non-thesis Option.

Master's students need to complete the following courses as partial fulfillment of their requirement for an MS degree:

First Year		
First Term		Hours
PHPR 5800	Cosmetic Ingredients and Product Forms	3
PHPR 5830	Cosmetic Regulations, Ethics, and Practices	3
Hours		6

Second Term

PHPR 5850	Formulating Makeup, Hair Care, and Oral Care Products	3
Hours		3

Third Term

PHPR 5840	Formulating Skin and Sun Care Products	3
Hours		3

Second Year**First Term**

PHPR 6960	M.S. Thesis Research In Pharmacy	1-6
PHPR 6960 minimum 12 hours		
Electives up to 6 hours		
Hours		1-6
Total Hours		13-18

Online elective course options - students can take other elective courses as well; however, for this, they need the program director's approval prior to taking the course.

Code	Title	Hours
PHPR 5820	Cosmetic Trends and Claims	3
PHPR 6720	Global Cosmetic Regulations	3
PHCL 6710	Fundamentals of Biostatistics and Research Analysis	3
PHPR 6710	Skin Delivery of Cosmetic Actives	3
PHPR 6730	Sustainable Product Development	3
PHPR 6740	Skin Microbiome	3

Additional Requirements for Hybrid Option:

- Total number of credit hours at the graduate level (course numbers of 5000 and 6000) must be at least 30.
- Maintenance of a cumulative graduate GPA of 3.0 or higher.

In addition, the following items also must be completed for the thesis option:

- Preparation of a written MS thesis based upon the results of an original research investigation performed by the student during the MS program at UToledo
- Acceptance of this thesis by the MS thesis adviser and the thesis advisory committee
- Successful oral defense of the thesis before the thesis advisory committee

Or, the following items must be completed for the non-thesis option:

- Preparation of a written project report performed by the student during the MS program at UToledo.
- Acceptance of this project by the MS project adviser and the project advisory committee
- Successful oral presentation of the project report before a committee

Cosmetic Regulatory Affairs Graduate Certificate**First Year**

First Term		Hours
PHPR 5800	Cosmetic Ingredients and Product Forms	3
Hours		3

Second Term

PHPR 5830	Cosmetic Regulations, Ethics, and Practices	3
Hours		3

Third Term

PHPR 6720	Global Cosmetic Regulations	3
PHPR 5820	Cosmetic Trends and Claims	3
Hours		6
Total Hours		12

Students must successfully complete all courses listed in the Cosmetic Regulatory Affairs Graduate Certificate Plan of Study to earn the Graduate Certificate.

- 1. Demonstrate knowledge of ingredient function, physicochemical and biological properties, and proper ingredient selection to support product claims.
- 2. Interpret current and relevant regulations, and guidelines, and peer-reviewed scientific literature to assess the quality, efficacy, and safety of cosmetics and personal care products.
- 3. Design cosmetic and personal care products that are regulatory compliant globally and meet consumers' needs.
- 4. Define and appropriately apply basic and advanced pharmaceutical and cosmetic science terminology and abbreviations that are encountered in the practice of cosmetic science.
- 5. Apply pharmaceutical sciences and cosmetic science knowledge and skills to evaluate and solve problems.