### WILDLIFE BIOLOGY-BS

**This is a general curriculum guide and is not applicable to every student. It is important to meet with your advisor.**

#### Year One

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIO 121</strong> General Biology II w/lab</td>
<td>4 (6)</td>
<td>Prerequisite: MTH 110 (may be taken concurrently)</td>
</tr>
<tr>
<td>CHM 109 Introductory Chemistry (GE Physical Science) OR</td>
<td>4 (6)</td>
<td></td>
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<tr>
<td>1CHM 115 Principles of Chemistry I w/lab (GE Physical Science)</td>
<td>4 (6)</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (GE Art) or 2WRT 120 (self-placement)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (GE Social/Behavioral) OR 3MTH 122 College Algebra</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4 Elective</td>
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*It is strongly recommended that WB majors take BIO 121 before BIO 120.

#### Year Two

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td><strong>BIO 215</strong> Ecology w/lab (summer and fall only)</td>
<td>4 (6)</td>
<td>Prerequisites: BIO 121</td>
</tr>
<tr>
<td>NRM 250 Resource Measurements and Maps (fall only)</td>
<td>3 (5)</td>
<td></td>
</tr>
<tr>
<td>STA 215 Intro to Applied Statistics (GE Math)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (GE Philosophy &amp; Literature (COM 202 recommended))</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 Elective</td>
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#### Year Three

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIO 408/NRM 408 Wildlife Management (fall only)</strong></td>
<td>4 (6)</td>
<td>Wildlife Theory &amp; Application Elective (see below)</td>
</tr>
<tr>
<td>Wildlife Theory &amp; Application Elective (see below)</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Animal Elective (see below)</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Plant Elective (see below)</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>Issues Gen Ed+SWS (BIO 338-SWS recommended)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 Elective (if needed)</td>
<td>1-3</td>
<td></td>
</tr>
</tbody>
</table>

#### Year Four

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIO 375</strong> Genetics and <strong>BIO 376</strong> Genetics Laboratory</td>
<td>4 (6)</td>
<td><strong>NRM 495 SWS</strong> Trends in Natural Resources Mgt</td>
</tr>
<tr>
<td>Biological Electives (see below)</td>
<td>3-4</td>
<td>Prerequisites: Senior Standing, STA 215, NRM 150 and one of NRM 330, 386, 408, 420, 452 or 462</td>
</tr>
<tr>
<td>Plant Elective (see below)</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>Issues Gen Ed (NRM 451 recommended)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (GE Global Perspectives) (if needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>NRM 496 SWS</strong> (winter only) + <strong>NRM 497</strong></td>
<td>4</td>
<td>(Capstone) (spring/summer only)</td>
</tr>
<tr>
<td>(Prerequisites: 496: Senior Standing, STA 215, NRM 150 and one of NRM 330, 386, 408, 420, 452 or 462: NRM 496 or permission)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant Elective (see below)</td>
<td>2-4</td>
<td></td>
</tr>
<tr>
<td>Math &amp; Statistics or Gen Ed (if needed)</td>
<td>3-5</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (if needed) or 4 Elective (if needed)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed (if needed) or 4 Elective (if needed)</td>
<td>3</td>
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#### Notes

1. Students planning on professional or graduate school should complete CHM 115, 116, 241, 242, 461 and PHY 220 and PHY 221. See the Preprofessional Advisors in the CLAS Academic Advising Center for more information.

2. A grade of C or better is required in WRT 130 or 150 in order to satisfy the WRT requirement at GVSU.

3. MTH 122 is required for CHM 116. Take the Math Proficiency Tests for MTH 122 and/or 123 online: www.gvsu.edu/s/mv

4. Students must have a minimum of 120 credits to graduate with 58 of the 120 credits being from a senior level institution and the final 30 of the 120 credits completed at GVSU. Elective refers to any course that will help meet these requirements.

5. Students must complete a total of two courses with an SWS attribute.

6. NRM 497 is a spring/summer course and can only be taken if NRM 496 is completed in the winter.
Declaring the Wildlife Biology Major:
1. In myBanner, select “Student” > “Student Records” > “Change Major” > “Change Major 1/Program”
2. Choose "Wildlife Biology-BS" from the drop-down box.
3. Click “Submit” and then “Change to New Program”

*By choosing the correct general education classes, graduates can be eligible for certification as an Associate Wildlife Biologist by the Wildlife Society. More information can be found at www.wildlife.org. Please consult with your faculty advisor.

<table>
<thead>
<tr>
<th>General Education Categories fulfilled by the Wildlife Biology major:</th>
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<tbody>
<tr>
<td>Life Science and Physical Science: BIO 120 and CHM 109 or CHM 115 (all fulfill lab requirement)</td>
</tr>
<tr>
<td>Mathematical Sciences: STA 215</td>
</tr>
<tr>
<td>Philosophy &amp; Literature: COM 202*</td>
</tr>
<tr>
<td>Issues (recommended): BIO 338-SWS* and NRM 451*</td>
</tr>
</tbody>
</table>

**Students must complete electives from each category as described below.**

### Wildlife Theory & Application Electives
Complete at least 6 credits from the following:

- **BIO 210** – Evolutionary Biology (3)  
  Prerequisites: BIO 120 and BIO 121

- **NRM 395** – GIS Applications in Resource Management (3) w/ lab  
  Prerequisites: GPY 307 or NRM 250

- **BIO 386 or NRM 386** – Ecological Restoration and Management (4) w/ lab  
  Prerequisites: BIO 215

- **BIO 415 or NRM 415** – Fire Ecology and Management (3)  
  Prerequisites: BIO 215

- **NRM 462** – Forest Ecosystem Management (4) w/ lab  
  Prerequisites: NRM 150, NRM 250

- **BIO 470** – Conservation Biology (3)  
  Prerequisites: BIO 215

- **FE BIO 475** – Population Genetics (3)  
  Prerequisites: BIO 210 and (either BIO 355 or BIO 375), or by permission

- **BIO 485** – Molecular Ecology (3) w/ lab  
  Prerequisites: BIO 375

**Offered in Fall**

**Offered in Winter**

**Offered in Spring/Summer**

**Offered in Even years only**

**Offered in Odd years only**

### Animal Electives
Complete at least 9 credits from the following:

- **F BIO 222** – Natural History of Vertebrates (3) w/ lab  
  Prerequisites: BIO 121

- **W BIO 232** – Natural History of Invertebrates (3) w/ lab  
  Prerequisites: BIO 121

- **F BIO 272** – Insect Biodiversity (3) w/ lab  
  Prerequisites: BIO 121 (BIO 215 recommended)

- **W BIO 342** – Ornithology (3) w/ lab  
  Prerequisites: BIO 121

- **F BIO 412** – Mammalogy (4) w/ lab  
  Prerequisites: BIO 121 and BIO 215)

- **F BIO 444** – Herpetology (4) w/ lab  
  Prerequisites: BIO 215

- **S BIO 243** – Plant Identification and Natural History (3) w/ lab  
  Prerequisites: BIO 121

- **W BIO 303** – Plant Morphology (4) w/ lab  
  Prerequisites: BIO 215

- **W BIO 313** – Plants and Islands (4)  
  Prerequisites: BIO 121 and Permission of Instructor. BIO 215 recommended.

- **F BIO 323** – Aquatic and Wetland Plants (3) w/ lab  
  Prerequisites: BIO 121

- **F BIO 333** – Plant Systematics (4) w/ lab  
  Prerequisites: BIO 121

- **F BIO 383** – Plant-Fungal Interactions (4) w/ lab  
  Prerequisites: BIO 121

- **W BIO 403** – Plant Physiology (4) w/ lab  
  Prerequisites: BIO 120 (or CMB 155/156); and BIO 121; and CHM 231 or CHM 241

- **F BIO 433** – Plant Ecology (4) w/ lab  
  Prerequisites: BIO 120 (or CMB 155/156); and BIO 121; and BIO 215

- **F NRM 263** – Forest Vegetation (2) w/ lab  
  Prerequisites: BIO 121

### Plant Electives
Complete at least 9 credits from the following:

- **SS CHM 116** – Principles of Chemistry II (5) w/ lab  
  Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)

- **CHM 231** – Intro to Organic Chemistry (4) w/ lab  
  Prerequisites: CHM 109 or CHM 116

- **CHM 232** – Biological Chemistry (4) w/ lab  
  Prerequisites: CHM 231

- **GEO 111** – Exploring the Earth (4) w/ lab  

- **F NRM 281** – Principles of Soil Science (4) w/ lab  
  Prerequisites: CHM 109 or CHM 115

- **PHY 200** – Physics for the Life Sciences (4) w/ lab  
  Prerequisites: MTH 110 or MTH 122 or MTH 201

- **OR PHY 220** – General Physics I (5) w/ lab  
  Prerequisites: MTH 122 and MTH 123

### Mathematics & Statistics
Complete at least 3 credits from the following:

- **MTH 122** – College Algebra (3)  
  Prerequisite: MTH 110 or assignment through Grand Valley math placement

- **MTH 123** – Trigonometry (3)  
  Prerequisite: MTH 122 or assignment through Grand Valley math placement (MTH 122 may be taken concurrently)

- **MTH 124** – Precalculus: Functions and Models (5)  
  Prerequisite: MTH 110

- **MTH 125** – Survey of Calculus (3)  
  Prerequisite: MTH 110; or assignment through math placement

- **STA 216** – Intermediate Applied Statistics (3)  
  Prerequisite: STA 215 or STA 312

### Physical Science Electives
Complete at least 5 credits from the following:

- **CHM 116** – Principles of Chemistry II (5) w/ lab  
  Prerequisites: CHM 115 and (MTH 122 or MTH 125 or MTH 201)

- **CHM 231** – Intro to Organic Chemistry (4) w/ lab  
  Prerequisites: CHM 109 or CHM 116

- **CHM 232** – Biological Chemistry (4) w/ lab  
  Prerequisites: CHM 231

- **GEO 111** – Exploring the Earth (4) w/ lab  

- **F NRM 281** – Principles of Soil Science (4) w/ lab  
  Prerequisites: CHM 109 or CHM 115

- **PHY 200** – Physics for the Life Sciences (4) w/ lab  
  Prerequisites: MTH 110 or MTH 122 or MTH 201

- **OR PHY 220** – General Physics I (5) w/ lab  
  Prerequisites: MTH 122 and MTH 123

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.

The CLAS Academic Advising Center is located in C-1-120 MAK, 616-331-8585. To schedule an appointment with an advisor in the CLAS Academic Advising Center, visit www.gvsu.edu/clasadvising and click on “Schedule Appointment.”

March 2022