

Name: \_\_\_\_\_

Class Year: \_\_\_\_\_

## Checklist for CHEMISTRY Major Requirements

COURSE NUMBER	COURSE TITLE	CREDITS	PREREQUISITE(S)	COMPLETED (SEMESTER/YEAR)
CHEM BC2001x	<i>General Chemistry (lecture + lab)</i>	5.0	Algebra	_____
MATH UN1101x,y	<i>Calculus I</i>	3.0		_____
CHEM BC3230y	<i>Organic Chemistry I</i>	3.0	CHEM BC2001x	_____
CHEM BC3328y	<i>Organic Chemistry I Lab.</i>	2.5	CHEM BC2001x; Coreq.: CHEM BC3230y	_____
MATH UN1102	<i>Calculus II<sup>1</sup></i>	3.0	MATH UN1101x,y	_____
CHEM BC3231x	<i>Organic Chemistry II</i>	3.0	CHEM BC3230y	_____
CHEM BC3333x	<i>Modern Techniques Lab.</i>	3.0	CHEM BC3328y; Coreq.: CHEM BC3231y	_____
CHEM BC3242y	<i>Quantitative Analysis</i>	3.0	CHEM BC3231x; MATH UN1101x,y; Coreq.: CHEM BC3338y	_____
CHEM BC3338y	<i>Quant. &amp; Instrumental Tech. Lab.</i>	3.0	CHEM BC3231x, 3333x; Coreq.: CHEM BC3242y	_____
PHYS BC2001x	<i>Mechanics (with lab)<sup>2</sup></i>	4.5	MATH UN1101x,y	_____
PHYS BC2002y	<i>Electricity &amp; Magnetism (with lab)<sup>2</sup></i>	4.5	MATH UN1101x,y	_____
CHEM BC3253x	<i>Quantum Chemistry</i>	3.0	CHEM BC3242y; MATH UN1102 or 1201; PHYS BC2001x, 2002y	_____
CHEM BC3252y	<i>Thermodynamics &amp; Kinetics</i>	3.0	CHEM BC3242y; MATH UN1102 or 1201; PHYS BC2001x & 2002y	_____
CHEM BC3348y	<i>Adv. Spectroscopy &amp; Analysis Lab.</i>	3.0	CHEM BC3253x; Coreq.: CHEM BC3271y, 3252y	_____
CHEM BC3271y	<i>Inorganic Chemistry</i>	3.0	CHEM BC3231x	_____
CHEM BC3358x	<i>Adv. Chemical Synthesis Lab.</i>	5.0	CHEM BC3333x, 3338y, 3271y; Coreq.: CHEM BC3253x	_____
CHEM BC3282x	<i>Biological Chemistry (optional)<sup>3</sup></i>	3.0	CHEM BC3231y; BIOL BC1502y	_____
Elective (specify)	_____			_____

### Senior Requirement:

CHEM BC3901x ; 3902y *Senior Honors Thesis Seminar* 4.0 ; 4.0 \_\_\_\_\_

**or** CHEM BC3599 *Guided Research* 4.0 \_\_\_\_\_

**Note 1:** Two semesters of math after entering college, including Calculus I and II are required. *For the Class of 2021 and beyond*, students must complete through Calculus II, including two math courses while a student at Barnard. At least one of the courses taken at Barnard must be a calculus class. The remaining requirement can be fulfilled with a mathematics, statistics, or computer science course.

**Note 2:** The Barnard physics sequence is strongly recommended. Any calculus-based Columbia sequence, with two semesters of laboratory work, is acceptable (1401-2, 1601-2, but not 1201-2). For greater coverage of basic physics, PHYS BC3001x (*Waves and Optics*) is recommended.

**Note 3:** Completion of CHEM BC3282 is required to receive an American Chemical Society certified degree. It is not required for the major.