

Course Syllabus

BIOLOGY

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Program: Telecommunications Engineering

1. Course number and name

BIOG1001 - BIOLOGY

2. Credits and contact hours

2 credits and 3 contact hours

3. Instructor's course or coordinator's name

ANDREA SOFÍA REYES CHEJIN

4. Text book, title, author, and year

- AUDESIRK T.. BILOGIA, LA VIDA EN LA TIERRA (Octava Edición)
 - a. Other supplemental materials
- Audesirk T.. Biología (Novena Edición)
 - Johnson, Alexander S. & Lewis, Julian & Morgan, David L. & Raff, Martin C. & Roberts, Keith & Peter Walter. Molecular biology of the cell (6. ed.;

5. Specific course information

- a. Brief description of the content of the course (catalog description)

Students will receive an introduction to functions and interactions of biological systems from a quantitative perspective. They will understand the role of Biology in Engineering and Bachelors degrees in the University. They will also learn how to use techniques and methods of analysis of experimental data through case studies. A model of biological systems will be analyzed. Finally, students will be encouraged to solve problems through research, critical analysis, and creativity (working on a project that they will present in the tunnel of knowledge).

- b. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction
- 1.- Relate biology to other types of science as a learning tool to study living beings.
 - 2.- Study biological molecules, cells, their components, functioning and reproduction, as fundamental basis of life.
 - 3.- Understand the genetic bases of inheritance that determine the ways how genes will interact and behave in biological and technological processes of life.
 - 4.- Examine the different theories about the origin of species from the scientific and philosophical points of view, recognizing the distinctive morphological aspects of each animal and plant kingdoms
 - 5.- Value the influence of biotic and abiotic factors in ecosystems, as means for environmental conservation



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6.- Develop projects to apply Biology in multipurpose equipment.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

7. Brief list of topics to be covered

- 1.- The study of life
- 2.- Molecular and cellular bases of life
- 3.- Introduction to Genetics
- 4.- Evolution and Systematics
- 5.- Population, communities and ecosystems
- 6.- Application of Biology in today's world

