

**BACHELOR OF SCIENCE IN CHEMISTRY**  
**PHARMACEUTICAL SCIENCES – PHARM.D. CONCENTRATION**

YEAR TERM		MAJOR REQUIREMENTS					GENERAL EDUCATION		TOTAL CREDITS
YEAR 1	FALL	<b>BIOL 110</b> 4 GENERAL BIOLOGY I	<b>CHEM 110</b> 4 GENERAL CHEMISTRY I Co-Req: MATH 135 or higher	<b>PHRM 101</b> 0 PHARM PROFESSIONS	<b>MATH 170</b> 4 CALCULUS I Pre-Req: Math Placement or MATH 141 or MATH 136		<b>FCWR 101/111</b> 3 FOUNDATIONS OF COLLEGE COMPOSITION Pre-Req: Requires Placement	<b>DATA 101</b> 3 MAKING SENSE OF A DATA-ORIENTED SOCIETY	18
	SPRING	<b>BIOL 150</b> 4 GENERAL BIOLOGY II Pre-Req: BIOL 110	<b>CHEM 150</b> 4 GENERAL CHEMISTRY II Pre-Req: CHEM 110		<b>MATH 180</b> 4 CALCULUS II Pre-Req: MATH 180	<b>GENERAL ELECTIVE</b> 3	<b>FCWR 151/161</b> 3 FOUNDATIONS OF RESEARCH WRITING Pre-Req: FCWR 101/111		18
YEAR 2	FALL	<b>CHEM 210</b> 4 ORGANIC CHEMISTRY I Pre-Req: CHEM 150	<b>CHEM 310</b> 4 QUANTITATIVE ANALYSIS Pre-Req: CHEM 150	<b>BIOL 210</b> 4 HUMAN GROSS ANATOMY		<b>PHYS 170</b> 4 GENERAL PHYSICS I Co-Req: MATH 170	<b>FCWR 302 or 304</b> 3 COMMUNICATION FOR HEALTHCARE CAREERS or TECHNICAL PROFESSIONS Pre-Req: FCWR 151/161		19
	SPRING	<b>CHEM 250</b> 4 ORGANIC CHEMISTRY II Pre-Req: CHEM 210	<b>BIOL 340</b> 4 BIOCHEMISTRY Pre-Req: CHEM 210, BIOL 150	<b>BIOL 310</b> 4 HUMAN PHYSIOLOGY Pre-Req: BIOL 210, and CHEM 105 or CHEM 110		<b>PHYS 180</b> 4 GENERAL PHYSICS II Co-Req: MATH 180 Pre-Req: PHYS 170	<b>ICXX 3XX *</b> 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS) Pre-Req: FCWR 101/111 and FCWR 151/161		19
YEAR 3	FALL	<b>CHEM 410</b> 4 PHYSICAL CHEMISTRY I Pre-Req: CHEM 310 Co-Req: MATH 170	<b>CHEM 395</b> 3 INTRODUCTION TO RESEARCH DESIGN Pre-Req: Any 300-level CHEM course	<b>BIOL 456</b> 3 PHARMACOLOGY Pre-Req: BIOL 310 and BIOL 340	<b>BIOL 235</b> 4 MICROBIOLOGY Pre-Req: BIOL 150		<b>ICXX 3XX *</b> 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS) Pre-Req: FCWR 101/111 and FCWR 151/161		17
	SPRING	<b>CHEM 450</b> 4 PHYSICAL CHEMISTRY II Pre-Req: CHEM 410 Co-Req: MATH 180	<b>CHEM 420</b> 3 PHARMACEUTICAL CHEMISTRY Pre-Req: BIOL 340	<b>SCIENCE***</b> 3 ELECTIVE			<b>ICXX 3XX *</b> 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS) Pre-Req: FCWR 101/111 and FCWR 151/161	<b>ICXX 3XX *</b> 3 SEMINAR CHOICE (ICBS, ICLT, ICPH, or ICSS) Pre-Req: FCWR 101/111 and FCWR 151/161	16
Remaining B.S. degree credits will be completed within the first professional year of the <a href="#">Pharm.D. program</a> .									
CREDITS						Undergraduate Required Credits			107

\*Of the four required ICXX seminar courses (ICBS, ICLT, ICPH, ICSS), at least three must be in different subject areas

Post-admission, all required courses for joint programs must be taken at New York Tech unless unavailable.

Science Elective Options***		
Science Elective Options	Credits	Pre-requisites
<b>CHEM 350</b> INSTRUMENTAL ANALYSIS	3	CHEM 310
<b>CHEM 440</b> DRUG DISCOVERY AND DEVELOPMENT	3	CHEM 420 or BIOL 456
<b>CHEM 470</b> INORGANIC CHEMISTRY	3	CHEM 410
<b>BIOL 250</b> BIOSTATISTICS	3	BIOL 110 and MATH 170

Course names, numbers and/or pre-requisites are subject to change  
 (rev 4/25)