

## CHEM Major Course Checklist

### I. Pre-Requisite Classes

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#### *Chemistry*

General Chemistry – (or AP Credit)

\_\_\_\_\_ CHEM 1601 + Lab

\_\_\_\_\_ CHEM 1602 + Lab

#### *Organic Chemistry*

\_\_\_\_\_ CHEM 2221 + Lab (OR CHEM 2211) (pre-req CHEM 1602)

\_\_\_\_\_ CHEM 2222 + Lab (OR CHEM 2212)

BSCI 1510 – not explicitly part of the major, but is a pre-requisite for BSCI 2520

#### *Math*

\_\_\_\_\_ Calculus A – MATH 1200 or 1300

\_\_\_\_\_ Calculus B – MATH 1201 or 1301

#### *Physics*

\_\_\_\_\_ Physics A – PHYS 1501 or 1601 + Lab, PHYS 1911

\_\_\_\_\_ Physics B – PHYS 1502 or 1602 or 1912 + Lab

### II. Specialized Chemistry Classes

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#### *Analytical Chemistry*

\_\_\_\_\_ CHEM 2100 and Lab (Fall)

#### *Physical Chemistry*

\_\_\_\_\_ CHEM 3300- Physical Chemistry: Quantum Mechanics, Spectroscopy, and Kinetics  
(Fall)

OR 3310 – Physical Chemistry: Chemical Thermodynamics and Equilibrium  
(Spring)

(pre-req – Physics and Math)

\_\_\_\_\_ CHEM 3315 – Physical Chemistry Lab (Spring)

#### *Biochemistry*

\_\_\_\_\_ BSCI 2520 – Biochemistry (pre-req BSCI 1510 and CHEM 2221)

#### *Inorganic Chemistry*

\_\_\_\_\_ CHEM 3010 (Fall – pre- or co-req of PCHEM)

### III. Research – Pick one Path

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Capstone –

\_\_\_\_\_ CHEM 4965 (Fall of 4<sup>th</sup> year)

\_\_\_\_\_ CHEM 4966 (Spring of 4<sup>th</sup> year)

OR

Honors – GPA of 3.3 overall and 3.4 in chemistry classes

\_\_\_\_\_ CHEM 3980 (Spring of 3<sup>rd</sup> year)

\_\_\_\_\_ CHEM 4980 (Fall of 4<sup>th</sup> year)

\_\_\_\_\_ CHEM 4999 (Spring of 4<sup>th</sup> year)

\_\_\_\_\_ Defend an Honors Thesis Spring of 4<sup>th</sup> Year

### IV. CHEM In-depth Courses – 2 classes required (6 credit hours)

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General Elective #1 \_\_\_\_\_

General Elective #2 \_\_\_\_\_

Some options:

- CHEM 3860 (3 credit hours can count towards In-depth classes)
- CHEM 2610 – Introduction to Nanochemistry (spring)
- CHEM 3020 – Intro to Bioinorganic (spring)
- CHEM 3120 – Instrumental Analytical Chemistry (spring)
- CHEM 3135W – Forensic Analytical Chemistry (spring) *Also a writing class!*
- CHEM 3220 – Spectroscopic Identification (fall)
- CHEM 3630 – Macromolecular Chemistry (fall)
- CHEM 3710 – Bioorganic Chemistry (fall)
- CHEM 4050- Introduction to Organometallic Chemistry (fall)
- CHEM 4230 – Physical Organic Chemistry (spring)
- CHEM 4720 – Drug Design and Development (spring)