

## Biology (AS-T)

### AS-T TRANSFER MAJOR

The Associate in Science in Biology for Transfer provides students with a comprehensive study of the biological sciences as well as the supporting core to understand the dynamics of biology. The Associate in Science in Biology for Transfer is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in the major of Biology. Students completing the major will have a fundamental understanding of concepts and processes in molecular, cellular and organismal biology as well as ecology and evolution. In addition, students will have a solid foundation in math, physics and chemistry.

Pursuant to SBI440, the following completion requirements must be met:

(1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:

(A) The Associate in Science in Biology for Transfer degree requires completion of the major and the CSU General Education for STEM or the IGETC for STEM, allowing completion of 6 units of non-stem GE work after transfer. Please see a counselor for details.

(2) Obtainment of a minimum grade point average of 2.0.

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is not an acceptable grade for courses in the major.

#### Required Core (8-12 units)

|          |                           |   |
|----------|---------------------------|---|
| BIOL 200 | Foundations of Biology I  | 5 |
| BIOL 201 | Foundations of Biology II | 5 |

#### List A (21-22 units)

|           |                                               |   |
|-----------|-----------------------------------------------|---|
| CHEM 110  | General Chemistry                             | 3 |
| CHEM 110L | General Chemistry Laboratory                  | 2 |
| CHEM 115  | General Chemistry                             | 3 |
| CHEM 115L | General Chemistry Laboratory                  | 2 |
| MATH 140  | Calculus with Analytic Geometry, First Course | 5 |
| PHYS 120  | General Physics and                           | 4 |
| PHYS 121  | General Physics or                            | 4 |
| PHYS 230  | Principles of Physics and                     | 5 |
| PHYS 231  | Principles of Physics                         | 5 |

**TOTAL UNITS** 33 – 35

## Biology-Preprofessional (AS, CA)

Provides intensive lower-division preparation for pursuing advanced studies in biological science, pre-medical, pre-dental, or pre-veterinarian programs leading towards a Bachelor's degree and beyond.

Students are advised to consult catalogs of the institution to which they plan to apply to determine special or additional requirements, or see a Palomar College Counselor.

### A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements |                                           | Units |
|----------------------|-------------------------------------------|-------|
| BIOL 200             | Foundations of Biology I                  | 5     |
| BIOL 201             | Foundations of Biology II                 | 5     |
| CHEM 110/110L        | General Chemistry and Laboratory          | 5     |
| CHEM 115/115L        | General Chemistry and Laboratory          | 5     |
| CHEM 220             | Organic Chemistry                         | 5     |
| CHEM 221             | Organic Chemistry                         | 5     |
| MATH 140             | Calculus/Analytic Geometry, First Course  | 5     |
| MATH 141             | Calculus/Analytic Geometry, Second Course | 4     |
| TOTAL UNITS          |                                           | 39    |

Courses in the program are based upon recommendations given to pre-med students at UC Berkeley. Actual requirements will vary from school to school and will depend on specific student goals. Students must check with the professional schools (not transfer schools) to which they plan to apply for their specific requirements. Choice of courses will also depend upon the student's major. Humanities majors, for example, can spread out pre-med coursework into their junior and senior years.

Recommended Electives: BIOL 211; MATH 205; PHYS 230, 231, 232

### COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.

Courses numbered under 100 are not intended for transfer credit.

\*UC credit limitations –

- BIOL 100, 101/101L, 102 and 200 combined: maximum credit, 5 units
- No credit for BIOL 100 and 101/101L if taken after 200 or 201
- No credit for BIOL 102 if taken after 100, 101/101L or 200 or 201
- BIOL 105, 106 and BIOL 145/145L combined: maximum credit, 4 units
- BIOL 114/114L, 118/118L combined: maximum credit, 4 units
- BIOL 130 and 131/131L combined: maximum credit 4 units
- BIOL 185, NUTR 165, NUTR 185, and HE 165 combined: maximum credit, one course

#### BIOL 47 Biology Topics (.5 - 4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.

Non-degree Applicable

Topics in Biology. See class schedule for specific topic covered. Course title will designate subject covered.

#### BIOL 100 General Biology (4)

3 hours lecture - 3 hours laboratory

**Note:** Not open to students with prior credit in BIOL 101 or 101L, BIOL 102, BIOL 105, BIOL 106/106L.

**Transfer acceptability:** CSU; UC\*

Basic principles of general biology as they relate to the cellular, organismic, and population levels of organization. Includes cell ultrastructure and function, energy transfer, reproduction, genetics, evolution, diversity of organisms, and ecology. Not recommended for students interested in Biology, Zoology, Botany, Premed, or related majors (see Biology 200 and Biology 201).

#### BIOL 101 General Biology (Lecture) (3)

3 hours lecture

**Note:** Not open to students with prior credit in BIOL 100

**Transfer acceptability:** CSU; UC\*

Basic principles of general biology as they relate to the cellular, organismic, and population levels of organization. Includes cell ultrastructure and function, energy transfer, reproduction, genetics, evolution, diversity of organisms, and ecology.

#### BIOL 101L General Biology (Laboratory) (1)

3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in BIOL 101 or 114, or concurrent enrollment in BIOL 101 or 114

**Note:** Not open to students with prior credit in BIOL 100, BIOL 102, BIOL 105, BIOL 106.

**Transfer acceptability:** CSU; UC\*

Laboratory exercises in cell structure and function, energy transfer, reproduction, genetics, and ecology. This is a general education course intended for non-science majors.