



## **CURRICULUM GUIDE 2014-2015**

### **BIOLOGY**

#### **Associate in Science in Biology**

The Associate in Science in Biology offered by Ohlone College is designed to prepare students for studying the Biological Sciences at most universities. The core courses required in the Associate in Science in Biology will fulfill the lower division requirements for most campuses of the UC and CSU systems. This program will enable students to develop a strong foundation in the life sciences, physical sciences, and mathematics. Furthermore, the theoretical knowledge and laboratory skills acquired by students in this program will also enhance their success with obtaining entry-level jobs that require two years of college-level science and math.

Since some curriculum requirements may vary among transfer universities, it is imperative that students entering Ohlone's Associate in Science degree program in Biology meet with a counselor at the start of their academic work. Counselors will assist students in preparing a Student Education Plan that will prepare them to transfer to the university of their choice. Counselors will also advise students on the general education plan that best prepares them for future transfer.

#### **Requirements for Associate in Science Degree:**

- a) Complete the Major Field courses with a grade of C or better.
- b) Complete Ohlone College General Education (Plan A), CSU GE (Plan B), or IGETC (Plan C) requirements. These requirements are specified in the Ohlone College catalog.
- c) Complete at least 60 degree-applicable units with a 2.0 grade point average.
- d) Complete at least 12 units at Ohlone College.
- e) Complete at least 50% of the Major Field courses at Ohlone College.
- f) Complete BIOL-101A and BIOL-101B at Ohlone College.

#### **Student Learning Outcomes**

1. Demonstrate the correct operating procedures in the use of common lab equipment such as compound microscopes, spectrophotometer, pH meter, electrophoresis gel apparatus, micropipetters, and centrifuges.
2. Construct, for analytical purposes, appropriate graphs from raw experimental data.
3. List common laboratory safety guidelines.
4. List and briefly explain the main concepts of modern evolutionary theory.

**MAJOR FIELD**

|           |   |          |
|-----------|---|----------|
| BIOL-101A | Principles of Biology -- Molecular and Cellular | 5        |
| BIOL-101B | Principles of Biology -- Organisms and Systems  | 5        |
| CHEM-101A | General Chemistry                               | 5        |
| CHEM-101B | General Chemistry                               | 5        |
| CHEM-112A | Organic Chemistry                               | 5        |
| CHEM-112B | Organic Chemistry                               | 5        |
| MATH-101A | Calculus with Analytic Geometry                 | 5        |
| *PHYS-120 | Introduction to Physics I                       | 4        |
| *PHYS-121 | Introduction to Physics II                      | <u>4</u> |
|           | Total Required Units:                           | 43       |

\*PHYS-140 + PHYS-141 + PHYS-142 may be substituted for PHYS-120 + PHYS-121.