

# Chemistry with Biochemistry Concentration Major

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## About

The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

**Program:** [Chemistry](#)

**Type:** Bachelor of Science

## Major (81 credits)

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
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CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
CHM 3311	Inorganic Chem II	3
CHM 3301	Inorganic Chem Lab II	2
CHM 1512	Quantitative Analysis	3
CHM 1502	Quant Anal Lab	2
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3212	Organic Chemistry II	3
CHM 3202	Organic Chemistry Lab II	2
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CHM 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
CHM 4621	Biochemistry I: Structure	3
CHM 4603	Biochem Tech. and Pract.	1
CHM 4622	Biochemistry II:Metabolism	3
CHM 4604	Biochem Tech. and Pract II	1
	Biochemistry Biology Courses	8
PHY 2410	University Phy:Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics:Elec & Mag	3
PHY 2413	Lab:Elec & Magnetism	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Molecular Based Biology Course	4
	Biochemistry Chemistry Elective	3

## Category Descriptions

### Biochemistry Biology Courses

Credits: 8

Choose two biology courses from the course below.

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 4205	Cell Biology	4
BIO 4505	Molecular Biology	4

## Molecular Based Biology Course

Credits: 4

<b>Item #</b>	<b>Title</b>	<b>Credits</b>
BIO 3351	Genetics	4
BIO 3595	General Microbiology	4

## Biochemistry Chemistry Elective

Credits: 3

Choose any 3-credit course with the CHM subject code numbered 3000:9999.