



## Biological Sciences 2014-2015

The major in Biological Sciences is primarily intended for students who plan to transfer to a four-year institution to earn a bachelor's degree. This major prepares students for careers in the health professions, teaching, forestry, agriculture, environmental protection and conservation, wildlife biology, biotechnology, basic research and many other fields. Students who plan to major in the Biological Sciences should also visit the Biology website at:

www.foothill.edu/bio/programs/biosci/.

Students with an interest in biology who do not intend to transfer to a four-year institution and earn a bachelor's degree are encouraged to look into some of the other programs offered by the Biological and Health Sciences Division, which are: dental assisting, dental hygiene, diagnostic medical sonography (ultrasound), environmental horticulture, paramedic, pharmacy technician, primary care associate, radiologic technology, respiratory therapy, veterinary technology and/or veterinary assistant.

Students who already have a bachelor's degree can meet the biology requirement for medical school by taking BIOL 1A, 1B, and 1C.

### Program Learning Outcomes:

- The Biology majors sequence prepares students to use the scientific method to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- The Biology majors sequence prepares students to apply evolutionary theory at the molecular, cellular, organismal and population levels to explain the unity and diversity of living things.

### Units required for Major: 48

#### Associate Degree Requirements:

- English proficiency: ENGL 1A, 1AH, 1S & 1T, ESLL 26 or equivalent.
- Mathematics proficiency: MATH 57, 105, 108 or equivalent.

A minimum of 90 units is required\* to include:

- Completion of one of the following general education patterns: Foothill General Education, CSU General Education Breadth Requirements or the Intersegmental General Education Transfer Curriculum (IGETC)
- Core courses (48 units)

\*Additional course work may be necessary to meet the 90-unit minimum requirement for the associate degree.

NOTE: All courses pertaining to the major must be taken for a letter grade. In addition, a GPA of 2.0 or higher is required

in all core courses for the degree.

### Program Type:

**AS = Associate in Science Degree.**

### Additional Information:

Students planning to transfer to a four-year institution should meet with a counselor to develop an educational plan to ensure that both university general education and lower division major preparation requirements specific to the transfer institution(s) of choice are satisfied.

Students who plan to transfer to earn a Bachelor's degree in biology will probably be required to take both physics and organic chemistry. However, they need take only one of these requirements to get an Associate in Science degree from Foothill College.

### Core Courses: 48 Unit(s)

BIOL 1A Principles of Cell Biology (6 units)

BIOL 1B Form & Function in Plants & Animals (6 units)

BIOL 1C Evolution, Systematics & Ecology (6 units)

CHEM 1A General Chemistry (5 units)

CHEM 1B General Chemistry (5 units)

CHEM 1C General Chemistry & Qualitative Analysis (5 units)

And select ONE option:

Organic Chemistry (Option #1) OR Physics (Option #2).

#### Option # 1

CHEM 12A Organic Chemistry (6 units)

CHEM 12B Organic Chemistry (6 units)

CHEM 12C Organic Chemistry (6 units)

#### Option # 2

PHYS 2A General Physics (5 units)

PHYS 2B General Physics (5 units)

PHYS 2C General Physics (5 units)

or

PHYS 4A General Physics (Calculus) (6 units)

PHYS 4B General Physics (Calculus) (6 units)

PHYS 4C General Physics (Calculus) (6 units)

or

PHYS 5A\* General Physics (Calculus) Extended (5 units)

PHYS 5B\* General Physics (Calculus) Extended (5 units)

PHYS 5C\* General Physics (Calculus) Extended (5 units)

PHYS 4C General Physics (Calculus) (6 units)

\*The PHYS 5A, 5B & 5C sequence is equivalent to PHYS 4A & 4B.