**CENTRE COLLEGE**

**BIO Major Checklist**

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Check when [Unless indicated, all courses are 3 credits]

Completed

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|  | 1. BIO 110 Evolution, Biodiversity, Ecology (4 credits) |
|  | 2. BIO 210 Introduction to Genetics (4 credits) |
|  | 3. BMB 210 Introduction to Biochemistry and Cell Biology (4 credits) |
|  | 4. EITHER CHE 131 General Chemistry I (4 credits) and |
|  | CHE 132 General Chemistry II (4 credits) |
|  | OR CHE 135 Accelerated General Chemistry (4 credits) |
|  | 5. CHE 241 Organic Chemistry-I (4 credits)  6. MAT 130 Introduction to Statistics OR MAT 205 Statistical Modeling |
|  | 7. PHY 110 Introduction to Physics (4 credits) or CSC 160 Web, Data, and Design  Science (4 credits) or CSC 220 Programming and Problem Solving for students entering Fall 2019  and after. [CSC 117 and 261 count for students who entered prior to Fall 2019]. |
|  | **8. A minimum of seven upper-level biology courses are required for the biology major.   The seven courses must be selected according to the following criteria:**  **One** capstone course: BIO 500 Senior Seminar  **One course from each of the following groups (A, B, and C):**  Group A Cell and Molecular Biology:   * BIO 335 Developmental Biology (4 credits) * BIO 345 Histology (4 credits) * BIO 355 Immunology * BIO 385 Cellular Neurobiology * BIO 386 Cancer Biology * BIO 392 Bioinformatics and Genomics (4 credits) * BIO 455 The Biology of Viruses * BMB 310 Macromolecules * BMB 320 Cellular Metabolism * BMB 330 Molecular Genetics (counts as lab course if taken with BMB 335) * BMB 340 Cell Biology (counts as lab course if taken with BMB 345)   Group B Organisms: |
|  | 1. BIO 310 Invertebrate Biology (4 credits) |
|  | 1. BIO 320 Natural History of Vertebrates 2. BIO 325 Comparative Anatomy (4 credits) |
|  | 1. BIO 330 Entomology 2. BIO 340 Microbiology-I (4 credits) 3. BIO 350 Comparative Vertebrate Physiology 4. BIO 360 Plant Biology (4 credits)   Group C Ecology and Evolution:   * BIO 300 Macroevolution * BIO 305 Microevolution and Speciation * BIO 308 Paleontology: The History of Life * BIO 315 Freshwater Ecology (4 credits) * BIO 365 Plant-Herbivore Interactions * BIO 370 Principles of Ecology (4 credits) * BIO 375 Conservation Biology |
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| v | **Three** additional three or four credit hour BIO courses numbered 300 or higher, can include:   * BIO 390 Biostatistics * BIO courses listed above in A, B and C * BMB courses listed above in A  (no more than two can be applied to upper-level requirement) * BNS 330 Animal Behavior   **Note:** BIO 401, BIO 402, and BIO 405 do NOT count toward the major  Additional Upper-level Courses taken:  1.  2.  3.  **At least three of the upper-level requirements must have a lab component** (four credit  hour courses). A one-hour upper-level lab course taken with a complementary upper-level  three-hour lecture course together count as one four-hour course (e.g. BMB 330 + BMB 335). |
|  | Lab courses taken:  1.  2.  3. |
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