DEGREE WORKSHEET FOR:
BS Chemistry, Industrial Chemistry Emphasis
2017-2018 Catalog
Degree Requirements – 120 credits

YEAR 1- FALL (15 credits)		YEAR 1- SPRING (14 credits)	
CHEM 111/111L Principles of Chemistry I (LAC Area 6)	4/1 credits	CHEM 112/112L Principles of Chemistry II	4/1 credits
ENG 122 College Composition (LAC Area 1a)	3 credits	ECON 203 Macroeconomics (LAC Area 5)	3 credits
MATH 131[1] Calculus I (LAC Area 2)	4 credits	Liberal Arts Core	6 credits
Liberal Arts Core	3 credits		
YEAR 2- FALL (16 credits)		**YEAR 2-SPRING (16 credits)**	
CHEM 331/331L Organic Chemistry I (F)	4/1 credits	CHEM 332/332L Organic Chemistry II (S)	4/1 credits
PHYS 220 Introductory Physics I (LAC Area 6)	5 credits	PHYS 221 Introductory Physics II	5 credits
SCI 291[2] Scientific Writing (LAC Area 1b)	3 credits	Course for Minor	3 credits
Course for Minor	3 credits	Liberal Arts Core	3 credits
YEAR 3- FALL (14 credits)		**YEAR 3- SPRING (16 credits)**	
CHEM 321 Chemical Analysis (F)	4 credits	CHEM 360[3] Environmental Chemistry	2 credits
CHEM 441 Inorganic Chemistry I (F)	3 credits	CHEM 421 Instrumental Analysis (S)	4 credits
Courses for Minor or Electives	4 credits	CHEM 443 Inorganic Chemistry Lab (S)	1 credits
Liberal Arts Core	3 credits	CHEM 450/450L Survey of Phys Chemistry (S)	3/1 credits
		Liberal Arts Core	2 credits
		General Electives	3 credits
YEAR 4- FALL (14 credits)		**YEAR 4- SPRING (15 credits)**	
General Electives	6 credits	General Electives	6 credits
Courses for Minor or Electives	8 credits	Courses for Minor or Electives	9 credits
		Chemistry Assessment Exam[4]	0 credits

Admission Requirement – No separate admission requirement.

Minor Required A minor is required of students selecting this emphasis. Some example 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.

Contact Information – Department of Chemistry & Biochemistry

Ross Hall Room 3480, 970-351-2559

Department Web Page: http://www.unco.edu/nhs/chemistry-biochemistry/

This worksheet is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 40 credit hours in courses designated as Liberal Arts Core; meet all degree requirements in the student's major field of study. Each major and/or emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

Notes

1 [1]Students who lack sufficient preparation in mathematics may need to start in MATH 124 College Algebra (4), MATH 125 Plane Trigonometry (3), or MATH 127 Elementary Functions (4). MATH 171 may be substituted for MATH 131. Consult your advisor.

2 [2]With advisor approval, students may substitute ENG 123 (3) for SCI 291 Scientific Writing (3).

3 [3]CHEM 360 is offered only alternate spring semesters (odd year). This course can be completed in either the Spring of the junior or senior year.

4 All students must take a chemistry major assessment exam prior to graduation.

This emphasis offers training in chemistry, mathematics, physics and a minor area selected by the student. The course of study provides a solid foundation in chemistry and specific background knowledge about the chemical industry.

Students completing this emphasis can pursue a career in the chemical, medical, pharmaceutical or biotechnology industries; or in related government agencies. Career options include supervision, process evaluation, quality control, pilot scale operation, management and sales. Students considering graduate study in chemistry may be required to complete additional course work in chemistry and/or mathematics depending on the entrance requirements of the specific graduate school.

A. The four-year plan described on the other side of this sheet is a suggested track for completing this major. You must meet with your advisor each semester 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). CHEM 360 as specified earlier is taught in the spring of every other year. In this plan courses are listed in order of required prerequisites first.

C. Some upper-level courses are separate from laboratory; e.g., CHEM 331/CHEM 331L Organic Chemistry I and Organic Chemistry I Lab and CHEM 332/CHEM 332L Organic Chemistry II and Organic Chemistry II Lab. In these cases, the two are taken concurrently.

D. Graduate level CHEM courses are recommended for juniors and seniors. Other recommended electives include MATH 132, MATH 221, MATH 335, STAT 150, PHYS 321, and PHYS 343.

E. Students majoring in chemistry must earn a grade of “C” or better (C- is not acceptable) in all courses having a CHEM prefix which count toward the major.