## Lower Division Core

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>UNITS</th>
<th>PREREQUISITES &amp; CO-REQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol 106/L</td>
<td>Biological Principles I and Lab</td>
<td>3+1</td>
<td>Corequisite: Biol 106 and 106L must be taken concurrently</td>
</tr>
<tr>
<td>Biol 107/L</td>
<td>Biological Principles II and Lab</td>
<td>3+1</td>
<td>Corequisite: Biol 107 and 107L must be taken concurrently, Chem 102/L recommended</td>
</tr>
<tr>
<td>Chem 101/L</td>
<td>General Chemistry I and Lab</td>
<td>4+1</td>
<td>Prerequisite: Satisfactory score on the CPT or a grade of &quot;C&quot; or higher in Chem 100 taken at CSUN only Corequisite: Chem 101, 101L, and 101 Discussion must be taken concurrently</td>
</tr>
<tr>
<td>Chem 102/L</td>
<td>General Chemistry II and Lab</td>
<td>4+1</td>
<td>Prerequisite: Chem 101/L with a grade of &quot;C-&quot; or better in 101 Corequisite: Chem 102, 102L, and 102 Discussion must be taken concurrently</td>
</tr>
<tr>
<td>Phys 100A/AL</td>
<td>General Physics I</td>
<td>3+1</td>
<td>Prerequisite: Math 103, 104, 105 or Math 106 or a score on the MPT sufficient for entry into Math 255A</td>
</tr>
<tr>
<td>Phys 100B/BL</td>
<td>General Physics II</td>
<td>3+1</td>
<td>Prerequisite: Phys 100A</td>
</tr>
<tr>
<td>Math 102/L</td>
<td>Pre-Calculus I</td>
<td>3+1</td>
<td>Prerequisite: Category 1 or 16 on ALG of MPT (Full Prep) OR Category 2 or Math 196S or 14 on ALG of MPT (Conditional Prep) Corequisite: Math 102L (if Conditional Prep)</td>
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<tr>
<td>AND</td>
<td>Math 105/L</td>
<td>5+1</td>
<td>Prerequisite: B- in Math 102 or 19 on ALG of MPT (Full Prep) OR C- in Math 102 or 17 on ALG of MPT (Conditional Prep) Corequisite: Math 105L (if Conditional Prep)</td>
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<tr>
<td>OR</td>
<td>Math 106</td>
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<td>Prerequisite: Readiness for GE math without supplemental support</td>
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## Upper Division Core

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<tr>
<td>Biol 322</td>
<td>Evolutionary Biology</td>
<td>3</td>
<td>Prerequisite: Biol 106/L and Biol 107/L passed with grades of &quot;C&quot; or better</td>
</tr>
<tr>
<td>Biol 360</td>
<td>Genetics</td>
<td>3</td>
<td>Prerequisite: Biol 106/L and Biol 107/L passed with grades of &quot;C&quot; or better; Chem 101/L or Chem 103/L; Math 105 or Math 102+104</td>
</tr>
<tr>
<td>Biol 380</td>
<td>Cell Biology</td>
<td>3</td>
<td>Prerequisite: Biol 106/L and Biol 107/L passed with grades of &quot;C&quot; or better; Chem 102/L or Chem 104</td>
</tr>
<tr>
<td>Chem 333/L</td>
<td>Principles of Organic Chemistry I and Lab</td>
<td>4+1</td>
<td>Prerequisite: Chem 102/L with a grade of &quot;C-&quot; or better in Chem 102 Corequisite: Chem 333, 333L, and 333 Discussion must be taken concurrently</td>
</tr>
<tr>
<td>Chem 334/L</td>
<td>Principles of Organic Chemistry II and Lab</td>
<td>3+1</td>
<td>Prerequisite: Chem 333/L with a grade of &quot;C-&quot; or better in Chem 333 Corequisite: Chem 334 and 334L must be taken concurrently</td>
</tr>
</tbody>
</table>

## Selective Program: 20 Units Required, 17 Must Be Upper Division (300 or above)

1. **Molecular, Cellular and Physiological Biology**
   - Choose at least two courses – Seven units or more
   - At least one course must have a lab “L”
   - At least one course must be 400-level or above

2. **Systematics and Comparative Biology**
   - Choose one course
   - At least one course in either Section 2 or 3 must have a field studies component

3. **Ecology and Environmental Biology**
   - Choose one course
   - At least one course in either Section 2 or 3 must have a field studies component

4. **Electives**: Choose additional courses from one of the 3 sections above, or from the Elective section to bring the total number of units in the Selective Program to 20, with at least 17 of them upper division units (300 level or above)
1. Molecular, Cellular, Physiological Biology: Choose at least one course with a lab and at least one course 400-level or above (7 units total)

**300-Level “L” Courses**
- Biol 315/L Principles of Microbiology (2+2)
- Biol 316/L Plant Biology (3+1)
- Biol 382/L Human Anatomy & Physio I (3+1)

**400-Level “L” Courses**
- Biol 408/L Applied Microbiology (2+2)
- Biol 411/L Animal Histology (2+2)
- Biol 417/L Microbial Physiology (2+2)
- Biol 441/L Embryology (2+2)
- Biol 442/L Developmental Biology (3+1)
- Biol 472/L Recombinant DNA Techniques (2+2)
- Biol 475/L Biological Imaging (2+2)
- Biol 477/L Cell and Tissue Culture (2+2)
- Biol 480/L Cellular Physiology (2+2)
- Biol 481/L Plant Physiology (2+2)
- Biol 482/L Animal Physiology (2+2)
- Biol 483/L Principles of Neurophysiology (3+1)
- Biol 485/L Immunology and Serology (2+2)
- Biol 487/L Hematology (2+2)

**500-Level “L” Courses**
- Biol 551/L Computer Modeling in Biology (2+2)

2. Systematics and Comparative Biology: Choose one course. One course from Section 2 or 3 must be a Field Studies Course

**Non-field Studies Courses**
- Biol 410/L Medical Microbiology (2+2)
- Biol 418/L Bacterial Diversity (2+2)
- Biol 432/L Comparative Anatomy (2+2)
- Biol 433/L Biology of Marine Tetrapods (2+1)
- Biol 435/L Parasitology (2+2)
- Biol 452/L Molecular Markers in Evolutionary Studies (2+2)

**Field Studies Courses**
- Biol 312/L + 392F Vertebrate Biology (2+1+1)
- Biol 313/L + 392B Invertebrate Zoology (2+1+1)

3. Ecology and Environmental Biology: Choose one course. One course from Section 2 or 3 must be a Field Studies Course

**Non-field Studies Courses**
- Biol 422/L Physiological Ecology (2+2)

**Field Studies Courses**
- Biol 407/L + 492N Plant Ecology (2+1+1)
- Biol 414/L + 492A Avian Ecology (2+1+1)
- Biol 419/L + 492C Microbial Ecology (2+1+1)
- Biol 421/L + 492B Marine Biology (2+1+1)
- Biol 423 + 492F Field Ecology (2+2)
- Biol 425 + 492D Animal Behavior with Field Studies (3+1)

4. Elective Requirements: Choose additional courses if needed to total 20 units, at least 17 upper division units

**Lecture Courses**
- Math 255A Calculus for Life Sciences I (3)
- Chem 461 Biochemistry I (3)
- Chem 464 Principles of Biochemistry (3)
- Biol 449 Seminar on Topics in Tropical Biology (3)*
- Biol 490, 495, 499, 526 (1 to 3)

**Lab Courses**
- Chem 461L Biochemistry I Lab (1)
- Chem 464L Principles of Biochemistry Lab (1)
- Biol 330/L Design & Analysis of Experiments (2+1)
- Biol 431/L Food Microbiology (2+2)
- Biol 447/L Full Immersion Research Experience (FIRE) (2+2)
- Biol 502/L Biometry (3+1)
- Geol 322/L Introductory Oceanography and Lab (3+1)
- Geol 351/L Fundamentals of Paleontology (3+1)

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* #: Available only to students in Bridges Stem Cell Research Program

* #: Available only to students participating in Tropical Semester (Spring of even years)