Seneca POLYTECHNIC

2024-2025

BACHELOR OF SCIENCE - COSMETIC SCIENCE (BSCS)

About the Program

The Bachelor of Science – Cosmetic Science program is the first degree of its kind in Canada and is designed to equip you with industry-relevant skills and experience for careers in the cosmetic and personal care industry.

This innovative three-year degree program intersects elements of science and art by providing a strong foundation in core sciences, such as biology and chemistry, alongside a specialization in cosmetic product formulation, including colour cosmetics. Foundational concepts are further explored through courses in organic and analytical chemistry, as well as the anatomy and physiology of hair, skin and nails.

Through the program's sensorial and comprehensive curriculum, you will exercise your creative skills and gain hands-on experience with raw materials and colour theory. You will learn how to design and develop cosmetic formulations — from skin care to colour cosmetics — participate in regulatory applications, oversee quality assurance and more. The curriculum also includes a focus on equity, diversity and inclusion (EDI), through the exploration and formulation of products that embrace different skin tones, conditions, genders and ages.

In addition to cosmetic product formulation, you will learn about sustainability through the study of responsible manufacturing practices and examine how these topics are addressed within the scope of marketing, social media and package design.

Credential Awarded

Bachelor Degree

Duration

6 Semesters (3 Years)

Starts

September

Program and Course Delivery

This program is offered in Seneca's hybrid delivery format. Some coursework is online and some must be completed in person. Students will need to come on campus to complete in-person learning requirements.

Skills

Throughout this program you will develop the following skills:

- Raw material research
- Cosmetic formulation and manufacturing
- Quality mindset
- Global regulations
- Product development process
- Sustainable practices in the cosmetic industry

Work Experience

Mandatory Degree Work Term

A work experience that includes at least one term in a formal work environment. The work term(s) may be a paid or unpaid position that is completed between two academic semesters and requires a minimum of 420 hours of work. Students must be in good standing and meet all identified requirements prior to participating in the work experience. The successful completion of the work term(s) is required for graduation. Eligibility for participation does not guarantee that a work position will be secured. Additional fees are required for the mandatory degree work term regardless of success in securing a work position.

Applied Research Spaces & Labs

As part of this program, you will have access to state-of-the-art equipment and labs at Seneca@York (https://www.senecapolytechnic.ca/campuses/yorklocation.html) including the Seneca Centre for Innovation in Life Sciences (https://www.senecapolytechnic.ca/innovation/research/centres/scils.html) (SCILS) — a first-of-its-kind applied research facility, where students, faculty and industry partners can collaborate to develop, enhance and validate innovations in diagnostics and cosmetics

Your Career

When you graduate from this program, these are the types of career options you can explore:

- Cosmetic formulation chemist
- Research and development chemist
- Quality assurance associate
- Quality control technician
- Regulatory affairs associate
- Sales/technical representative
- Product development associate

Marketing opportunities also exist in the packaging, product development, advertising and media fields.

Affiliations/Associations

- Canadian Cosmetic Cluster
- Cosmetics Alliance Canada
- Society of Cosmetic Chemists

Program of Study

Course Code	Course Name	Weekly Hours
Semester 1		
BIO115	Biology I	3
CHM105	Introduction to General Chemistry	3

MTH105	Math	6
CSP155	Lab Operations I	4
ENG106	Writing Strategies	3
Semester 2		
BIO255	Biology II	3
CHM205	Introduction to General Chemistry II	3
CSP205	Project Management Fundamentals	4
CSP255	Lab Operations II	4
LSP105	Computers and Data	4
Semester 3		
BIO305	Cosmetic Biology and Biochemistry	3
CSP315	Raw Materials I - Organic Chemistry	5
CSP305	Cosmetic Microbiology and Biological Assays	6
CSP325	Fragrances	3
plus: Liberal Studies Course (1)		3
Semester 4		
CSP405	Formulation I	6
CSP415	Raw Materials II: Analytical Chemistry Instrumentation	3
CSP425	Pigments, Powders and Poured Products	6
CSP435	Cosmetic Regulations and Quality Assurance	2
LSP305	Research and Statistics	4
WTP200	Work Term Preparation	1
Work-Integrated Learning Term		
CSP881	Bachelor of Cosmetic Science, Work Term	35
Semester 5		
CSP505	Formulation II	6
CSP515	Product Development, Sales and Marketing	3
CSP525	Product Evaluation and Claims Substantiation	3
CSP555	Capstone Project in Cosmetic Science I	5
Semester 6		
CSP615	Plant Bioactives and Biopharmaceuticals	3
CSP625	Sustainability and Corporate Social Responsibility	2
CSP655	Capstone Project in Cosmetic Science II	6
plus: Liberal Studies Course (2)		6

Seneca has been granted a consent by the Minister of Colleges and Universities to offer this degree for a seven-year term starting June 24, 2024. In conformity with the Minister's criteria and requirements, Seneca will submit an application for the renewal of the consent for this program 12 months prior to the expiration of the consent. Seneca shall ensure that all students admitted to the above-named program during the period of consent will have the opportunity to complete the program within a reasonable time frame.

Program Learning Outcomes

This Seneca program has been validated by the Credential Validation Service as an Ontario College Credential as required by the Ministry of Colleges and Universities.

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Safely operate analytical laboratory equipment for research, production, and testing of cosmetic products and raw materials with Good Manufacturing Practices (GMP).
- Interpret scientific data to support safety, efficacy, and release of quality-controlled products to satisfy consumer expectation and regulatory compliance.
- Effectively employ project management skills and digital competencies to analyze data, ideate, and develop commercially viable cosmetic and personal care products.
- Compare Canadian and international regulatory guidelines governing cosmetic production, marketing and sales to ensure product safety, sustainability and ethical standards are upheld.
- Design a project portfolio with team members utilizing recognized cosmetic product development principles to meet diverse, sustainability and efficacious consumer needs.
- Appraise suitable bioactive molecules, functional ingredients, colors, and additives for utility and function in the design of novel/innovative and existing cosmetic formulations.
- Execute product development milestones through efficient time management, effective decision making, and creative problem-solving utilizing gathered scientific knowledge.
- Evaluate peer and mentor feedback for optimal and efficient product improvement and dissemination of product attributes.
- Collaborate with multiple stakeholders using effective modes of communication while contributing to research and presentation results.

Admission Requirements

- Ontario Secondary School Diploma (OSSD) or equivalent or a mature applicant; including six courses from the University (U) or University/College (M) or College (C) stream with a minimum overall average of 65%.
- Required courses with minimum final grade of 65% in each:
  - English: Grade 12 (C or U), or equivalent course
  - Mathematics: Grade 12 (C or U), or Grade 11 (M or U), or equivalent course
  - Biology: Grade 12 (C or U), or Grade 11 (M or U) , or equivalent course
  - Chemistry: Grade 12 (C or U), or Grade 11 (M or U) , or equivalent course

Learn about Seneca's free English upgrading course (https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options/english-12u-equivalency.html) and math upgrading course (https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options/math-12u-equivalency.html) for applicants who don't meet the

high school requirements, as well as recommended upgrading for applicants who don't meet their academic subject requirements. (https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options.html)

International Student Information

International admissions requirements vary by program and in addition to English requirements (https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/english-requirements.html), programs may require credits in mathematics, biology, and chemistry at a level equivalent to Ontario's curriculum, or a postsecondary degree or diploma, equivalent to an Ontario university or college. Program-specific pre-requisite courses and credentials are listed with the admission requirements on each program page. To review the academic requirements please visit: Academic Requirements - Seneca, Toronto, Canada (senecapolytechnic.ca) (https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/academic-requirements.html).

Pathways

As a leader in academic pathways, we offer a range of options that will allow you to take your credential further in another Seneca program or a program at a partner institution.

To learn more about your eligibility, visit the Academic Pathways (https://www.senecapolytechnic.ca/pathways.html) web page.

Last updated: August 5, 2025 at 7:00 p.m.