



## B.S. Biology Major Requirements

### Lower Division - Complete one series for each subject

Chemistry :  14A  14B  14C  14D  14BL OR  20A  20B  20L  30A  30B  30AL

Life Science (LS) :  7A  7B  7C  23L

Math :  LS30A  LS30B OR  3A  3B  3C OR  31A  31B  32A

Statistics :  LS40 OR  Stats13

Physics :  5A  5B  5C OR  1A  1B  1C  4AL  4BL

### Upper Division - Complete 2 course from each core principle for a total of 10 courses

\*NOTE: Please review the Rules section for major course policies

#### Evolution & Genetics

**Ecology & Evolutionary Biology** 103, 104, 108, 109, 109L, 110, 111, 112, 113A, 113AL, 114A, 115, 117, 118, 120 (or 185), 121, C126, 129, 130, C135, 136, 140, 143, 144, M145 (same as EPSS M118), C146, 149, 150, 158, 160, 169, 171, C174, CM173, 175, 181, 184, 185, 186  
**Anthropology** 120, 124P, 124Q, 124S, 128P  
**Earth & Planetary Sciences** 116  
**Life Science** 107  
**Microbiology, Immunology, & Molecular Genetics** CM156, 158  
**Molecular, Cell, & Developmental Biology** 138, CM156  
**Society & Genetics** M142

Select two courses

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#### Information Flow

\* FMBQ/FBQ/MBQ Course

**Ecology & Evolutionary Biology** 100, 100L, 116, 120 (or 185), 121, 122, 125, C126, 129, 132\*, 134B, C135, 136, 137, 143, C146, 149, 150, 153, 156, 162, 162L, 169, 170, 171, C172, C174, 176, M178 (same as C&S BIOL M186), C179, 180A, 180B, 183  
**Anthropology** 124P, 128P  
**Chemistry** C100, 153A, 166  
**Life Science** 107  
**Microbiology, Immunology, & Molecular Genetics** 101, 103AL, 103BL, 109AL, 109BL, 123, 132, CM156, 158, C185A  
**Molecular, Cell, & Developmental Biology** 100, 138, 143, 144, C150, 150AL, CM156, 165B, 168, M175A, M175B, M175C, 187AL  
**Neuroscience** M101A, M101B, M101C, 102  
**Physiological Sciences** M106, 111A, 111B, CM123, 124, C126, C127, 128, C130, 136, 138, M140, C144, M145, 146, 147, 149, C152, 154, 155, 165, 166, 167, 173, 174, 175, M176, 177, M180A, M180B, M180C

Select two courses

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#### Structure Function

\* FMBQ/FBQ/MBQ Course

**Ecology & Evolutionary Biology** 101, 102\*, 103, 104, 105, 106\*, 107, 109, 109L, 110, 111, 112, 113A, 113AL, 113B\*, 114A, 114B\*, 115, 117, 118, 121, 122, 123A\*, 123B\*, 124A\*, 125, M127, M127L, 128, 129, M131 (same as GEOG M117), 136, 140, 144, M145 (same as EPSS M118), 147, 148, 151A, 151B\*, 152, 155, M157, 160, 161, 162, 162L, 163\*, 164\*, 165\*, 166\*, 169, 170 (or PHYSI 166), 171, C174, 181, 184  
**Chemistry** C105, 153A, 153D, 153L  
**Earth & Planetary Sciences** 116  
**Geography** 108, 111, 112  
**Microbiology, Immunology, & Molecular Genetics** 101, 103AL, 103BL, 109AL, 132, CM156, 158, 168, C185A  
**Molecular, Cell, & Developmental Biology** 100, 138, M140, C141, 143, 144, 146, C150, 165A, 165B, 168, M175A, M175B, M175C  
**Neuroscience** M101A, M101B, M101C, 102  
**Physiological Sciences** 107, 108, 111A, 111B, 120, 121, 122, CM123, 124, C126, C127, 128, C130, 136, 138, M140, C144, M145, 146, 147, 149, C152, 153, 154, 155, 165, 166, 167, 173, 174, 175, M176, 177, M180A, M180B, M180C

Select two courses

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## B.S. Biology Major Requirements

**Principle of Transformation of Energy & Matter**

\* FMBQ/FBQ/MBQ Course

**Ecology & Evolutionary Biology** 103, 109, 109L, 123A\*, 123B\*, 124A\*, M131 (same as GEOG M117), M139, 143, M151A, 153, 161, 162, 162L, 170, 184,  
**Atmospheric & Oceanic Sciences** 102, 103, 104, M105, 130, 145  
**Chemistry** 103, 110A, 110B, 114, C123A, C123B, 136, C143A, C143B, 144, C145, 153A, 153B, 153C, 153D, 153L, 154, C159, C164  
**Environmental Health Sciences** 100  
**Microbiology, Immunology, & Molecular Genetics** 101

Select two courses

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**Systems**

\* FMBQ/FBQ/MBQ Course

**Ecology & Evolutionary Biology** 101, 102, 104, 105, 106\*, 107, 108, 110, 111, 112, 113A, 113AL, 113B\*, 114A, 114B\*, 115, 116, 117, C119A, C119B, 120 (or 185), 122, 123A\*, 123B\*, 124A\*, 124B\*, 125, C126, M127, M127L, 128, 129, M131 (same as GEOG M117), 132\*, 133, 136, 137, M139, 140, 142, 144, C146, 147, 148, 149, 150, 151A, 151B\*, 152, 153, 154, 155, 156, 158, 160, 161, 162, 162L, 163\*, 164\*, 165\*, 166\*, 169, 170, C172, 176, C177, M178 (same as C&S BIOL M186), C179, 180A (2 units), 180B, 182\*, 183, 184  
**Anthropology** 124P, 128P  
**Atmospheric & Oceanic Sciences** 102, 103, 104, M105, 130, 145,  
**Biostatistics** 100B  
**Chemistry** 103, 153A, 153L  
**Environmental Health Sciences** 100  
**Earth & Planetary Sciences** 116  
**Geography** 108, 111, 112  
**Life Science** 107, M174  
**Microbiology, Immunology, & Molecular Genetics** 101, 103AL, 103BL, 105, 109AL, 109BL, 123, 132, 158, 168, 180A, 180B, C185A  
**Molecular, Cell, & Developmental Biology** 100, 138, M140, C141, 143, 144, 146, C150, 150AL, CM156, 160, 165A, 165B, 168, M175A, M175B, M175C, 187AL  
**Neuroscience** M101A, M101B, M101C, 102  
**Physiological Sciences** 100, M106, 107, 108, 111A, 111B, 120, 121, 122, CM123, 124, C126, C127, 128, C130, M135, 136, 138, M140, C144, M145, 146, 147, 149, C152, 153, 154, 155, 165, 166, 167, 173, 174, 175, M176, 177, M180A, M180B, M180C  
**Psychology** 115, 133B  
**Society & Genetics** M142

Select two courses

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## Major Worksheet

<b>Total:</b>	<b>/10</b>	
Of the 10 course above, <b><u>TWO</u></b> must be labs with one lab being from EEB (see chart below)	<b>Lab 1.</b>	
	<b>Lab 2.</b>	
Of the 10 course above, <b><u>FIVE</u></b> courses must be from the EEB department	<b>1.</b>	<b>2.</b>
	<b>3.</b>	<b>4.</b>
	<b>5.</b>	

**B.S. Biology Major Requirements****Courses that fulfill the lab requirement**

**Ecology and Evolutionary Biology** 100L, 101, 103, 109L, 110, 111, 112, 113AL, 114A, 115, 117, 128, 136, 144L, 150L, 162L, 170, CM174, 181

**Earth & Planetary Science** 116

**Chemistry** 114, 136, 144, 153L, 154

**Molecular, Cell, and Developmental Biology** 150AL, 160, 187AL

**Microbiology, Immunology, & Molecular Genetics** 101+100L, 103AL, 103BL, 105, 109AL, 109BL, 123

**Neuroscience** 102

**Physiological Science** 107, 108, 153, 166

**Rules for Biology Major**

- All Life Science Core Curriculum courses must be passed with a letter grade of C- or better and must be completed with an overall GPA of 2.00 (C) or better. Students receiving a grade below C- in three core curriculum courses, either in separate courses or repetitions of the same course, are ineligible to pursue the Biology major.
- For the upper division (UD) major requirements, you must pass each course with a letter grade of D- or better. However, in order to graduate, you are required to maintain a global GPA (UD major requirements) of 2.00 or better.
- A maximum of four (4) units of graduate work may be applied on the major, BUT only if approved by the department.
- Two courses from each Core Principle are required.
- Courses applied to the upper division (UD) major requirements may be applied to ONE Core Principle only. Courses listed in multiple categories MAY NOT be applied to multiple Core Principles simultaneously.
- Minimum of 5 Upper Division courses for the major must be taken within the EE BIOL Department.
- Minimum of 2 lab courses must be taken toward the degree, including a minimum of 1 Upper Division EE BIOL lab course.
- In order to receive lab credit for EEB 100L, 109L, 113AL, or 162L, the corresponding lecture course (EEB 100, 109, 113A, and 162, respectively) must be completed, either as a pre-requisite or as a co-requisite. The lecture course may be applied to a separate Core Principle.
- MIMG 101 + MIMG 100L - in order to receive lab credit for MIMG 100L, MIMG 101 must also be completed, either as a pre-requisite or as a co-requisite. However, MIMG 100L cannot be applied as a separate Core Principle since it is only three (3) units.



## B.S. Biology Major Requirements

### Rules for Biology Major

- Credit deductions: students cannot take the following pairs of courses:
  - o EE BIOL 120 & 185
  - o EE BIOL 170 & PHYSICI 166
  - o MCD BIOL 100 & 165A
- FBQ/MBQ instructors determine which Core Principles their courses will help complete Upper Division requirements for the major (up to 4 requirements total).
- A maximum of four (4) units of EE BIOL 199 OR eight (8) units of EE BIOL 198A & 198B may be applied to the major. Credit for 199 courses from other departments may NOT be applied. NO EXCEPTIONS TO THIS POLICY.
- Each Primary Investigator (PI) will sign off on a form stating which Core Principle the student's research course should count for, after the student's work and quarter are completed. The research course must be for a minimum of 4 units.
- Each course applied toward the UD major requirements must have a minimum of four (4) units. Courses with fewer than four units may be combined to equal one (1) course equivalent, IF they are applicable to the major (e.g., EE BIOL 180, EE BIOL 188), which would need to be determined via a course substitution petition. Thus, two (2) courses worth 2 units each (for a total of 4 units) could equal one course requirement on the major. A maximum of one (1) course on the major is allowed in cases where two 2-unit courses are combined to equal one course equivalent. A six-unit course counts as one course on the requirements for the major.
- Regarding classes offered by Molecular, Cell & Developmental Biology and Physiological Science (Department of Integrative Biology & Physiology, IBP): enrollment in ALL upper division (UD) Physiological Science courses will be restricted to their majors during first pass. You must consult the IBP department about enrollment in courses during second pass for UD elective Physiological Science courses. Non-Physiological Science majors are restricted from enrolling in PHYSICI 107 and 111A/B at ALL TIMES.

### Departmental Honors

- An overall GPA of 3.400 and a global GPA of 3.400 in the major are required for graduation with honors in Biology. Highest honors in Biology are awarded to students whose global and overall GPA are 3.600 at graduation and who have satisfactorily completed EE BIOL 198A & 198B. Students do not need to apply for departmental honors. All students are reviewed for honors following the receipt of final transcripts.