

## Department of Biology Graduation Checklist

LD= \_\_\_\_\_ Student: \_\_\_\_\_ E-mail \_\_\_\_\_  
 UD= \_\_\_\_\_ Last First  
 Advisor: \_\_\_\_\_

### BACHELOR OF SCIENCE IN BIOLOGY: CONCENTRATION IN CELL AND MOLECULAR

| <b>Lower Division Requirements (35-36 units)</b> |   | <i>Units</i> | <i>✓</i> | <i>Equiv. Form if any (✓)</i> |
|--|---|--------------|----------|-------------------------------|
| BIOL 230   | Introductory Biology I                                      | 5            |          |                               |
| BIOL 240   | Introductory Biology II                                     | 5            |          |                               |
| CHEM 115   | General Chemistry I: Essential Concepts of Chemistry        | 5            |          |                               |
| CHEM 215/216                                     | General Chemistry II: Quant. Appl. of Chem. Conc./Lab (3/2) | 5            |          |                               |
| MATH 226   | Calculus I  | 4            |          |                               |

*One course selected from the following (3-4):*

|   |  |              |  |  |
|---|--|--------------|--|--|
| MATH 124                                      | Elementary Statistics (3)                |              |  |  |
| MATH 227                                      | Calculus II (4)                          |              |  |  |
| MATH 228                                      | Calculus III (4)                         |              |  |  |
| CSC 210                                       | Introduction to Computer Programming (3) |              |  |  |
| BIOL 458                                      | Biometry (4)                             |              |  |  |
| PHYS 111/112                                  | General Physics I/Laboratory (3/1)       | 4            |  |  |
| PHYS 121/122                                  | General Physics II/Laboratory (3/1)      | 4            |  |  |
| <b>Total lower division requirements.....</b> |  | <b>35-36</b> |  |  |

### Upper Division Requirements (36 units)

|          |   |   |  |  |
|----------|---|---|--|--|
| BIOL 350 | Cell Biology                              | 3 |  |  |
| BIOL 351 | Experiments in Cell and Molecular Biology | 4 |  |  |
| BIOL 355 | Genetics                                  | 3 |  |  |
| BIOL 357 | Molecular Genetics                        | 3 |  |  |
| BIOL 382 | Developmental Biology                     | 3 |  |  |
| CHEM 333 | Organic Chemistry I                       | 3 |  |  |
| CHEM 335 | Organic Chemistry II                      | 3 |  |  |
| CHEM 340 | Biochemistry I                            | 3 |  |  |
| CHEM 341 | Biochemistry II                           | 3 |  |  |

*Electives to include one course from each group below. Include one lab course (8):*

#### *Group A:*

|              |  |  |  |  |
|--------------|--|--|--|--|
| BIOL 380     | Comparative Embryology (3)                   |  |  |  |
| BIOL 401/402 | General Microbiology and Laboratory (3/2)    |  |  |  |
| BIOL 450/451 | Biology of the Protozoa and Laboratory (3/2) |  |  |  |
| BIOL 525/526 | Plant Physiology and Laboratory (3/2)        |  |  |  |
| BIOL 612/613 | Human Physiology and Laboratory (3/2)        |  |  |  |
| BIOL 614     | Vertebrate Histology (4)                     |  |  |  |
| BIOL 630/631 | Animal Physiology and Laboratory (3/2)       |  |  |  |
| BIOL 640     | Cellular Neuroscience (3)                    |  |  |  |

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**Group B:**

|                                |   |  |  |  |
|--------------------------------|---|--|--|--|
| BIOL 356                       | Honors Genetics (2)   |  |  |  |
| BIOL 358                       | Experimental Techniques in Molecular Biology (4)                            |  |  |  |
| BIOL 361                       | Human Genetics (3)  |  |  |  |
| BIOL 391                       | Microscopy and Photomicrography (2)   |  |  |  |
| BIOL 420/421                   | General Virology and Laboratory (3/2)                                       |  |  |  |
| BIOL 435                       | Immunology (3)  |  |  |  |
| BIOL 442/443                   | Microbial Physiology and Laboratory (3/2)                                   |  |  |  |
| BIOL 524                       | Plant Molecular Biology (3)   |  |  |  |
| BIOL 620                       | Endocrinology (3)   |  |  |  |
| CHEM 300 <i>or</i><br>CHEM 343 | General Physical Chemistry I (2) <i>or</i><br>Biochemistry I Laboratory (3) |  |  |  |
| CHEM 351                       | Physical Chemistry I  |  |  |  |

*3 to 4 units of credit in graduate courses numbered BIOL 725-744, which accept qualified seniors, may be substituted with the advisor's approval.*

| <i>Course Num.</i> | <i>Course Title</i> | <i>Units</i> |
|--------------------|---------------------|--------------|
|                    |                     |              |
|                    |                     |              |
|                    |                     |              |
|                    |                     |              |

|   |                 |                  |
|---|-----------------|------------------|
|   | <b>Required</b> | <b>Completed</b> |
| <b>Total upper division requirements:</b> | <b>36</b>       | _____            |
| <b>Total for major</b>                    | <b>71</b>       | _____            |