

**UPR-RÍO PIEDRAS CAMPUS  
FACULTY OF NATURAL SCIENCES  
DEPARTMENT OF CHEMISTRY**

**Bachelor's Degree with a Concentration in Chemistry = 130 credits**

**FIRST YEAR**

**First Semester**

<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Prerequisites</b>	<b>Specifications</b>
CISO 3121	Introduction to Social Sciences I	3		
QUIM 3001	General Chemistry I	4	MATH 3024 or MATH 3018	
ESPA	Spanish	3		
INGL	English	3		
MATH 3151	Logical Mathematics (Calculus I)	4	MATH 3018 or MATH 3023-24 or equivalent	

**Total: 17 credits**

**Second Semester**

<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Prerequisites</b>	<b>Specifications</b>
CISO 3122	Introduction to Social Sciences II	3		
QUIM 3002	General Chemistry II	4	QUIM 3001	
ESPA	Spanish	3		
INGL	English	3		
MATH 3152	Calculus II	4	MATH 3151	

**Total: 17 credits**

---

## SECOND YEAR

### First Semester

Code	Course	Credits	Prerequisites	Specifications
QUIM 3451	Organic Chemistry I	4	QUIM 3002	
LITE	Literature	3		
PHYS 3011	University Physics I	3	MATH 3151 & PHYS 3013 concurrently	
PHYS 3013	University Physics Lab I	1	PHYS 3011 or PHYS 3012 concurrently	
HUMA 3101	Introduction to Western Culture I	3		

**Total: 14 credits**

### Second Semester

Code	Course	Credits	Prerequisites	Specifications
QUIM 3452	Organic Chemistry II	4	QUIM 3451	
LITE	Literature	3		
PHYS 3012	University Physics II	3	PHYS 3011 or PHYS 3001, PHYS 3014 concurrently & MATH 3151	
PHYS 3014	University Physics Lab II	1	PHYS 3011 or PHYS 3012 concurrently	
HUMA 3102	Introduction to Western Culture II	3		

**Total: 14 credits**

---

## THIRD YEAR

### First Semester

Code	Course	Credits	Prerequisites	Specifications
QUIM 3255	Chemical Analysis	4	QUIM 3002	
BIOL 3101	General Biology	4	QUIM 3001	
ESPA or INGL (Writing)	3	First- year ESPA or INGL	Recommended: INGL 3236 (Scientific Writing) or alternatives	
MATH 3163	Mathematical Methods for Physical Chemistry	4	MATH 3151 & QUIM 3002	Recommended to take the semester before QUIM 4041
CIBI/CIFI 4000	Natural Sciences	3		

**Total: 17 credits**

### Second Semester

Code	Course	Credits	Prerequisites	Specifications
QUIM 4015	Instrumental Analysis	4	QUIM 3255	
QUIM 4055	Biochemistry	3	QUIM 3452 or QUIM 3032	
CIBI/CIFI 4000	Natural Sciences	3		
Free Elective	Free Elective	3		

**Total: 17 credits**

---

## FOURTH YEAR

### First Semester

Code	Course	Credits	Prerequisites	Specifications
ART	Art	3	-	-
QUIM 4041	Physical Chemistry I	3	QUIM 3255 & QUIM 3452 & MATH 3152	-
QUIM 4043	Physical Chemistry Lab	2	QUIM 4041 or concurrently	-
Directed Elective	Directed Elective	3	-	Strengthening areas in Chemistry, including research: Analytical/Environmental, Industrial/Business, Organic, Biochemistry, Inorganic, Physical Chemistry
Free Elective	Free Elective	3	-	-

**Total: 17 credits**

### Second Semester

Code	Course	Credits	Prerequisites	Specifications
QUIM 4000	Inorganic Chemistry	3	QUIM 4041	
QUIM 4042	Physical Chemistry II	3	QUIM 4041	
QUIM 4044	Physical Chemistry Lab II	2	QUIM 4042 or concurrently	
Directed Elective	Directed Elective	3		Strengthening areas in Chemistry, including research: Analytical/Environmental, Industrial/Business, Organic, Biochemistry,

Code	Course	Credits	Prerequisites	Specifications
				Inorganic, Physical Chemistry
Free Elective	Free Elective	3		

**Total: 17 credits**

---

**Revised version, March 2025**



**Dr. Liz M. Diaz**

**Director**

**Chemistry Program**

---