

**INTER AMERICAN UNIVERSITY OF PUERTO RICO
VICE PRESIDENCY OF ACADEMIC AND STUDENT AFFAIRS
GENERAL EDUCATION PROGRAM**

SYLLABUS

I. GENERAL INFORMATION:

Course Title: The Natural Environment and the Human Being
Code and Number: GEST 2020
Credits: 3
Academic Term:
Professor:
Office hours:
Office phone:
E-mail:

II. DESCRIPTION:

Application of scientific methodology to the study of human interactions with the natural environment. The scientific perspective of the origin of life and natural selection as evolution mechanisms. Study of the relationship between human activities and their impact on the environment. Emphasis on identifying actions to solve problems and improve environmental quality. Prescribed distributive course.

III. GOALS, COMPETENCES AND COMPETENCE AREAS:

Goal I: Develop a person with humanistic sensitivity, capable of contributing to the solution of problems with a collaborative attitude, using research, critical, creative and innovative thinking, in an international context.

Competence # 1: Demonstrate a critical, creative, scientific, humanistic, ethical and aesthetic attitude for the solution of problems, based on the use of research methods, sources of information and technological advances.

Competence # 2: Demonstrate capacity and willingness for collaborative work and negotiation.

Competence Areas:

- Critical thinking.
- Information management.
- Ethical awareness.
- Research.

Goal III: Develop a person who values diversity, appreciates other cultures, is aware of their social, ethical, civic and environmental responsibility and who exercises leadership in a democratic life context.

Competence # 5: Demonstrate commitment to social, ethical, civic and environmental responsibility.

Competence Area:

- Ethical, civic and environmental awareness.

Goal VI: Develop a person capable of solving problems through scientific thinking, logical and quantitative reasoning and communication, in an ethical, critical, creative and innovative way.

Competence # 9: Apply scientific thinking and logical and quantitative reasoning for decision making and problem solving.

Competence # 10: Use information and communication technologies for decision making and problem solving.

Competence Areas:

- Decision-making processes.
- Problem solving.
- Technology integration.

OBJECTIVES:

It is expected that, at the end of the course, the student will be able to:

- a. Apply the scientific method to the decision making and problem solving processes .
- b. Distinguish between organic and inorganic compounds.
- c. Identify heat transfers and their applications.
- d. Explain the different theories about the origin of life and the theory of evolution.
- e. Recognize the importance of the interrelation of the levels of organization of matter in homeostasis.
- f. Examine the relevance of genetic processes in humans, society and the dynamics of evolution.
- g. Analyze the interactions of the human being with the environment and the importance of conservation framed in an environmental ethical perspective.

IV. COURSE CONTENT:

I. Scientific Methodology

1. Define science vs. pseudoscience
2. Scientific method
3. Measurement system
4. Types of research
5. Limitations of science

II. Chemical nature

1. Organic and inorganic compounds
 - a. Chemical energy: carbohydrates, lipids and proteins
 - b. Nucleic acids
 - c. Water
2. Thermodynamics
 - a. Heat transfer
 - b. Applications

III. Origin of Life and Evolution

1. Oparin's theory
2. Theory of Evolution

IV. Human body as a system

1. Levels of organization
2. Control and communication
3. Transportation
4. Health and nutrition
5. Human sexuality
6. Heredity

V. Human interactions with the environment

1. Definition of the environment
2. Historical development of agricultural, industrial and economic activity
3. Relationship between population and resources
4. Preservation vs. conservation
5. Global warming and climate change
6. Types of pollution
7. Waste management
8. Environmental ethics
9. Actions to improve the environment

V. **ACTIVITIES** (suggested):

1. Conferences
2. Individual or group discussions of daily living situations
3. Use of news on controversial issues
4. Use of audiovisual resources
5. Individual or group course work
6. Search for information in different sources
7. Discussion forums
8. Construction of concept maps
9. Research projects
10. Problem solving

VI. EVALUATION:

At the instructor's preference.

VII. SPECIAL NOTES:

A. Auxiliary services or special needs

All students who require auxiliary services or special assistance must request the same at the beginning of the course or as soon as they become aware of the need, in the Office of Professional Counselor, _____, located at the University Counseling Program.

B. Warning about dishonesty, fraud and plagiarism

Lack of honesty, fraud, plagiarism and any other inappropriate behavior in relation to academic work constitute major infractions sanctioned by the General Regulations of Students. The greater infractions, according to the Regulations of Students can have as consequence the suspension of the University by a definite time greater than one year or the permanent expulsion from the University, among other sanctions.

C. Compliance with the provisions of Title IX

The Federal Higher Education Act, as amended, prohibits sex discrimination in any academic, educational, extracurricular, athletic, or any other program or employment, sponsored or controlled by an institution of higher education regardless of whether it is conducted inside or outside the institution's premises, if the institution receives federal funds. As provided by current federal regulations, a Title IX Assistant Coordinator has been designated in our academic unit to provide assistance and guidance in relation to any alleged incident of discrimination based on sex or gender, sexual harassment or sexual assault. You can contact the Assistant Coordinator, _____, at _____ extension _____, or email _____.

The Normative Document entitled *Standards and Procedures for Responding to Alleged Violations of Title IX Provisions* contains the institutional rules for channeling any complaint that is based on this type of allegation. This document is available on the website of the Inter-American University of Puerto Rico (www.inter.edu).

VIII: EDUCATIONAL RESOURCES:

TEXT:

Trefil, James and Hazen, Robert M. (2016). *The Sciences: An Integrated Approach*. Eighth Edition, John Wiley & Sons, Inc. ISBN: 978-1-118-18526-1.

BIBLIOGRAPHY:

Electronic books are available at the Information Access Center (CAI).

- Chiras, Daniel D. *Human biology*. Burlington, MA: Jones & Bartlett Learning, 2019.
- Cunningham, William P. *Principles of environmental science: inquiry & application*. 8th edition. New York, NY: McGraw-Hill Education, 2017.
- Enger, Eldon D. & Smith, Bradley F. *Environmental science: a study of interrelationships*. 14th ed. Dubuque: McGraw-Hill Education, 2016.
- Felt, Ulrike, et al., eds. *The handbook of science and technology studies*. 4th edition. Cambridge, MA: The MIT Press, 2017.
- Gardiner, Stephen M. & Thompson, Allen. *The Oxford handbook of environmental ethics*. New York, NY: Oxford University Press, 2017.
- Ghosh, Nilanjan. & Goswami, Anandajit. *Sustainability science for social, economic, and environmental development*. Hershey, PA: Information Science Reference, 2014.
- Green, Robert. *How renewable energy is changing society*. San Diego, CA: ReferencePoint Press, Inc., 2016.
- Hartl, Daniel L., et al. *Genetics: analysis of genes and genomes*. Burlington, MA: Jones & Bartlett Learning, 2019.
- Heos, Bridget. *It's getting hot in here: the past, the present, and the future of global warming*. Boston: HMH Books, 2016
- King, Bruce M. *Human sexuality today*. Hoboken, NJ: Pearson, 2019.
- Lew, Kristi. *Taxonomy: the classification of biological organisms*. New York: Enslow, 2019.
- Maser, Chris. *Interactions of land, ocean and humans: a global perspective*. Boca Raton: CRC Press, 2015.
- Massey, Garth. *Ways of social change: making sense of modern times*. 2nd ed. Thousand Oaks: SAGE Publications, Inc., 2016.
- Mooney, Carla. *How the Internet is changing society*. San Diego, CA: ReferencePoint Press, Inc., 2016.
- Nardo, Don. *How robotics is changing society*. San Diego, CA: ReferencePoint Press, Inc., 2016.
- Sanders, Mark Frederick, et al. *Genetic analysis: an integrated approach*. NY: Pearson Education, Inc., 2019.
- Perritano, John. *Science and technology*. Broomall, PA: Mason Crest, 2017.
- Perritano, John. *Space science*. Broomall, PA: Mason Crest, 2017.
- Simon, Eric J., et al. *Campbell essential biology with physiology*. NY: Pearson, 2019.
- Tomasello, Michael. *Becoming human: a theory of ontogeny*. MA: The Belknap Press of Harvard University Press, 2019.
- Wright, Richard T. *Environmental science: toward a sustainable future*. Gordon College. 13th Edition. Boston: Pearson, 2017.
- World Almanac*, 2019.
- World Atlas*, 2019.

DIGITAL RESOURCES:

Updated Databases are available at the Information Access Center (CAI).

Translated, bibliographical resources updated and revised by:
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