# Fort Hays State University – Bachelor of Science in Biology – Natural Resources (120 Credit Hours) FALL 2023

### General Education Program (34-35 Hours; starting Fall 2023)

| <u>Course No.</u>       | Course Title                              | <u>Hrs.</u> | <u>Grade</u> | Course No.      | Course Title  | <u>Hrs.</u> | <u>Grade</u> |
|-------------------------|---|-------------|--------------|-----------------|---|-------------|--------------|
| English (6              |   |             |              | Social and      | l Behavioral Sciences (6 hours; 2 areas req   | uired)      |              |
| ENG 101                 | English Composition I                     | 3           |              | Social and      | Denavioral Sciences (0 nours, 2 areas req   | un cu)      |              |
| ENG 102                 | English Composition II                    | 3           |              | Social Scien    | ce Requirement (choose 1 course)  |             |              |
| Communio                | cation (3 hours)                          |             |              | CRJ 360         | Social Justice Action and Policy  | 3           |              |
| COMM 100                | Fundamentals of Oral Communication        | 3           |              | PSY 100         | General Psychology  | 3           |              |
|                         |   |             |              | SOC 140         | Understanding Society   | 3           |              |
| Math and                | Stats (3 hours)                           |             |              | SOC 310         | Gender and Society  | 3           |              |
| With and                | Stats (5 hours)                           |             |              | LDRS 200        | Discovering Leadership  | 3           |              |
| MATH 105                | College Algebra with Review               | 3           |              |                 |   |             |              |
| MATH 110                | College Algebra                           | 3           |              | Engaged Gl      | obal Citizens Requirement (choose 1 course)   |             |              |
| MATH 234                | Analytic Geometry and Calculus I          | 3           |              |                 |   |             |              |
| MATH 331                | Calculus Methods                          | 3           |              | GSCI 110        | World Geography   | 3           |              |
|                         |   | U           |              | POLS 105        | Current Political Issues  | 3           |              |
| Arts and E              | Iumanities (6 hours; 2 areas required)    |             |              | SOC 333         | Global Forces in a Changing World   | 3           |              |
| Arts and L<br>Aesthetic | fumanties (6 nours; 2 areas required)     |             |              | <b>TECS 391</b> | Technology in Society   | 3           |              |
| ART 180                 | Fundamentals and Appreciation of Art      | 3           |              |                 |   |             |              |
|                         | Survey of Art History I                   | 3           |              | Institution     | nally Designated Area (6 hours; 2 areas   | requir      | ed)          |
| ART 201                 | Listening to Music                        | 3           |              | Critical Thi    | nking   |             |              |
| MUS 161<br>THTR 120     | Introduction to Theatre                   | 3           |              | <b>PHIL 100</b> | Critical Thinking   | 3           |              |
| IHIK 120                | Introduction to Theatre                   | 3           |              |                 | C   |             |              |
| Historical              |   |             |              | Personal and    | d Professional Development  |             |              |
| HIST 110                | World Civilization to 1500                | 3           |              | FIN 205         | Theory and Practice of Personal Finance   | 3           |              |
| HIST 111                | Modern World Civilization                 | 3           |              | GSCI 240        | Introduction to Geographic Info Systems   | 3           |              |
| HIST 130                | United States History to 1877             | 3           |              | HHP 200         | Personal Wellness   | 3           |              |
| HIST 130                | United States History is 1077             | 3           |              | INF 101         | Introduction to Computer Information Systems  | 3           |              |
| 11151 151               | United States History since 1077          | 5           |              | MIL 302         | Soldier Health and Fitness  | 3           |              |
| Philosophica            | 1   |             |              |                 |   |             |              |
| PHIL 120                | Introduction to Philosophy                | 3           |              |                 |   |             |              |
| PHIL 170                | World Religions                           | 3           |              | *Counts tow     | ards General Education and the Biology major.   |             |              |
| PHIL 340                | Ethics                                    | 3           |              |                 |   |             |              |
| 11112 0 10              |   | U           |              |                 |   |             |              |
| Natural an              | nd Physical Sciences (4 hours; 1 course w | /Lab)       |              |                 | rses may fulfill the requirements. The recor<br>logy majors. Please check with your faculty |             |              |
| BIOL 180*               | Principles of Biology                     | 3           |              |                 | other course options.   |             | •            |
| BIOL 180L*              | Principles of Biology Lab                 | 1           |              | auvi501 101     | other course options.   |             |              |
|                         | r   | -           |              |                 |   |             |              |

You must complete 120 credit hours to earn a bachelor's degree.

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#### 1. Biology Core (15-16 Hours)

| Required:              |                           |   |     |
|------------------------|---------------------------|---|-----|
| BIOL 180/180L*         | Principles of Biology/Lab | 4 | F S |
| BIOL 250/250L          | Botany/Lab                | 4 | F S |
| BIOL 260/260L          | Zoology/Lab               | 4 | F S |
|                        |                           |   |     |
| Take one of the follow | wing:                     |   |     |
| BIOL 325/325L          | Genetics/Lab              | 4 | F S |
| BIOL 420               | Evolution                 | 3 | F   |
| *0 10                  | 1 E 1                     |   |     |

\*Counts towards General Education and the Biology major.

#### 2. Structure and Function Requirement (8 hours)

Take **two** of the following, at least one of which must be a Physiology course:

|                | 6                           |   |         |
|----------------|-----------------------------|---|---------|
| BIOL 230/230L* | Anatomy & Physiology I/Lab  | 4 | F S*    |
| BIOL 231/231L* | Anatomy & Physiology II/Lab | 4 | F S*    |
| BIOL 330/330L  | Plant Anatomy/Lab           | 4 | S       |
| BIOL 345/345L  | Human Anatomy/Lab           | 4 | S       |
| BIOL 346/346L  | Human Physiology/Lab        | 4 | F       |
| BIOL 450/450L  | Comparative Anatomy/Lab     | 4 | F (odd) |
| BIOL 495/495L  | Plant Physiology/Lab        | 4 | F       |
|                |                             |   |         |

#### \*BIOL 230/230L and BIOL 231/231L must be taken in combination

# 3. Additional Process Class (4 hours)

Required: BIOL 395/395L Ecology/Lab

4

S

#### 4. Upper-Division Requirements (13-23 hours)

Take any of courses with "BIOL" prefix and 300 level or above from either the list below or courses listed above that were not used to meet the requirements for that section. Courses other than those listed may be available. Talk to your faculty mentor and academic advisor. The number of credit hours completed in this section, depends on the number of credit hours completed in sections 1, 3, 6, 7, and 9.

| BIOL 470/471  | Problems in Biology         | 1-4 | F S      |
|---------------|-----------------------------|-----|----------|
| BIOL 476      | Internship in Biology       | 1-3 | F S      |
| BIOL 482      | Readings in Biology         | 1-3 | F S      |
| BIOL 490/490L | General Microbiology        | 4   | F S      |
| BIOL 610/610L | Taxonomy Flowering Plants   | 4   | F        |
| BIOL 619/619L | Aquatic Ecology             | 4   | F (odd)  |
| BIOL 621      | Human Dimensions Wildlife   | 3   | S (odd)  |
| BIOL 627      | Behavioral Ecology          | 3   | S (even) |
| BIOL 634      | Range. Restoration Conserv. | 3   | S (odd)  |
| BIOL 637      | Contemp. Rangeland Issues   | 3   | S (even) |
| BIOL 638/638L | Range. Plant Ecology        | 4   | F (odd)  |
| BIOL 642/642L | Parasitology                | 4   | S (odd)  |
|               |                             |     |          |

| BIOL 643/643L | Entomology                      | 4 | F        |
|---------------|---------------------------------|---|----------|
| BIOL 650/650L | Ornithology                     | 4 | S        |
| BIOL 651/651L | Mammalogy                       | 4 | F        |
| BIOL 660/660L | Herpetology                     | 4 | S (even) |
| BIOL 665      | Biodiversity & Conserv. Biology | 3 | S        |

#### 5. Discipline Writing Course Graduate Requirement (3 hours)

| BIOL 442 | Scientific Communication | 3 | F |
|----------|--------------------------|---|---|
|          |                          |   |   |

# 6. Management (4 hours)

 Take one management course:

 BIOL 695/695L
 Range Management
 4
 \_\_\_\_\_\_F(even)

 BIOL 697/697L
 Wildlife Management
 4
 \_\_\_\_\_\_S(even)

 BIOL 699/699L
 Fisheries Management
 4
 \_\_\_\_\_\_S(even)

# 7. Chemistry Cognates (6-10 hours)

| CHEM 120/120L                         | University Chemistry I/ Lab                           | 5      | F      |
|---------------------------------------|---|--------|--------|
| CHEM 122/122L                         | University Chemistry II/ Lab                          | 5      | S      |
| Or:<br>CHEM 112/112L<br>CHEM 114/114L | General Chemistry I/ Lab<br>General Chemistry II/ Lab | 4<br>4 | F<br>S |

# 8. Mathematics and Statistics Cognates (7 hours)

| BIOL 620/620L   | Biostatistics/Lab | 4 | F |  |
|---|-------------------|---|---|--|
| MATH 110  | College Algebra*  | 3 |   |  |
| *Counts towards General Education and the Biology major |                   |   |   |  |

# Counts towards General Education and the Biology major.

# 9. Earn a minor take electives of your choice (20-21 hours)

Recommendations: (other minors are possible; talk to your faculty mentor and academic advisor)

| Agriculture | 20 hours |
|-------------|----------|
| GeoSciences | 20 hours |

F = Fall Offering, S = Spring Offering

# YOU MUST COMPLETE 120 CREDIT HOURS TO EARN A BACHELOR'S DEGREE.