

PHARMACEUTICAL MANUFACTURING TECHNOLOGY

Associate in Applied Science Degree | Career Program
Department of Chemistry and Chemical Technology

The Pharmaceutical Manufacturing Technology (PMT) program is a specialized chemical technology program designed to meet the needs of the pharmaceutical and related industries (cosmetics, food, plastics, custom chemicals, research centers, pilot plants etc.). The PMT curriculum prepares students to work in manufacturing, research and development and quality control and quality assurance departments of pharmaceutical, cosmetics and related chemical industries. Today's industrial environment requires technicians well-trained in state-of-the-art instruments, computer methods, safety protocols and federal and state government regulations.

The PMT program provides a solid foundation in liberal arts and sciences combined with specialized training in the field. Students also have the option of transferring to science and engineering bachelor's programs or to pharmacy schools to continue their education. The program articulates with SUNY Empire State College. Visit the Transfer Planning website for details.

Curriculum Coordinator: Dr. Thomas Brennan

PHARMACEUTICAL MANUFACTURING TECHNOLOGY CURRICULUM (PATHWAYS)

60 Credits required for AAS Degree

Required Core

A. English Composition

- ENG 110 Fundamentals of Composition and Rhetoric
OR ENG 111 Composition and Rhetoric I (3 Credits)

C. Life and Physical Sciences

- CHM 11 General College Chemistry I (4 Credits)

Flexible Core

A. World Cultures and Global Issues

- HIS 10 History of the Modern World OR
HIS 11 Introduction to the Modern World (3 Credits)

D. Individual and Society

- COMM 11 Fundamentals of Interpersonal Communication (3 Credits)

E. Scientific World

- CHM 12 General College Chemistry II (4 Credits)

Additional Flexible Core Requirement - Scientific World

- BIO 11¹ General Biology I (4 Credits)

SUBTOTAL 21

Major Requirements

- ART 10² Art Survey (1 Credit)
- BIO 12¹ General Biology II (4 Credits)
- CHM 27 Principles of Laboratory Safety (2 Credits)
- CHM 31 Organic Chemistry I (5 Credits)
- CHM 32 Organic Chemistry II (5 Credits)
- CHM 37 Quantitative Instrumental Analysis (4 Credits)
- CHM 38 Computer Applications in Chemistry (2 Credits)
- CHM 39 Foundations of Pharmaceutical Process Technology (3 Credits)
- CHM 40 Pharmaceutical and Chemical Technology (3 Credits)
- ENG 23 Scientific and Technical Writing (3 Credits)
- Free Electives to complete 60 credit requirement (1-2 Credits)
- MTH 13³ Trigonometry and College Algebra (3 Credits)
- MTH 14³ Algebra and Introduction to Calculus (3 Credits)
- PMT 41 Pharmaceutical Chemistry (3 Credits)
- PMT 42 Pharmaceutical Product Preparation (3 Credits)
- PMT 43 Pharmaceutical Laws and Regulations (2 Credits)
- Restricted Electives⁴ (5-6 Credits)

SUBTOTAL 39

¹ Students can substitute PHY 11 for BIO 12. Students who wish to substitute both PHY 11 and PHY 12 for BIO 11 and BIO 12 need department approval.

² Students can substitute MUS 10, or any PEA one-credit course, or CPR 10, or WFA 10 for ART 10.

³ Students intending to transfer to four-year programs should substitute MTH 30 and MTH 31 and 32 for MTH 13 and MTH 14.

⁴ Students may choose any combination of restricted electives CHM 39, CHM 40, PMT 41, PMT 42 and PMT 43 to meet the program credits requirement.