

**CSU-Pueblo Chemistry Department**  
 Emphasis Area in **Forensic Science**  
 for the Chemistry Major

**Coursework Requirements:**

**Chemistry Core**

<b>Course #</b>	<b>Course Title</b>	<b>Credit Hours</b>
CHEM 121/L	General Chemistry/Lab I	5
CHEM 122/L	General Chemistry/Lab II	5
CHEM 221/L	Inorganic Chemistry/Lab	3
CHEM 301/L	Organic Chemistry/Lab I	5
CHEM 302/L	Organic Chemistry/Lab II	5
CHEM 317/L	Quantitative Analysis/Lab	5
CHEM 321	Physical Chemistry I	3
CHEM 322	Physical Chemistry II	3
CHEM 419/L	Instrumental Analysis/Lab	5
CHEM 493	Seminar	1
<b>Total</b>		<b>40</b>

**Other Required Courses (for the Chemistry Major)**

<b>Course #</b>	<b>Course Title</b>	<b>Credit Hours</b>
MATH 126	Calculus and Analytical Geometry	5
MATH 224	Calculus and Analytical Geometry II	5
PHYS 221/L	General Physics/ Lab I	5
PHYS 222/L	General Physics/ Lab II	5
Institutional and Gen Ed		24
<b>Total</b>		<b>44</b>

**Forensic Science Emphasis Area Courses:**

<b>Course #</b>	<b>Course Title</b>	<b>Credit Hours</b>
CHEM 160/L	Introduction to Forensic Science	4
CHEM 260/L	Forensic Chemistry I	4
CHEM 460/L	Forensic Chemistry II	4
MATH 156	Introduction to Statistics	3
ELECTIVES *		21
<b>Total</b>		<b>36</b>

**Total Credit Hours for Major            120**

\*Approved elective courses, at least 9 credit hours of which must be upper division

<b>Course #</b>	<b>Course Title</b>	<b>Credit Hours</b>
ANTHRO 416	Crime and the Mind	3
ANTHRO/ SOC 451	Culture/Deviance/Psychopathology	3
ANTHRO 291/491	Forensics of Bones	3
BIOL 191/L	College Biology I	5
BIOL 192/L	College Biology II	5
BIOL 212/L	Introduction to Cell Biology	3
BIOL 223/L	Human Physiology and Anatomy I	4
BIOL 301/L	General Microbiology	5
BIOL 351	Molecular Biology & Genetics	2
BIOL 351L	Adv. Gen. & Molec. Biol. Lab	2
BIOL 440/L	Molecular Genetics & Lab	3
BIOL 481/L	Entomology	3
BIOL/CHEM 411	Biochemistry	3
CHEM 412/L II	Biochemistry II	5
CHEM 498 or 492	Internship or Research	1-3 var
ENG 305	Technical and Scientific Report Writing	3
MATH 356	Statistics for Engineers and Scientists	3
PSYCH 220	Drugs and Behavior	3
PSYCH 362	Abnormal Psychology	3
PSYCH 491	Forensic Psychology (new course currently under development)	3
SOC 415	Forensic Criminology	3

The emphasis area will provide a solid background in the field of forensic science with an emphasis on investigation and the scientific analysis of samples. The chemistry major with this emphasis will have an in-depth foundation in the considerable array of scientific instrumentation and techniques employed in forensic investigations. Additionally, the student will understand how the science interfaces with other facets of a forensic investigation (such as crime scene investigation, courtroom expert witness testimony, etc.). Chemistry majors with this emphasis will be able to function with expertise in the forensic laboratory, to maintain the scientific instrumentation, and to interpret complex analyses of samples.

This emphasis area should be attractive to majors who seek employment as scientists in a forensic crime laboratory.

# SAMPLE PROGRAM PLANNING SHEET

## B.S. in Chemistry with a Forensic Emphasis

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<u>COURSE</u>	<u>CREDIT HRS.</u>		<u>COURSE</u>	<u>CREDIT HRS.</u>
<b>FALL 1</b>			<b>SPRING 1</b>	
CHEM 121/L	5		CHEM 122/L	5
ENG 101	3		ENG 102	3
GEN ED	6		CHEM 160/L	4
			MATH 156	3
	<b>14</b>			<b>15</b>

<b>FALL 2</b>			<b>SPRING 2</b>	
CHEM 301/L	5		CHEM 302/L	5
MATH 126	5		MATH 224	5
GEN ED	6		CHEM 260/L	4
	<b>16</b>			<b>14</b>

<b>FALL 3</b>			<b>SPRING 3</b>	
CHEM 221/L	3		PHYS 221/L	5
CHEM 317/L	5		CHEM 322	3
forensic elective	5		forensic elective	5
GEN ED	3		GEN ED	3
	<b>16</b>			<b>16</b>

<b>FALL 4</b>			<b>SPRING 4</b>	
CHEM 321	3		CHEM 419/L	5
PHYS 222/L	5		CHEM 493	1
CHEM 460/L	4		forensic elective	8
forensic elective	3			
	<b>15</b>			<b>14</b>

**CREDIT HOURS: UPPER DIV. 42 CHEM 45 TOTAL 120 MINOR 20**

**GEN ED:**

ENG(6) 101/102 MATH(3) FULLFILLED BY MAJOR HIST(3) \_\_\_\_\_

H (9) \_\_\_\_\_ SS (6) \_\_\_\_\_ ST (8) FULLFILLED BY MAJOR