



[BIOLBTAS; CIP Code 26.0101]

### *Associate in Science (A.S.) – Transfer*

This Biology program option provides students with the basic course requirements necessary to satisfy the first three years of a baccalaureate degree in Bioscience Technologies (Biotechnology, Cytotechnology, Medical Technology) at a transfer institution. A "C" grade or better in each course is required for transfer. Biotechnology is the field in which biological and engineering principles are used to develop products and techniques for advances in gene therapy, new tests to diagnose and pharmaceuticals to treat a variety of diseases or new ways of studying the molecular and genetic structure of cells.

#### **Program Learning Outcomes**

In addition to the outcomes stated for the A.S. Biology program, students who have completed this option will be able to:

- Apply biological principles to solve problems in health care and in the design of pharmaceutical products
- Possess the laboratory techniques and skills necessary to contribute to the design, research, development and pre-clinical testing of diagnostic and therapeutic agents, methods and systems for health care
- Possess specific technical and problem solving skills required for biomedical settings in the medical, pharmaceutical and industrial chemical industries

✦ Are you ready to get started at RCSJ? Visit [RCSJ.edu/Enroll](https://www.rcsj.edu/enroll) and complete the interest form. ✦

## *Biology: Bioscience Technologies Option, A.S.*

### **FIRST YEAR – Fall Semester**

|                                                                                                                         |             |
|-------------------------------------------------------------------------------------------------------------------------|-------------|
| <input type="checkbox"/> ENGL 101 English Composition I <i>or</i><br>ENGL 101E Enhanced English Composition I           | 3–4         |
| <input type="checkbox"/> BIOL 101 General Biology I                                                                     | 4           |
| <input type="checkbox"/> CHEM 101 General Chemistry I                                                                   | 4           |
| <input type="checkbox"/> MATH 120 Pre-Calculus and Mathematical Analysis <i>or</i><br>MATH 121 Pre-calculus Mathematics | 4           |
|                                                                                                                         | <hr/> 15–16 |

### **Spring Semester**

|                                                          |          |
|----------------------------------------------------------|----------|
| <input type="checkbox"/> ENGL 102 English Composition II | 3        |
| <input type="checkbox"/> BIOL 102 General Biology II     | 4        |
| <input type="checkbox"/> CHEM 102 General Chemistry II   | 4        |
| <input type="checkbox"/> MATH 130 Calculus I             | 4        |
|                                                          | <hr/> 15 |

### **SECOND YEAR – Fall Semester**

|                                                                          |          |
|--------------------------------------------------------------------------|----------|
| <input type="checkbox"/> BIOL 207 Ecology                                | 4        |
| <input type="checkbox"/> BIOL 203 Microbiology                           | 4        |
| <input type="checkbox"/> _____ General Education Social Science Elective | 3        |
| <input type="checkbox"/> _____ General Education Humanities Elective     | 3        |
| <input type="checkbox"/> BIOL 105 Anatomy & Physiology I                 | 4        |
|                                                                          | <hr/> 18 |

### **Spring Semester**

|                                                                                                                                   |             |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------|
| <input type="checkbox"/> CHEM 201 Organic Chemistry I                                                                             | 4           |
| <input type="checkbox"/> BIOL 221 Cell and Molecular Biology                                                                      | 4           |
| <input type="checkbox"/> _____ General Education Social Science Elective <i>or</i><br>_____ General Education Humanities Elective | 3           |
| <input type="checkbox"/> _____ Health and Physical Education Elective <i>or</i><br>_____ Free Elective                            | 1–3         |
| <input type="checkbox"/> BIOL 106 Anatomy & Physiology II                                                                         | 4           |
|                                                                                                                                   | <hr/> 16–18 |

**TOTAL MINIMUM CREDITS: 64**

#### **Program Notes**

Students planning to transfer to Thomas Jefferson University will require two additional courses selected from the following options: BIOL 140 Science of Nutrition, CHEM 202 Organic Chemistry II, CSCI 121 Introduction of Programming or CSCI 131 Intermediate Programming, NTRN 101 Nutrition or PHYS 123 General Physics I.