



Biology/Cytotechnology BS/MS

Daemen College has partnered with Roswell Park Cancer Institute (RPCI) to offer a combined Bachelor's degree in Biology and a Master's degree in Cytotechnology in a 4+1 BS/MS degree curriculum.

What is Cytotechnology?

Cytotechnology is a specialty in the allied health field which involves the evaluation of cellular material from all body sites; recognizing normal and abnormal cytology, including but not limited to malignant neoplasms, precancerous lesions, infectious agents and inflammatory processes in gynecologic, non-gynecologic and fine needle aspiration specimens.



The cytotechnologist must possess the technical skills for a wide variety of cytologic laboratory specimen preparations including a basic knowledge of contemporary procedures and technologies applicable to the practice of cytology, which includes but is not limited to human papillomavirus (HPV) testing, fluorescence-in-situ hybridization (FISH), immunohistochemistry and cell search assays. In addition, continuing demand for support for various technological advances in the field of pathology requires continuing education and assessment of the cytotechnology professional.

Program Overview

The BS/MS in Biology/Cytotechnology will rigorously prepare students for work in a variety of cytotechnology environments. Our BS students complete a strong foundation in the liberal arts to develop skills employers desire, such as strong critical thinking and excellent written communication. In addition, Biology BS students take a variety of required and elective science courses through which they develop the knowledge base and analytical skills needed to excel in their graduate studies at Roswell Park Cancer Institute. During their fourth year at Daemen, cytotechnology students begin their graduate course work. The graduate program runs for 12 months and involves specialized, intensive study at Daemen College and RPCI.

At the end of the five-year program, students are awarded a MS degree from Daemen College in Cytotechnology and are eligible to take the national certification exam given by the Board of Registry of the American Society for Clinical Pathology.

Courses

The BS in Biology for cytotechnology has been carefully designed to provide our students with all of the necessary knowledge and skills needed to succeed at the graduate level and beyond. In addition to introductory biology and chemistry, students will take upper level courses in cell biology, microbiology, anatomy, physiology, molecular biology, and immunology. Students will also work closely alongside Daemen faculty to design and complete original research for their senior thesis. Thesis research allows students to deepen their understanding of science concepts through their application to a real-world question as well as allowing students to develop the research skills they will call upon in the graduate portion of the program.

Recent Graduates:

Graduates from the BS/MS in Biology/Cytotechnology are now employed as cytotechnologists at Roswell Park Cancer Institute and University of Rochester Medical Center.

Program Structure: Degrees are conferred separately for this BS/MS program. No MS will be conferred without completion of the full BS/MS curriculum.

First-Year Student Admission Criteria:

Acceptance into the lower division of the Biology major requires successful completion of high school chemistry and mathematics through trigonometry.

Admission into the Upper Division of the Program:

Students pursuing a Biology degree must apply for upper division status during the spring of their sophomore year. Students interested in pursuing the cytotechnology degree program will be evaluated at this time by both Daemen College and Roswell Park Cancer Institute faculty and staff. The following criteria will be used to evaluate students and determine acceptance into the program:

1. A minimum grade of C in all science courses
2. Minimum science grade point average (GPA) of 3.00
3. An overall grade point average (GPA) of 3.30 or higher
4. Completion of: BIO109/L-110/L; CHE110/L-111/L; BIO325/L, BIO308/L, CHE301/L-302/L; MTH134 (if required as prerequisite to MTH144), MTH144, NSC231
5. Laboratory skills in histology and other molecular techniques (i.e., ability to use a microscope, patience in analysis of data, precision of data analysis)
6. Demonstrated communication skills as evidenced in interviews with Daemen and RPCI faculty and staff

Transfer student admission to upper division will be based on prior academic performance, space availability, and the requirements referenced above.