

Clarion University Department of Chemistry and Biochemistry
SUGGESTED SCHEDULE OF COURSES and COURSE PLANNING GUIDE (ver. Spring 2014)

DEGREE PROGRAM: B.S. CHEMISTRY: Biochemistry Concentration

FRESHMAN YEAR

| Fall Semester | Spring Semester |
|---------------------------------------|--|
| CHEM 151 Chemical Prin. I (Lec); 3 CR | CHEM 152 Chemical Prin. II (Lec); 3 CR |
| CHEM 161 Chemical Prin. I Lab; 1 CR | CHEM 162 Chemical Prin. II Lab; 1 CR |
| MATH 171 Precalculus; 4 CR | MATH 270 Calculus I; 4 CR |
| BIOL 155 Prin. Bio. I (Lec); 3 CR | |
| BIOL 165 Prin. Bio. I Lab; 1 CR | |
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Other courses/electives to consider for your Freshman year: **(1)** ENG 111- Writing II; **(2)** First Year Values Flag Course [See Registrar/ Student Resources/ General Education Flags: <http://www.clarion.edu/6874/>] If you're considering pharmacy school, select prerequisite courses (PSYC or SOC, ECON, ENG, and MATH 221); **(3)** Health and/or Personal Performance; **(4)** If you're considering pursuing a health-related career, consider BIOL 156/166 in the spring.

SOPHOMORE YEAR

| Fall Semester | Spring Semester |
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| CHEM 251 Organic Chemistry I (Lec); 3 CR | CHEM 252 Organic Chemistry II (Lec); 3 CR |
| CHEM 261 Organic Chemistry I Lab; 1 CR | CHEM 262 Organic Chemistry II Lab; 1 CR |
| MATH 271 Calculus II; 4 CR | BIOL 203 Cell Bio; 3 CR OR BIOL 201 Genetics; 3 CR |
| PH 251 General Physics I; 4 CR | PH 252 General Physics II; 4 CR |
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In addition to completing your Physics and Math requirements, other courses/electives to consider for your Sophomore year: **(1)** Liberal Knowledge Gen. Ed. requirements: If you're considering pharmacy school, select prerequisite courses (PSYC or SOC, ECON, ENG, and MATH 221); **(2)** Second Values Flag Course [See Registrar/ Student Resources/ General Education Flags: <http://www.clarion.edu/6874/>]; **(3)** Health and/or Personal Performance.

JUNIOR YEAR

| Fall Semester | Spring Semester |
|---|---|
| CHEM 353 Analytical Chemistry I (Lec); 3 CR | CHEM 358 Analytical Chemistry II (Lec); 3 CR |
| CHEM 363 Analytical Chemistry I Lab; 1 CR | CHEM 368 Analytical Chemistry II Lab; 1 CR |
| BCHM 453 Biochemistry I (Lec); 3 CR | BCHM 454 Biochemistry II (Lec); 3 CR |
| BCHM 463 Biochemistry Lab; 1 CR | BIOL 341 Gen. Microbiology; 4 CR <i>[Prereq for BIOL 483 Fall or Spring]</i> |
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Other courses/electives to consider for your Junior year: **(1)** Liberal Knowledge Gen. Ed. requirements; **(2)** Second Values Flag Course [See Registrar/ Student Resources/ General Education Flags: <http://www.clarion.edu/6874/>]; **(3)** If relevant, look at pre-requisites for graduate/ professional school; **(4)** Offered alternate spring semesters: CHEM 359 Advanced Organic Chem. (Lec); 3 CR.

SENIOR YEAR

| Fall Semester | Spring Semester |
|---|--|
| CHEM 354 Physical Chemistry I (Lec); 3 CR | CHEM 470 Chemistry Seminar; 3 CR |
| CHEM 364 Physical Chemistry I Lab; 1 CR | CHEM 265 Inorganic Chemistry I (Lec); 3 CR |
| BIOL 483 Molecular Biology; 4 CR [Fall only] | CHEM 266 Inorganic Chemistry I Lab; 1 CR |
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Other courses/electives to consider for your Senior year: **(1)** Complete Gen. Eds; **(2)** Complete ≥120 credits; **(3)** Offered alternate spring semesters: CHEM 359 Advanced Organic Chem. (Lec); 3 CR; **(4)** CHEM 465/466 Chemical Research.