

**BACHELOR OF SCIENCE IN CHEMISTRY**  
*Industrial Chemistry Emphasis<sup>1</sup>*

## YEAR 1

CHEM 111 Principles of Chemi. I <sup>LAC, Area 6</sup>	5	CHEM 112 Principles of Chem. II	5
MATH 131 <sup>2</sup> Calculus I <sup>LAC, Area 2</sup>	4	ECON 203 Macroeconomics <sup>LAC, Area 5</sup>	3
LAC	<u>6</u>	LAC	<u>6</u>
	15		14

## YEAR 2

CHEM 331 (F) Organic Chemistry I	5	CHEM 332 (S) Organic Chemistry II	5
PHYS 220 Introductory Physics I <sup>LAC, Area 6</sup>	5	PHYS 221 Introductory Physics II	5
Course for Minor	3	Course for Minor	3
SCI 291 <sup>3</sup> Scientific Writing <sup>LAC, area 1b</sup>	<u>3</u>	LAC	<u>3</u>
	16		16

## YEAR 3

CHEM 321 (F) Chemical Analysis	4	CHEM 360 <sup>4</sup> Environmental Chem	2
Courses for Minor or Electives	7	CHEM 421 (S) Instrumental Analysis	4
LAC	<u>3</u>	CHEM 441 (S) Inorganic Chemistry I	2
	14	CHEM 443 (S) Inorganic Chem Lab	1
		CHEM 450 (S) Survey of Phys Chem	4
		LAC	<u>3</u>
			16

## YEAR 4

Research and Chemistry Electives	6	Research and Chemistry Electives	6
Courses for Minor or Electives	<u>8</u>	Courses for Minor or Electives	<u>9</u>
	14		15

<sup>1</sup> A minor is required of students selecting this emphasis. Possible minors include business or economics for students interested in management, biology for students leaning toward biotechnology, or English for students considering technical writing. Consult your advisor for additional course work to complement this emphasis.

<sup>2</sup> Students who lack sufficient preparation in mathematics may need to start in MATH 124 (4)--College Algebra, MATH 125 (3) --Plane Trigonometry, or MATH 127 (4) --Elementary Functions. Consult your advisor.

<sup>3</sup> With advisor approval, students can substitute for SCI 291 (3)--Scientific Writing for their Intermediate Composition requirement.

<sup>4</sup> CHEM 360 is offered only alternate springs (odd year).

## CHEMISTRY AND BIOCHEMISTRY

### Contact Information:

**Main Office Room Number: Ross 3480**

**Main Office Telephone Number: (970) 351-2559**

**Department Web Page: [http://www.unco.edu/chemist/chem\\_hp.htm](http://www.unco.edu/chemist/chem_hp.htm)**

- A. The four-year plan described on the other side of this sheet is only a suggested track in which to complete this major. The student must meet with his/her advisor to determine an appropriate plan.
- B. Upper-level courses are generally taught only one semester per year and are marked on the sheet as F (Fall), S (Spring) or I (Irregular). If they are taught once per year and are a two-semester series, the first semester will generally be taught in the Fall. CHEM 360 as specified earlier is taught in the Spring every other year. In this plan courses are listed in order of required prerequisites first.
- C. Each major requires 120 total credits prior to graduation and the *Industrial Chemistry Emphasis* requires a minor.
- D. Some upper-level courses are separate from laboratory; e.g., CHEM 451/CHEM 453–Physical Chemistry I and Physical Chemistry I Lab and CHEM 452/CHEM 454–Physical Chemistry II and Physical Chemistry II Lab. In these cases, the two are typically taken concurrently—in any case, the lecture must be taken either concurrently or would be considered a prerequisite to the laboratory.