

# CHEMISTRY B.S. - FORENSIC CHEMISTRY

## Bachelor of Science - Chemistry; Forensic Chemistry Concentration

### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements/>) of the catalog.

### Summary

Code	Title	Hours
Lower-Division Core Courses		52
	General Chemistry	
	Organic Chemistry	
	Biology	
	Physics	
	Mathematics	
	Forensic Science and Criminal Justice	
Upper-Division Core Courses		32
	Analytical Chemistry	
	Physical Chemistry	
	Inorganic Chemistry	
	Biochemistry	
	Experiential Learning	
	Seminar	
	Statistics	
Advanced Electives		7
Expressive Art - Public Speaking		3
Social Science - Criminology		3
<b>Total Hours</b>		<b>97</b>

Degree Specific Credits: 97

Required Cumulative GPA: 2.0

### Lower-Division Core Courses

#### General Chemistry

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
<b>Total Hours</b>		<b>10</b>

Minimum Required Grade: C-

### Organic Chemistry

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
<b>Total Hours</b>		<b>10</b>

Minimum Required Grade: C-

### Biochemistry and Biology

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Principles of Living Systems Lab	1
BIOB 260	Cellular and Molecular Biology	4
<b>Total Hours</b>		<b>8</b>

Minimum Required Grade: C-

### Physics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fundamentals of Physics with Calculus I and Physics Laboratory I with Calculus	5
PHSX 217N & PHSX 218N	Fundamentals of Physics with Calculus II and Physics Laboratory II with Calculus	5
<b>Total Hours</b>		<b>10</b>

Minimum Required Grade: C-

### Mathematics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
<b>Total Hours</b>		<b>8</b>

Minimum Required Grade: C-

### Forensic Science and Criminal Justice

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CJUS 125N	Fundamentals of Forensic Science	3
SOCI 221	Criminal Justice System	3
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

### Upper-Division Core Courses

Rule: All courses in all subcategories listed are required.

#### Analytical Chemistry

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chemistry-Quantitative Analysis	4

CHMY 421	Advanced Instrument Analysis	4
<b>Total Hours</b>		<b>8</b>

Minimum Required Grade: C-

### Physical Chemistry

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 373	Physical Chemistry-Kinetics & Thermodynamics	4
<b>Total Hours</b>		<b>4</b>

Minimum Required Grade: C-

### Inorganic Chemistry

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
<b>Total Hours</b>		<b>3</b>

Minimum Required Grade: C-

### Biochemistry

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3
<b>Total Hours</b>		<b>9</b>

Minimum Required Grade: C-

### Experiential Learning

Code	Title	Hours
<b>Complete one of the following courses:</b>		
CHMY 488	Forensic Research	3
or CHMY 498	Internship/Cooperative Education	
<b>Total Hours</b>		<b>3</b>

Minimum Required Grade: C-

### Seminar

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 489	Forensic Research Seminar	1
<b>Total Hours</b>		<b>1</b>

Minimum Required Grade: C-

### Statistics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
STAT 451	Statistical Methods I	3
STAT 457	Computer Data Analysis I	1
<b>Total Hours</b>		<b>4</b>

Minimum Required Grade: C-

## Advanced Electives

Code	Title	Hours
<b>Complete 7 credits from the following courses:</b>		
CHMY 411	Advanced Organic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Option for Undergraduate Research	
CHMY 542	Separation Science	
CJUS 488	Forensic Science the Crime Lab and Beyond	
<b>Total Hours</b>		<b>7</b>

Minimum Required Grade: C-

## Advanced College Writing Requirement

**Rule:** To complete the Advanced College Writing Requirement, Biochemistry students may take the following courses or any other stand-alone advanced writing course.

Code	Title	Hours
BCH 482	Advanced Biochemistry II	3
BCH 486	Biochemistry Research Lab	3

Minimum Required Grade: C

## Expressive Art - Public Speaking

Code	Title	Hours
<b>Complete the following course:</b>		
COMX 111A	Introduction to Public Speaking	3
<b>Total Hours</b>		<b>3</b>

Minimum Required Grade: C-

## Social Science - Criminology

Code	Title	Hours
<b>Complete the following course:</b>		
SOCI 211S	Introduction to Criminology	3
<b>Total Hours</b>		<b>3</b>

Minimum Required Grade: C-