Degree Map

A.S. in Chemistry leading to a B.S. in Pharmaceutical Sciences at York College (Dual/Joint Degree Program)

Catalog Year 2025-26

The number of credits you take each year will determine when you graduate. To graduate on time, you are strongly encouraged to enroll in at least 30 credits toward your degree during the calendar year, including fall and spring semesters and winter and summer sessions This degree map is designed for students who place into MA-440. Additional degree maps are available for students who place into other levels of mathematics. Please see the degree website or your advisor for more information.

Courses in **Bold Text** are prerequisites for later courses or only offered in the Fall or Spring semester and should be taken where indicated in the sequence.

Fall Semester #1 – Queensborough Community College

Courses	Credits	Prerequisites and Corequisites[1]
ENGL-101 English Composition I (Required Core 1A - English Composition)	3	Prerequisite: Complete developmental requirements in English
MA-440 Pre-Calculus Mathematics[2] (Required Core 1B - Mathematical & Quantitative Reasoning)	4	Prerequisites: MA-119 and MA-121 (C or better) or placement
CH-151 General Chemistry I[2] (Required Core 1C – Life & Physical Sciences)	4.5	Prerequisite: MA-119 and MA-121 or placement
One course from Flexible Core 2A, 2B, 2C, or 2D[3]	3	Check individual courses for prerequisites and corequisites
Total credits for the term	**14.5**	

Spring Semester #1 – Queensborough Community College

Courses	Credits	Prerequisites and Corequisites[1]
ENGL-102 English Composition II (Required Core 1A - English Composition)	3	Prerequisite: ENGL-101 or placement
MA-441 Analytic Geometry and Calculus I[2]	4	Prerequisites: MA-440 (C or better)
CH-152 General Chemistry II[2] (Additional Flexible Core Course)	4.5	Prerequisite: CH-151
One course from Flexible Core 2A, 2B, 2C, or 2D[3]	3	Check individual courses for prerequisites and corequisites
Total credits for the term	**14.5**	

Summer Session #1 – Queensborough Community College

Courses	Credits	Prerequisites and Corequisites[1]
MA-442 Analytic Geometry and Calculus II	4	Prerequisite: MA-441 (C or better)
Total credits for the session	**4**	

Fall Semester #2 – Queensborough Community College

Courses	Credits	Prerequisites and Corequisites[1]
CH-251 Organic Chemistry I	5	Corequisite: CH-152 or by permission of the department
BI-201 General Biology I[2] (Flexible Core 2E – Scientific World)	4	Prerequisite: Complete developmental requirements in English
PH-421 General Calculus Physics A (Liberal Arts and Science Course + Free Elective Credit)	5	Prerequisite: MA-440; Corequisite: MA-441
HE-102 Health, Behavior and Society	2	None
Total credits for the term	**16**	

Spring Semester #2 – Queensborough Community College

Courses	Credits	Prerequisites and Corequisites[1]
CH-252 Organic Chemistry II	5	Prerequisite: CH-251
BI-202 General Biology II	4	Prerequisite: BI-201
One course from Flexible Core 2A, 2B, 2C, or 2D[3]	3	Check individual courses for prerequisites and corequisites
One course from Flexible Core 2A, 2B, 2C, or 2D[3]	3	Check individual courses for prerequisites and corequisites
Total credits for the term	**15**	
Total credits required for the A.S. degree	**64**[2]	

Notes:

1. Prerequisites for a course must be passed before taking the course. Corequisites must be passed before taking the course or taken in the same term as the course.
2. Students are required to take specific courses in some areas of the Common Core that fulfill both general education and major requirements. If students do not take the required courses in the Common Core, they will have to take additional credits to complete their degree requirements. MA-441 Analytical Geometry and Calculus I (4 credits) is the core mathematics requirement for this program. Students who need to take pre-requisite courses for MA-441 will need to take additional credits.
3. Students must complete one course from each of the Flexible Core categories (2A, 2B, 2C, 2D, and 2E) and one additional course from any one of the categories. HIST-110, HIST-111, or HIST-112 is recommended for Flexible Core 2A. SP-111 is recommended for Flexible Core 2B. The course from Flexible Core 2E is required to be BI-201 and the additional flexible core course is required to be CH-152.

All students must complete two (2) WI designated classes to fulfill degree requirements.

The following courses must be completed after transfer to York College to earn the B.S. in Pharmaceutical Sciences degree:

Fall Semester #3 – York College

Courses	Credits	Prerequisites and Corequisites
CHEM321 Physical Chemistry: Thermodynamics	3	Prerequisites: General Chemistry II Lecture and Lab, PHYS117, PHYS113, and Calculus II
CHEM341 Instrumental Analysis I	3	Prerequisite: Organic Chemistry II Lab
CHEM460 Biochemistry I	3	Corequisites: General Biology II and Organic Chemistry II
PHS300 Fundamentals of Pharmaceutical Science	3	Prerequisites: Organic Chemistry II Lecture and Lab
BIO301 Molecular Biology and Biotechnology	4	Prerequisite: General Biology II Corequisites: General Chemistry II Lecture and Lab
Total credits for the term	**16**	

Spring Semester #3 – York College

Courses	Credits	Prerequisites and Corequisites
CHM342 Instrumental Analysis II	3	Prerequisites: Organic Chemistry II Lab and CHM341
PHYS118 University Physics II	4	Corequisites: Calculus I and PHYS113
PHYS114 Physics Laboratory II	1	Corequisites: PHYS115 or PHYS117
PHS301 Pharmaceutics	3	Prerequisites: Organic Chemistry II, BIO 301, and PHS300
PHS Elective	3	(choices will be provided upon consultation)
Total credits for the term	**14**	

Fall Semester #4 – York College

Courses	Credits	Prerequisites and Corequisites
PHS350 Pharmaceutical Manufacturing and Applicable Regulations	3	Prerequisites: PHS 301 and BIO 301
PHS401 Pharmacology	3	Prerequisite: CHEM330 or CHEM412 or CHEM460
PHS Elective	3	(choices will be provided upon consultation)
PHS Elective	3	(choices will be provided upon consultation)
College Option: HE 111 Professional Health Issue	3	No Prerequisites
Total credits for the term	**15**	

Spring Semester #4 – York College

Courses	Credits	Prerequisites and Corequisites
CHEM 323 Physical Chemistry: Drug Processes	3	Prerequisites: CHEM321, Calculus II, and PHYS 114/118
PHS480 Independent Study OR PHS490 Internships in Pharmaceutical Science	3	(Satisfies College Option Writing Intensive Requirement)
Free Electives or College Option: Language Requirements	9	
Total credits for the term	**15**	
Total credits required for the B.S. degree	**60**	