

John Carroll University Chemistry and Biochemistry Department

Biochemistry Concentration with Physician Assistant Study Plan

First Year

| Fall Semester | Credits | Major | Core | Minor/Other | Spring Semester | Credits | Major | Core | Minor/Other |
|---------------------------------------|-----------|-------|------|-------------|--|--------------|-------|------|-------------|
| CH1410 General Chemistry I* | 4 | X | | | CH1420 General Chemistry II* | 4 | X | | |
| CH1430 General Chemistry Lab I* | 1 | X | | | CH1440 General Chemistry Lab II* | 1 | X | | |
| MT1350 Calculus / Analytic Geometry I | 4 | X | | | MT1360 Calculus / Analytic Geometry II | 4 | X | | |
| EN1250 Seminar on Academic Writing | 3 | | X | | COM1251 Speech Communications | 3 | | X | |
| BL1500 Principles of Biology I | 3 | X | | | BL1600 Principles of Biology II | 3 | X | | |
| BL1505 Principles of Biology Lab I | 1 | X | | | BL1605 Principles of Biology Lab II | 1 | X | | |
| Creative and Performing Arts (CAPA) | 1-3 | | X | | TRS Course | 3 | | X | |
| Total Credit Hours | 17 | | | | Total Credit Hours | 19*** | | | |

Second Year

| Fall Semester | Credits | Major | Core | Minor/Other | Spring Semester | Credits | Major | Core | Minor/Other |
|--|-----------|-------|------|-------------|--------------------------------------|--------------|-------|------|-------------|
| CH2210 Organic Chemistry I | 3 | X | | | CH2220 Organic Chemistry II | 3 | X | | |
| CH2230 Organic Chemistry Lab I | 1 | X | | | CH2240 Organic Chemistry Lab II | 1 | X | | |
| PH1250 General Physics I | 3 | X | | | CH2610 Analytical Chemistry | 3 | X | | |
| PH1251 General Physics Lab I | 1 | X | | | CH2630 Analytical Chemistry Lab (QA) | 1 | X | X | |
| PS1000 Perspectives Social Justice (ISJ) | 3 | | X | | PH1260 General Physics II | 3 | X | | |
| BL2310/15 Human Anatomy&Physio+Lab | 4 | | | X | PH1261 General Physics Lab II | 1 | X | | |
| TRS Course | 3 | | X | | BL2320/25 - Human A&P + Lab | 4 | | | X |
| | | | | | Philosophy Knowledge/Reality (PLKR) | 3 | | X | |
| Total Credit Hours | 18 | | | | Total Credit Hours | 19*** | | | |

Third Year

| Fall Semester | Credits | Major | Core | Minor/Other | Spring Semester | Credits | Major | Core | Minor/Other |
|--------------------------------|--------------|-------|------|-------------|-------------------------------------|--------------|-------|------|-------------|
| CH3630 Physical Chemistry I | 3 | X | | | CH4360 Biochemistry II | 3 | X | | |
| CH Elective | 3 | X | | | CH4780 Chemistry Seminar | 0 | X | | |
| CH4350 Biochemistry I | 3 | X | | | Engaging the Global Community (EGC) | 3 | | X | |
| CH4370 Biochemistry Laboratory | 1 | X | | | Humanities Course | 3 | | X | |
| Linked Pair of Courses | 6 | | X | | Philosophy/Values/Society (PLVS) | 3 | | X | |
| Language Requirement | 3 | | X | | Language Requirement | 3 | | X | |
| | | | | | Social Science Course | 3 | | X | |
| | | | | | CH3670 Physical Chemistry I Lab | 2 | X | | |
| Total Credit Hours | 19*** | | | | Total Credit Hours | 20*** | | | |

If you are planning to attend graduate school or a health professions program, take the GRE or MCAT in summer between years 3 and 4 and begin submitting applications this fall.

Total of 112 credits. 8 credits transfer back to JCU from partner school.

Notes:

*Well prepared students may substitute the CH1410-1440 sequence with CH1510/1530 - Chemical Principles and Lab in the Fall Semester
471 and PS426 and others by petition

CH399 or CH3994 (with three credits of CH399). One of these should be taken in the senior year.

Please consult your academic advisor to address specific needs of your major, minor, and/or concentration.

***Going beyond 18 credits in a semester incurs a fee per credit hour.