<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 121*</td>
<td>General Biology II</td>
<td>4 (6)</td>
<td>Prerequisite: MTH 110 (may be taken concurrently)</td>
</tr>
<tr>
<td>CHM 115</td>
<td>Principles of Chemistry I</td>
<td>4 (6)</td>
<td>Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201)</td>
</tr>
<tr>
<td>^MTH 122</td>
<td>College Algebra</td>
<td>3</td>
<td>Prerequisite: MTH 110 or assignment through Grand Valley math placement</td>
</tr>
<tr>
<td>Gen Ed or ^WRT 120 (self-placement)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>^Elective</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>*It is strongly recommended that BIO majors take BIO 121 before BIO 120.</td>
<td></td>
<td></td>
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<tr>
<td>Numbers noted within (parentheses) are contact hours</td>
<td>Total</td>
<td>15</td>
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**Year Two**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO 215</td>
<td>Ecology (summer and fall only)</td>
<td>4 (6)</td>
<td>Prerequisite: BIO 120 and BIO 121 (BIO 120 may be taken concurrently)</td>
</tr>
<tr>
<td>CHM 241</td>
<td>Organic Chemistry for Life Sciences I</td>
<td>5 (7)</td>
<td>Prerequisite: CHM 116</td>
</tr>
<tr>
<td>^MTH 123</td>
<td>Trigonometry</td>
<td>3</td>
<td>Prerequisite: MTH 122 or assignment through Grand Valley math placement (MTH 122 may be taken concurrently)</td>
</tr>
<tr>
<td>Gen Ed</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>^Elective</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>^WRT 130 or WRT 150 Strategies in Writing</td>
<td>3-4</td>
<td>Gen Ed</td>
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</tr>
<tr>
<td>^Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Numbers noted within (parentheses) are contact hours</td>
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<td>Total</td>
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**Year Three**

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHM 461</td>
<td>Biochemistry I</td>
<td>4</td>
<td>Prerequisites: CHM 242, CHM 247 or CHM 248</td>
</tr>
<tr>
<td>PHY 220</td>
<td>General Physics I</td>
<td>5 (7)</td>
<td>Prerequisites: MTH 122 and MTH 123</td>
</tr>
<tr>
<td>^Category I BIO Elective Course</td>
<td>3-4</td>
<td>Gen Ed</td>
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</tr>
<tr>
<td>Gen Ed</td>
<td></td>
<td>3</td>
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<tr>
<td>Numbers noted within (parentheses) are contact hours</td>
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<td>15-16**</td>
<td>Total</td>
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**Year Four**

<table>
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<th>Course Code</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB 405</td>
<td>Cell and Molecular Biology</td>
<td>4</td>
<td>Prerequisites: (BIO 375 or 355), BIO 376, and (CHM 232 or CHM 242 or CHM 247) may be taken concurrently</td>
</tr>
<tr>
<td>^CMB 406</td>
<td>SWS Cell and Molecular Biology Laboratory</td>
<td>2 (4)</td>
<td>Prerequisites: CMB 405 (may be taken concurrently)</td>
</tr>
<tr>
<td>BIO 357</td>
<td>Environmental Microbiology</td>
<td>4 (6)</td>
<td>Prerequisite: BIO 120 or instructor permission</td>
</tr>
<tr>
<td>OR BMS 212</td>
<td>Introductory Microbiology and BMS 213</td>
<td>4 (7)</td>
<td>Microbiology and Lab Prerequisites: BIO 120, and CHM 230 or CHM 232 or CHM 241</td>
</tr>
<tr>
<td>Issue</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Numbers noted within (parentheses) are contact hours</td>
<td>Total</td>
<td>14</td>
<td>Total</td>
</tr>
</tbody>
</table>

**The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15.**

^students must demonstrate competency in college algebra and trigonometry as a prerequisite to veterinary school admission. Consult with your advisor regarding the math requirements for Veterinary school and the Biology major to determine the appropriate courses to take. To take the Math Proficiency Tests for MTH 122 and/or 123 online, visit this link: gvsu.edu/s/mv

^Elective refers to any course that can apply towards the 120 credit needed to graduate.
Students must complete a minimum of 41 credits of Biology coursework. If students still do not have 41 credits of Biology coursework after completing both the Biology core requirements (above) and the requirements for their chosen emphasis (below), they should select additional Biology courses from the elective categories, BIO Issues courses, credits in research (BIO 499), or internship credit (BIO 490). Students should consult with a Biology advisor prior to selecting elective courses.

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

Declarations the Biology-Pre-Veterinary Medicine Major:
1. In myBanner, select “Student” > “Student Records” > “Change Major” > “Change Major 1/Program”
2. Choose “Biology-BA or Biology-BS Preveterninary Medicine” from the drop-down box.
3. Click “Submit” and then “Change to New Program”

General Education Categories fulfilled by the Biology major:
Life Science and Physical Science: BIO 120 and CHM 115 (both fulfill lab requirement)
Mathematical Sciences: STA 215, MTH 122, MTH 123, MTH 201

Students must complete one course from Categories I and II.
The BIO-PREVET major requires a total of 41 credits of BIO classes, including certain CMB and BMS courses. Elective courses may only count in one category. **Classes marked with a * are recommended for Prevet students.**

**Category I: Plant Organismal Biology**
BIO 243 Plant Identification & Natural History (3) w/lab
BIO 303 Plant Morphology (4) w/lab
BIO 313 Plants and Islands (4) w/lab
BIO 323 Aquatic and Wetland Plants (3) w/lab
BIO 313 Plants and Islands (4) w/lab
BIO 383 Plant-Fungal Interactions (4) w/lab
BIO 403 Plant Structure and Function (4) w/lab
BIO 413 Freshwater Algae (3) w/lab
BIO 423 Plant Biotechnology (3) w/lab
BIO 433 Plant Ecology (4) w/lab

Numbers in parentheses indicate # of credits
1 Offered in Fall semesters only
2 Offered in Winter semesters only
3 Offered in Even years only
4 Offered in Odd years only

**Category II: Animal Organismal Biology**
BIO 244 Herpetology (4) w/lab
BIO 302 Comparative Vertebrate Anatomy (3) w/lab
BIO 303 Comparative Vertebrate Anatomy (4) w/lab*
BIO 312 Mammalogy (4) w/lab*
BIO 322 Natural History of Vertebrates (3) w/lab*
BIO 323 Natural History of Vertebrates (3) w/lab*
BIO 342 Ornithology (3) w/lab*
BIO 362 Biology & Diversity of Fishes (4) w/lab
BIO 402 Aquatic Plants (3) w/lab
BIO 412 Mammalogy (4) w/lab*  
BIO 422 Animal Development Biology (3) w/lab*  
BIO 432 Comparative Animal Physiology (4) w/lab*  
BIO 444 Herpetology (4) w/lab
BMS 290+391 Human Physiology and Lab (5)*  
BMS 290+391 Human Physiology and Lab (5)*

*Strongly Recommended for Prevet Students*

**Excluded and Restricted Courses:**
The following courses may not count towards the Biology major:
BIO 104 - Biology for the 21st Century (4)
BIO 105 - Environmental Science (3)
BIO 107 - Great Lakes & Other Water Resources (4)
BIO 109 - Plants in the World (4)
BIO 205 - Genetics for K-8 Pre-Service Teachers (2)

Any other biology course whose description prevents it from being used in the major.
The following course may only count towards the Biology major with advisor’s permission.
BIO 355 - Human Genetics (3)

Note: students may count BIO 357 or BMS 212/213 towards the Biology degree, but not both

**The following courses can satisfy part of Gen Ed Issues requirement** and may count towards the Biology major after elective-category requirements are satisfied:
BIO 303 - Plants and Human Health (3)
BIO 311 - Who’s Running Your Life: Genes, Evolution and Behavior (3)
BIO 310 - Global Agricultural Sustainability (3)
BIO 328 - Biomedical Ethics (3)
BIO 329 - Evolution of Social Behavior (3)
BIO 338 - Environmental Ethics (3)

**Other Biology Elective Choice for Prevet Students:**
* BIO 352 - Animal Behavior (3) (does not count toward Category I or II)

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

**Biology Prevet Faculty Advisors:**
Dr. Jodee Hunt
huntj@gvsu.edu
Dr. Michael Henschaw
henschawm@gvsu.edu
Dr. Michael Lombardo
lombardm@gvsu.edu
Dr. Rod Morgan
morganr@gvsu.edu
Dr. Bruce Ostrow
ostrowb@gvsu.edu
Dr. Joe Jacquot
jacquotj@gvsu.edu

**CLAS Academic Advisors:**
Visit [www.gvsu.edu/clasadvising](http://www.gvsu.edu/clasadvising) and click on “Schedule Appointment” with one of the CLAS Biology Prevet Advisors

To find more information on Preprofessional programs, visit [www.gvsu.edu/clasadvising/preprofessional](http://www.gvsu.edu/clasadvising/preprofessional)

Edited 04/2021