

BIOLOGY MAJOR – Pre Medicine (BIOLPM.BS)

| <u>Required Courses</u> | <u>Hrs.</u> | <u>Prereq.</u> | <u>Rec.Yr.</u> |
|--|-------------|--|----------------|
| BIOL 115 Intro to Biology Profession | 1 | Coreq BIOL 163 or BIOL 164 | Fr |
| BIOL 163 Principles of Molecular Biology | 4 | | Fr |
| BIOL 164 Principles of Organismal Biology | 4 | C- or better in BIOL 163 | Fr |
| BIOL 215 Biostatistics | 4 | 100 level math placement or completion of DEVL 070; C- or better in BIOL 164 | Soph |
| BIOL 250 Genetics | 4 | C- or better in BIOL 163, 164 for Bio maj; C- or better in BIOL 163 for Biochem maj; CHEM 221, 223L highly recommended | Soph |
| BIOL 252 Physiology | 4 | C- or better in BIOL 163, 164 | Soph |
| BIOL 254 Research Methods in Biology | 4 | C- or better in BIOL 163, 164, 215, 252 for Bio Maj; C- or better in MATH 115, ENVS 130 for Env Sci | Soph |
| BIOL 310 Ecology | 4 | BIOL 254, CHEM 161, 163L | Jr/Sr |
| BIOL *** Biology elective | 4 | | Soph-Sr |
| One Biodiversity course selected from: | | | |
| BIOL 315 Botany | 4 | BIOL 215, 254 | Jr |
| BIOL 316 Vertebrate Zoology | 4 | BIOL 254 | Jr |
| BIOL 317 Invertebrate Zoology | 4 | BIOL 163, 164 | Jr |
| BIOL 322 Mammalogy | 4 | BIOL 215, 254 | Jr |
| One Integrative course selected from: | | | |
| BIOL 305 Toxicology | 3 | BIOL 151, 152 | Jr |
| BIOL 320 Animal Behavior | 4 | BIOL 254 | Jr |
| BIOL 344 Evolution | 3 | BIOL 250 | Jr |
| BIOL 360 Principles of Microbiology | 4 | BIOL 250; CHEM 221, 223L | Jr |
| One Molecular course selected from: | | | |
| BIOL 325 Molecular Embryology | 4 | BIOL 250 | Jr/Sr |
| BIOL 354 Molecular Cell Biology | 4 | BIOL 250, CHEM 221, 223L | Jr/Sr |
| BIOL 374 Immunology | 4 | BIOL/CHEBI/CHEM/EXSC major; CHEM 221, 223L | Jr |
| BIOL 395 Biology Internship | 1 | BIOL 254 | Jr |
| | OR | | |
| BIOL 398/498 Biology Research | 1-2 | BIOL 254; CHEM 221, 223L | Jr/Sr |
| ^BIOL 497 Seminar | 2 | Sr Stand or P/Faculty | Sr |
| CHEM 161 Accel Gen Chem for Sci Majors | 3 | HS Chemistry and placement or CHEM 105, 107L; Coreq CHE 163L | Fr/Soph |
| CHEM 163L Accel Gen Chem for Sci Majors Lab | 1 | HS Chemistry and placement or CHEM 105, 107L; Coreq CHEM 161 | Fr/Soph |
| | OR | | |
| CHEM 131 General Chemistry Sci Maj I | 3 | Coreq CHEM 133L | Fr/Soph |
| <i>*Prerequisite: Must have passed at least one year of high school chemistry or one semester of college chemistry equivalent to CHEM 105/107L or above AND at least one of the following: MATH ACT score of 20, MATH SAT score of 500, grade of C or better in one of the classes: MATH 103, 110, 112, 115, 130, 161.</i> | | | |
| CHEM 133L General Chemistry Sci Maj I Lab | 1 | Coreq CHEM 131 | |
| CHEM 132 General Chemistry Sci Maj II | 3 | C- or better in CHEM 131, 133L; Coreq CHEM 134L | Fr/Soph |
| CHEM 134L General Chemistry Sci Maj II Lab | 1 | Coreq CHEM 132 | |
| CHEM 221 Organic Chemistry I | 3 | C- or better in CHEM 161, 163L or 131, 133L, 132, 134L; Coreq CHEM 223L | Soph |
| CHEM 223L Organic Chemistry Lab | 1 | C- or better in CHEM 161, 163L or 131, 133L, 132, 134L; Coreq CHEM 221 | |

55-60 total hours

Pre-Med Concentration (15 hours)

| | | | |
|------------------------------------|---|---|------|
| CHEM 222 Organic Chemistry II | 3 | C- or better in CHEM 221, 223L; Coreq CHEM 224L | Soph |
| CHEM 224L Organic Chemistry II Lab | 1 | C- or better in CHEM 221, 223L; Coreq CHEM 222 | Soph |

Three courses beyond the core of which two must include a lab at 300 level:

| | | | |
|---|-----|--|-------|
| BIOL 354 Molecular Cell Biology | 4 | BIOL 250, CHEM 222, 224L | Jr/Sr |
| BIOL 360 Principles of Microbiology | 4 | BIOL 250; CHEM 221, 223L | Jr |
| BIOL 374 Immunology | 3 | BIOL/BIOCHEM/CHEM/EXSC maj; CHEM 221, 223L | Jr/Sr |
| BIOL 388/488 Approved special topics | 3 | | |
| CHEM 350/351L Biochemistry I & Lab | 3/1 | C- or better CHEM 222, 224L or BIOL 354 | Jr/Sr |
| CHEM 352/353L Biochemistry II & Lab | 3/1 | C- or better CHEM 350, 351L; Coreq CHEM-353L | Jr/Sr |
| CHEM 388/488 Approved special topics | 3 | | Jr/Sr |
| EXSC 240 Fund. Of Human Nutrition | 3 | | |
| EXSC 303 Org. & Adm. Health Professions | 3 | | |
| HSCI 210 Intro. To Epidemiology | 3 | | |

1. Biology majors are expected to take BIOL 163, 164, 215, 250, 252 and 254 by the end of the sophomore year.

2. Majors must take required Chemistry courses in their freshman or sophomore year.

3. Be aware that most upper division courses are offered every other year.

4. Graduate school candidates should check entrance requirements for several graduate schools.

5. Completion of BIOL-395, 398 or 498 with a grade of C or better is required for graduation.

^Satisfies advanced writing requirement

NAME: _____

**B.S. Degree: Biology Major (for students entering in Fall 2022/Spring 2023)
Pre-Med Concentration**

In the "WHAT" column, enter the specific course number when applicable--e.g. HIST 121. In the "WHEN" column, enter the term and year in which the requirement is satisfied--e.g., sp '20.

| General Education | |
|-------------------|--|
| WHAT | WHEN |
| _____ | ENGL 101* w/ C (2.0) [3 hrs] |
| _____ | ENGL 110 w/ C (2.0)* [3 hrs] |
| _____ | COMM 211 w/ C (2.0) [3 hrs] |
| _____ | Dept senior seminar/writing course |
| _____ | Met by: _____ BIOL 497 [2 hrs] |
| _____ | FYEX 101 [3 hrs] |
| _____ | FYEX 102 [1 hr] |
| _____ | FYEX 103/104/105/106/107 [1 hr] |
| _____ | FYEX 103/104/105/106/107 [1 hr] |
| _____ | Foundational Scientific Inquiry [3-4 hrs] |
| _____ | Foundational Quantitative Analysis [3-4 hrs] |
| _____ | Ethical/Spiritual Explor Lens (ETSP) [3 hrs] |
| _____ | Aesthetic Expression Lens (AEXP) [3 hrs] |
| _____ | Per & Soc Well Being Lens (PSWB) [3 hrs] |
| _____ | Cultural Expression Lens (CEXP) [3 hrs] |
| _____ | Experimental Inquiry Lens (EXIN) [3 hrs] |
| _____ | INDS 401 [1 hr] |
| _____ | INDS 402 [1 hr] |
| _____ | 35 – 41 Total semester hours |
| _____ | 120 semester hours required for graduation |

| Biology Major – Pre-Med Concentration | |
|---------------------------------------|--------------------------------------|
| WHAT | WHEN |
| _____ | BIOL 115 [1 hr] |
| _____ | BIOL 163 [4 hrs] |
| _____ | BIOL 164 [4 hrs] |
| _____ | BIOL 215 [4 hrs] |
| _____ | BIOL 250 [4 hrs] |
| _____ | BIOL 252 [4 hrs] |
| _____ | BIOL 254 [4 hrs] |
| _____ | BIOL 310 [4 hrs] |
| _____ | BIOL *** [4 hrs] |
| _____ | BIOL 325/354/374 [4 hrs] |
| _____ | BIOL 315/316/317/322 [4 hrs] |
| _____ | BIOL 305/320/344/360 [3-4 hrs] |
| _____ | BIOL 395/398/498 w/C (2.0) [1-2 hrs] |
| _____ | BIOL 497 [2 hrs] |
| _____ | CHEM 161 [3 hrs] |
| _____ | CHEM 163L [1 hr] |
| _____ | OR |
| _____ | CHEM 131 [3 hrs] |
| _____ | CHEM 133L [1 hr] |
| _____ | CHEM 132 [3 hrs] |
| _____ | CHEM 134L [1 hr] |
| _____ | CHEM 221 [3 hrs] |
| _____ | CHEM 223L [1 hr] |
| _____ | 55-60 semester hours |
| _____ | CHEM 222 [3 hrs] |
| _____ | CHEM 224L [1 hr] |

Three courses from the following (2 must include a lab)

| | | |
|-------|-------|--|
| _____ | _____ | BIOL *305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs] |
| _____ | _____ | BIOL 305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs] |
| _____ | _____ | BIOL 305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs] |

*no lab

➤Except in specifically approved majors, a maximum of 52 hours in an academic discipline may count toward graduation. Three hours over the limit may count to accommodate an internship in the discipline.

➤Only six hours of any minor may overlap with the required credit hours of a student's chosen major. The overlap constraint is not applicable to courses that majors or minors MUST take in others departments.

*Enter NA (not applicable) if waived upon admission