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| Rutgers University – Camden  Undergraduate Biology |  |

# Course Plan Form for BS in Biology

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| Student INFORMATION | |
| Student Name: | Signature: Date: |
| Advisor: | Signature: Date: |

1. **Required Courses**

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| Basic Courses | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits1 | Completed year/semester |
|  | General Biology I with a lab1 | 4 | 120:101,107 |  |  |
|  | General Biology II with a lab1 | 4 | 120:102,108 |  |  |
|  | Calculus I2 | 4 | 640:121 |  |  |
|  | Statistics for Biological Research 3 | 3 | 120:283 |  |  |
|  | Chemical Principles I with a lab | 5 | 160:115/125 |  |  |
|  | Chemical Principles II with a lab | 5 | 160:116/126 |  |  |
|  | Organic Chemistry I with a lab4 | 5 | 160:335,336 |  |  |
|  | General Physics I with a lab | 4 | 750:203/131/133 |  |  |
|  | General Physics II with a lab | 4 | 750:204/132/134 |  |  |
| elective Courses At least one course from each categories should be taken.   1. Courses Focused on Molecular Biology    1. Molecular biology (305/306)    2. Genetics (307/308)    3. Human Genetics (311) 2. Courses Focused on Cellular Biology    1. Cell Biology (334/335)    2. Neurobiology I (344)    3. General Microbiology (330/331)    4. General Physiology (341/342) 3. Courses Focused on Organismal Biology    1. Advanced A&P I (300/302)    2. Developmental Botany (360)    3. Plant Physiology (366/367)    4. Mycology (402/403) 4. Courses Focused on Ecology and Evolution    1. Evolution (310/313)    2. General Ecology I (351/353) | | | | | |
| elective Courses From Biology (50:120) at 300 level or higher graduate courses (56:120).  It is allowed to use up to 3 courses from the courses offered from other program in the list below;   * General Biochemistry I (115:403/407) * General Biochemistry II (115:404/408) * Genome Informatics I (121:552) * Essentials of Biophysics (121:565) | | | | | |
| 4 elective Courses with a lab | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits | Completed year/semester |
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| 3 Elective Courses | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits | Completed year/semester |
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| senior writing | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits | Completed year/semester |
|  | Current Topics in Biology | 3 | 120:399 |  |  |

1. **Certificate of Life Science Research**

The following courses are not required for the B.S. in Biology degree. For those who complete the course plan will receive the Certificate of Life Science Research after successfully completing the courses in order.

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| Independent research | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits | Completed year/semester |
|  | Exploring Careers in Biology (Research Shadowing) | 1 | 199 |  |  |
|  | Principles and Practices of Biological Research3 | 4 | 390/391 |  |  |
|  | Independent Research in Biology5 | 3 | 491 |  |  |
|  | Independent Research in Biology5 | 3 | 492 |  |  |
| Honors Thesis | | | | | |
| Review by Advisor | Courses | Minimum Credits | Course Number | Completed Credits | Completed year/semester |
|  | Honor Thesis I6 | 3 | 495 |  |  |
|  | Honor Thesis II6 | 3 | 499 |  |  |

1 Students are required to take General Biology courses which will be offered in both Fall and Spring semesters. Students must earn a ‘C’ or better grade in General Biology courses before taking Biology electives.

2 Unified Calculus is required (640:121) for Biology majors. Calculus for Business and Life Science (640:130) and similar courses in the community colleges do NOT satisfy this requirement.

3  Statistics for Biological Research (283) course will be offered in both Fall and Spring semesters. This is a required course for biology majors including transfer students. For students who plan to take the curricular research-training track, SBR (283) ->PPBR (285/286) ->Special Problem (491/492) -> Honor Thesis (495/499), SBR and PPBR is a back-to-back one year course. During the SBR course, the instructor of the PPBR course will help students develop the cornerstone projects for the PPBR course in the following semester.

4 Organic Chemistry II with a lab (160:339,340) is not required for the Biology Major. However, Organic Chemistry II with a lab (160:339,340) is required for the admission of medical professional schools. Students planning to apply to Medical Schools or Physician’s Assistance schools should plan to take them either in the second semester of sophomore or in the senior year.

5 Students are encouraged to read the full description of these courses at this webpage; https://biology.camden.rutgers.edu/undergraduate-program/special-topics-in-biology/

Independent Research in Biology (50:120:491) is a S/U grade course.

Independent Research in Biology (50:120: 492) can be used toward the elective laboratory requirement for the degree.

6 Honors Thesis courses are optional electives and cannot be used for course requirements for BS in Biology. After successfully defending the thesis, students will be recognized in the diploma as a ‘Honor Graduate’.

Students are encouraged to read the full description of these courses at the department webpage; https://biology.camden.rutgers.edu/undergraduate-program/departmental-honors/