

COSMETIC CHEMISTRY, B.S.

Program Description

The cosmetic chemistry major provides an interdisciplinary background and training in the chemistry, bioscience, business, and marketing necessary to prepare graduates for careers in the cosmetic and personal care industry. A central focus of the major will be connecting scientific principles to real world product design and consumer needs. Students will gain hands-on training in laboratory procedures, techniques, and instrumentation routinely employed in cosmetic science and research. The curriculum emphasizes core chemistry principles underlying cosmetic science while integrating practical business concepts necessary for graduates to be highly competitive for careers such as cosmetic product development, quality control, and commercialization.

Why Choose this Major?

Cosmetic chemistry undergraduate major is an interdisciplinary program blending a chemical and bioscience training with a business understanding relevant to cosmetic science and industry. The major highlights the chemistry of cosmetics and cosmetic ingredients. The curriculum prepares graduates to work in the cosmetics and personal care industries, including cosmetic product design and development, quality control, regulatory compliance (e.g. FDA), and marketing. Students will gain expertise in:

- Cosmetic formulation and ingredient functionality
- Product development and marketing
- Product stability and safety testing
- Regulatory compliance (FDA, EU, etc.)
- Sustainability and innovation in cosmetic product development

Graduates will be equipped to pursue careers in cosmetic R&D, product development, quality assurance, regulatory affairs, and related fields. The program also provides a strong foundation for graduate study in cosmetic science, pharmaceutical sciences, or related disciplines.

Degree Earned

Bachelor of Science (B.S.)

Required for Graduation

- Courses
 - Major: 18 Courses: 8 Chemistry, 1 Math, 1 Computer Science, 1 Business, 4 Biology, 1 Marketing or Innovation, 2 Electives
- Credits
 - Major: 62-65
 - Total: Must meet or exceed 120 completed credit hours in addition to satisfying all major and core requirements.
- GPA
 - Major: 2.0
 - Cumulative: 2.0

Student Learning Outcomes

Students will:

- Students will be able to apply the foundational chemistry, biochemistry, and materials science knowledge relevant to problems in cosmetic science.

- Students will explain and apply the principles of product development, marketing strategies, commercialization, and/or regulation relevant to the life cycle of cosmetic products.
- Students will apply quantitative and statistical skills to problems relevant to the cosmetic industry.
- Students will communicate information and scientific data relevant to the cosmetics industry effectively in discipline specific formats (e.g. poster presentations, written reports, business proposals, and oral discussions).
- Students will be able to safely execute chemistry laboratory procedures and techniques to collect data. Students will design experiments implementing these techniques and procedures to test hypotheses.

Progress Chart

Code	Title	Credits
Level One - Core Courses		
<i>Universal Required Courses</i>		
Students must complete the following 4 courses.		
ILO 8.1: Written Communication (https://catalog.lasalle.edu/undergraduate/ilo/)		
ENG 110	College Writing I: Persuasion	3
ILO 5.1: Information Literacy (https://catalog.lasalle.edu/undergraduate/ilo/)		
ENG 210	College Writing II: Research	3
ILO 1.1: Understanding Diverse Perspectives (https://catalog.lasalle.edu/undergraduate/ilo/)		
FYS 130	First-Year Academic Seminar	3
ILO 2.1: Reflective Thinking and Valuing (https://catalog.lasalle.edu/undergraduate/ilo/)		
REL 100	Religion Matters	3
<i>Elective Core Courses</i>		
Students must complete 1 course in each of the following 4 ILOs.		
ILO 3.1a: Scientific Reasoning (https://catalog.lasalle.edu/undergraduate/ilo/)		
CHM 111	General Chemistry I	4
ILO 3.1b: Quantitative Reasoning (https://catalog.lasalle.edu/undergraduate/ilo/)		
MTH 114	Applied Business Calculus	4
or MTH 120	Calculus I	
ILO 6.1: Technological Competency (https://catalog.lasalle.edu/undergraduate/ilo/)		
CSC 152	Computer Technology for the Sciences	3
ILO 8.1a/12.1: Oral Communication/Collaborative Engagement (https://catalog.lasalle.edu/undergraduate/ilo/)		
Choose course within ILO (https://catalog.lasalle.edu/undergraduate/ilo/)		3
<i>Distinct Discipline Core Courses</i>		
Students must complete 1 course in each of the following 4 ILOs. Each course must be from a different discipline. (A "discipline" is represented by the 3- or 4-letter prefix attached to each course.)		
ILO 4.1: Critical Analysis and Reasoning (https://catalog.lasalle.edu/undergraduate/ilo/)		
Choose course within ILO (https://catalog.lasalle.edu/undergraduate/ilo/)		4

ILO 9.1: Creative and Artistic Expression (<https://catalog.lasalle.edu/undergraduate/ilo/>)

Choose course within ILO (<https://catalog.lasalle.edu/undergraduate/ilo/>) 3

ILO 10.1: Ethical Understanding and Reasoning (<https://catalog.lasalle.edu/undergraduate/ilo/>)

Choose course within ILO (<https://catalog.lasalle.edu/undergraduate/ilo/>) 3

ILO 11.1: Cultural and Global Awareness and Sensitivity (<https://catalog.lasalle.edu/undergraduate/ilo/>)

Choose course within ILO (<https://catalog.lasalle.edu/undergraduate/ilo/>) 3

Universal Required Modules

Students must complete the following 2 non-credit modules.²

ILO 7.1a (<https://catalog.lasalle.edu/undergraduate/ilo/>)

Health Literacy Module

ILO 7.1b (<https://catalog.lasalle.edu/undergraduate/ilo/>)

Financial Literacy Module

Major Requirements

Level Two

Students must complete 1 course/learning experience in each of the 4 commitments.

ILO 2.2: Broader Identity (Capstone Course/Experience) (<https://catalog.lasalle.edu/undergraduate/ilo/>)

CHM 499 Chemistry Capstone 1

Select one ILO from 3.2a, 3.2b, 4.2, 5.2, 6.2, 7.2a, or 7.2b: Expanded Literacies (<https://catalog.lasalle.edu/undergraduate/ilo/>)

CHM 202 Organic Chemistry II (ILO 3.2a) 4

ILO 8.2b: Effective Expression (Writing-Intensive Course) (<https://catalog.lasalle.edu/undergraduate/ilo/>)

CHM 405 Materials Chemistry 4

Select one ILO from 10.2, 11.2, or 12.2: Active Responsibility (<https://catalog.lasalle.edu/undergraduate/ilo/>)

CHM 212 Quantitative Analysis (ILO 12.2) 4

All Other Required Courses

CHM 112 General Chemistry II 4

CHM 141 Introduction to Cosmetic Chemistry 3

CHM 201 Organic Chemistry I 4

CHM 411 Biochemistry I 4

BIO 210 Integrated Biology I- Molecules and Cells 4

BIO 231 Regulatory Affairs 3

BIO 303 Microbiology 4

BIO 320 Biostatistics 3

BUS 204 Principles of Marketing with Applications 3

Select one of the following: 3-4

BIO 330 Life Science Innovation

MKT 302 Advertising and Promotional Management

Select two of the following: 6-8

BIO 305 Mammalian Physiology

BIO 405 Histology

MKT 401 Marketing Research

PHLT 357 Women, Gender, And Public Health

Free Electives

In addition to the requirements listed above, students must take enough courses to the fulfill graduation credit requirements for their School and major.

Total Credits 93-96

Recommended Course Sequence

Course	Title	Credits
First Year		
First Semester		
CHM 111	General Chemistry I	4
CHL 111	Laboratory	0
Credits		4
Second Semester		
CHM 112	General Chemistry II	4
CHL 112	Laboratory	0
CHM 141	Introduction to Cosmetic Chemistry	3
BIO 210	Integrated Biology I- Molecules and Cells	4
BIL 210	Laboratory	0
Credits		11
Second Year		
First Semester		
CHM 201	Organic Chemistry I	4
CHL 201	Laboratory	0
MTH 114	Applied Business Calculus	4
Credits		8
Second Semester		
CHM 202	Organic Chemistry II	4
CHL 202	Laboratory	0
BUS 204	Principles of Marketing with Applications	3
Credits		7
Third Year		
First Semester		
CHM 405	Materials Chemistry	4
CHL 405	Materials Chemistry Lab	0
Elective		3-4
Credits		7-8
Second Semester		
BIO 231	Regulatory Affairs	3
BIO 320	Biostatistics	3
BIO 330 or MKT 302	Life Science Innovation or Advertising and Promotional Management	4
Credits		10
Fourth Year		
First Semester		
CHM 411	Biochemistry I	4
CHL 411	Laboratory	0
Elective		3-4
MKT 302 or BIO 330	Advertising and Promotional Management or Life Science Innovation	3-4
Credits		10-12
Second Semester		
BIO 303	Microbiology	4
BIL 303	Laboratory	0
CHM 499	Chemistry Capstone	1
Credits		5
Total Credits		62-65

Course Descriptions

(215) 951-1570

Code	Title	Credits
CHM 111	General Chemistry I	4
CHL 111	Laboratory	0
CHM 112	General Chemistry II	4
CHL 112	Laboratory	0
CHM 141	Introduction to Cosmetic Chemistry	3
CHM 201	Organic Chemistry I	4
CHL 201	Laboratory	0
CHM 202	Organic Chemistry II	4
CHL 202	Laboratory	0
CHM 212	Quantitative Analysis	4
CHL 212	Laboratory	0
CHM 405	Materials Chemistry	4
CHL 405	Materials Chemistry Lab	0
CHM 411	Biochemistry I	4
CHL 411	Laboratory	0
CHM 499	Chemistry Capstone	1
BIO 210	Integrated Biology I- Molecules and Cells	4
BIL 210	Laboratory	0
BIO 231	Regulatory Affairs	3
BIO 320	Biostatistics	3
BIO 303	Microbiology	4
BIL 303	Laboratory	0
BIO 305	Mammalian Physiology	4
BIL 305	Laboratory	0
BIO 330	Life Science Innovation	4
BIO 405	Histology	4
BIL 405	Laboratory	0
BUS 204	Principles of Marketing with Applications	3
MTH 114	Applied Business Calculus	4
MTH 120	Calculus I	4
MKT 302	Advertising and Promotional Management	3
MKT 401	Marketing Research	3
PHLT 357	Women, Gender, And Public Health	3

Contact Information

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