

Biomedical Chemistry

Student Name: _____

| Requirements for Major | | | | | | |
|------------------------|---------------|---|-----------------|------------|-----------------------|--------------|
| Course Prefix | Course Number | Major Requirements (<i>Pre-Requisite</i>) | Liberal Studies | Req. Hours | Semester Taught | Earned Hours |
| BIOL | 110 | General Biology | Y | 4 | Every Fall and Spring | |
| BIOL | 221 | Human Anatomy and Physiology I | | 3 | Every Fall | |
| BIOL | 222 | Human Anatomy and Physiology II | | 3 | Every Spring | |
| BIOL | 226 | General Microbiology | | 4 | Every Fall and Spring | |
| BSHS/ MATH | 210 | Statistical Analysis (knowledge of MATH101/120) | | 3 | Odd Year Spring | |
| BIOL | 415 | Genetics (<i>General Biology</i>) | | 4 | Every Fall | |
| CHEM | 123 | General Chemistry I | | 4 | Every Fall | |
| CHEM | 124 | General Chemistry II (<i>General Chemistry I</i>) | | 4 | Every Spring | |
| CHEM | 300 | Organic Chemistry I (<i>General Chemistry II</i>) | | 4 | Every Fall | |
| CHEM | 310 | Organic Laboratory Techniques (<i>General Chemistry II</i>) | | 2 | Every Fall | |
| CHEM | 320 | Organic Chemistry II (<i>Organic Chemistry I</i>) | | 4 | Every Spring | |
| CHEM | 330 | Organic Synthesis and Spectroscopy (<i>Organic Chemistry I</i>) | | 2 | Every Spring | |
| MATH | 145 | Calculus I | Y | 4 | Every Fall | |
| PHYS | 221 | General Physics I (<i>Calculus I</i>) | Y | 5 | Every Fall | |
| PHYS | 222 | General Physics II (<i>University Physics I</i>) | | 5 | Every Spring | |
| CHEM | 410 | Biochemistry I (<i>Organic Chemistry I</i>) | | 3 | Odd Year Fall | |
| CHEM | 420 | Biochemistry II (<i>Biochemistry I</i>) | | 3 | Even Year Spring | |
| CHEM | 311 | Laboratory Safety and Maintenance (<i>General Chemistry II</i>) | | 2 | Even Year Spring | |
| | | | | | | |

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|---------------------------|-----|---|--|-------|--------------|--|
| | | One from the following | | | | |
| BIOL | 400 | Immunology (<i>General Microbiology</i>) | | 3 | Every Spring | |
| BIOL | 425 | Cellular Molecular biology | | 3 | Every Fall | |
| | | Any Biology course above 300 level | | 3-4 | | |
| | | Any Chemistry course above 300 level | | 3-4 | | |
| | | | | | | |
| | | One from the following | | | | |
| CHEM | 221 | Quantitative Analysis (<i>General Chemistry II</i>) | | 5 | Even Fall | |
| CHEM | 323 | Inorganic Chemistry (<i>General Chemistry II</i>) | | 3 | Odd Spring | |
| CHEM | 427 | Physical Chemistry I (<i>Calculus I</i>) | | 4 | Odd Fall | |
| Total Major Hours: | | | | 69-72 | | |

| DEGREE REQUIREMENTS | | | | | | |
|--------------------------------|--|--|--|------------|--|--|
| BACHELOR OF ARTS: | | | | | | |
| Total Hours in Major: | | | | 69-72 | | |
| Liberal Studies: | | | | 36 | | |
| Suggested Courses: | | | | | | |
| ELECTIVES: | | | | 10-14 | | |
| TOTAL GRADUATION HOURS: | | | | 120 | | |

SUGGESTED SEQUENCE ENTERING EVEN YEAR**Major: BIOMEDICAL CHEMISTRY**

| (EVEN YEAR) FALL OF YEAR ONE | | | (ODD YEAR) SPRING OF YEAR ONE | | |
|-------------------------------------|---|--------------|--------------------------------------|---|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM123 | General Chemistry | 4 | CHEM124 | General Chemistry II | 4 |
| BIOL221 Or BIOL110 | Human Anatomy and Physiology I Or General Biology | 3 Or 4 | BIOL222 Or BIOL226 | Human Anatomy and Physiology II Or Microbiology | 3 Or 4 |
| MATH145 | Calculus | 4 | BSHS | Statistical Analysis | 3 |
| ENGL120 | Introduction to English Composition | 3 | | Writing intensive course | 3 |
| INTD105 | Wesleyan Experience | 2 | | Liberal studies/elective | 3 |
| INTD115 | Wesleyan Heritage | 1 | | | |
| | Total | 17-18 | | Total | 16-17 |

| (ODD YEAR) FALL OF YEAR TWO | | | (EVEN YEAR) SPRING OF YEAR TWO | | |
|------------------------------------|---|--------------|---------------------------------------|---|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM300 | Organic Chemistry I | 4 | CHEM320 | Organic Chemistry II | 4 |
| CHEM310 | Organic Laboratory Techniques | 2 | CHEM330 | Organic Synthesis and Spectroscopy | 2 |
| BIOL110 Or BIOL221 | General Biology Or Human anatomy and physiology I | 4 Or 3 | BIOL226 Or BIOL222 | General Microbiology Or Human anatomy and physiology II | 4 Or 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective or #Bio/chem. Elective (BIOL325 Invertebrate Zoology, BIOL350 Ecology) | 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective | 3 |
| | | | CHEM311 | Laboratory Safety and Maintenance | 2 |
| | Total | 15-16 | | Total | 17 |

| (EVEN YEAR) FALL OF YEAR THREE | | | (ODD YEAR) SPRING OF YEAR THREE | | |
|---------------------------------------|--|--------------|--|--|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| BIOL415 | <i>Genetics</i> | 4 | BIOL400 | <i>Immunology</i> | 3 |
| PHYS221 | General Physics I | 5 | PHYS222 | University Physics II | 5 |
| | Liberal studies /elective | 3 | PHYS222L | Liberal studies /elective | 3 |
| | Liberal studies /elective or #Bio/chem. Elective (CHEM221 Quantitative Analysis) | 3-5 | | Liberal studies /elective or #Bio/chem. Elective (CHEM323 Inorganic Chemistry, BIOL330 Vertebrate Zoology) | 3-4 |
| | | | | | |
| | Total | 15-17 | | Total | 14-15 |

| (ODD YEAR) FALL OF YEAR FOUR | | | (EVEN YEAR) SPRING OF YEAR FOUR | | |
|-------------------------------------|--|--------------|--|--|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM410 | <i>Biochemistry I</i> | 3 | CHEM420 | <i>Biochemistry II</i> | 3 |
| | Liberal studies /elective or Bio/chem. Elective (CHEM427 Physical Chemistry I, BIOL310 Botany) | 3-4 | BIOL425 | <i>Cellular Molecular Biology</i> | 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective | 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective | 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective or Bio/chem. Elective (CHEM311 Lab Safety and Maintenance) | 3 |
| | Total | 15-16 | | Total | 15 |

Total Hours = 122 minimum

Major: BIOMEDICAL CHEMISTRY

| (ODD YEAR) FALL OF YEAR ONE | | | (EVEN YEAR) SPRING OF YEAR ONE | | |
|------------------------------------|---|--------------|---------------------------------------|---|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM123 | General Chemistry | 4 | CHEM124 | General Chemistry II | 4 |
| BIOL221 Or BIOL110 | Human Anatomy and Physiology I Or General Biology | 3 Or 4 | BIOL222 Or BIOL226 | Human Anatomy and Physiology II Or Microbiology | 3 Or 4 |
| MATH145 | Calculus | 4 | BSHS | Statistical Analysis | 3 |
| ENGL120 | Introduction to English Composition | 3 | | Writing intensive course | 3 |
| INTD105 | Wesleyan Experience | 2 | | Liberal studies /elective | 3 |
| INTD115 | Wesleyan Heritage | 1 | | | |
| | Total | 17-18 | | Total | 16-17 |

| (EVEN YEAR) FALL OF YEAR TWO | | | (ODD YEAR) SPRING OF YEAR TWO | | |
|-------------------------------------|---|--------------|--------------------------------------|--|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM300 | Organic Chemistry I | 4 | CHEM320 | Organic Chemistry II | 4 |
| CHEM310 | Organic Laboratory Techniques | 2 | CHEM330 | Organic Synthesis and Spectroscopy | 2 |
| BIOL221 Or BIOL110 | Human Anatomy and Physiology I Or General Biology | 3 Or 4 | BIOL222 Or BIOL226 | Human Anatomy and Physiology II Or Microbiology | 3 Or 4 |
| | Liberal studies /elective | 3 | | Liberal studies /elective <i>or Bio/chem. Elective (BIOL320 Vertebrate Zoology, CHEM323 Inorganic Chemistry)</i> | 3-4 |
| | Liberal studies /elective | 3 | | Liberal studies /elective | 3 |
| | Total | 15-16 | | Total | 15-17 |

| | | |
|--------------------------------------|--|---|
| (ODD YEAR) FALL OF YEAR THREE | | (EVEN YEAR) SPRING OF YEAR THREE |
|--------------------------------------|--|---|

| Prefix and Number | Course Title | Credit Hours | | Prefix and Number | Course Title | Credit Hours |
|-------------------|---|--------------|--|-------------------|---|--------------|
| | Liberal studies /elective | 3 | | BIOL425 | Cellular Molecular Biology | 3 |
| PHYS221 | General Physics I | 5 | | PHYS222 | General Physics II | 5 |
| | Liberal studies /elective | 3 | | | Liberal studies /elective | 3 |
| | Liberal studies /elective or Bio/chem. Elective (CHEM427 Physical Chemistry I, BIOL310 Botany,) | 3-4 | | | Liberal studies /elective or Bio/chem. Elective (BIOL335 Invertebrate Zoology, BIOL350 Ecology) | 3-4 |
| | Liberal studies /elective | 3 | | CHEM311 | Laboratory Safety and Maintenance | 2 |
| | Total | 17-18 | | | Total | 16-17 |

| (EVEN YEAR) FALL OF YEAR FOUR | | | (ODD YEAR) SPRING OF YEAR FOUR | | |
|-------------------------------|---|--------------|--------------------------------|---|--------------|
| Prefix and Number | Course Title | Credit Hours | Prefix and Number | Course Title | Credit Hours |
| CHEM410 | Biochemistry I | 3 | CHEM420 | Biochemistry II | 3 |
| | Liberal studies /elective or Bio/chem. Elective (, CHEM221 Quantitative Analysis) | 3-5 | BIOL400 | Immunology | 3 |
| BIOL415 | Genetics | 4 | | Liberal studies /elective | 3 |
| | Liberal studies /elective | 3 | | Liberal studies /elective | 3 |
| | | | | Liberal studies /elective or Bio/chem. Elective (CHEM323 Inorganic Chemistry) | 3-4 |
| | | | | | |
| | Total | 13-15 | | Total | 15-16 |

Total Hours = 121 minimum

Purple shading is possible space for another class.