

ILLINOIS VALLEY COMMUNITY COLLEGE



COURSE OUTLINE

DIVISION: Natural Sciences and Business

COURSE: BIO 1002

Date: November 01, 2013

Credit Hours: 4

Prerequisite(s): BIO 1001 or consent of the instructor

Delivery Method: **Lecture** **2 or 3 Contact Hours** (1 contact = 1 credit hour)
 Seminar **0 or 1 Contact Hours** (1 contact = 1 credit hour)
hour)
 Lab **2 Contact Hours** (2 contact = 1 credit hour)
 Clinical **0 Contact Hours** (3 contact = 1 credit hour)
 Online
 Blended

Offered: **Fall** **Spring** **Summer**

IAI Equivalent –**Only for Transfer Courses**-go to <http://www.itransfer.org>:

CATALOG DESCRIPTION:

This course reinforces the concepts introduced in BIO 101 with an emphasis on human biology, ecology and the diversity of life. Special attention is given to the biological processes of digestion, respiration, circulation, excretion, communication and reproduction.

GENERAL EDUCATION GOALS ADDRESSED

[See the last page of this form for more information.]

Upon completion of the course, the student will be able:

[Choose those goals that apply to this course.]

- To apply analytical and problem solving skills to personal, social and professional issues and situations.
- To communicate orally and in writing, socially and interpersonally.
- To develop an awareness of the contributions made to civilization by the diverse cultures of the world.
- To understand and use contemporary technology effectively and to understand its impact on the individual and society.
- To work and study effectively both individually and in collaboration with others.
- To understand what it means to act ethically and responsibly as an individual in one's career and as a member of society.
- To develop and maintain a healthy lifestyle physically, mentally, and spiritually.
- To appreciate the ongoing values of learning, self-improvement, and career planning.

EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

[Outcomes related to course specific goals.]

Upon completion of the course, the student will be able to:

1. understand the levels of organization that are considered in studying the general biology of organisms, with special emphasis on human homeostatic processes;
2. understand in general the ways in which the processes of digestion, respiration, circulation, excretion, nerve and endocrine function and reproduction work to maintain homeostasis, especially as these processes apply to human biology;
3. demonstrate a general understanding of the behaviors exhibited by animals;
4. demonstrate a basic understanding of the principles of ecology; and
5. demonstrate a general understanding of the diversity of life and the ways in which organisms are classified.

COURSE TOPICS AND CONTENT REQUIREMENTS:

1. Human and animal organization
2. Obtaining nutrients: Digestion and nutrition
3. Gas exchange: Respiration
4. Circulation: Cardiovascular System
5. Lymphatic System and Immunity
6. Urinary System and Excretion
7. Communication: Nervous System
8. Communication: Senses
9. Communication: Endocrine System
10. Reproduction
11. Animal Behavior
12. Ecology: Population Growth and Regulation
13. Ecology: Community Interactions

14. Ecology: Nature of Ecosystems
15. Ecology: The Biosphere - Terrestrial Biomes of the World

INSTRUCTIONAL METHODS:

1. Lecture
2. Laboratory exercises
3. Laboratory assignments
4. Lecture exams and quizzes
5. Laboratory practice tests
6. Laboratory practical examinations

INSTRUCTIONAL MATERIALS:

1. In lecture: powerpoint presentations; Internet resources; document camera; videotape presentations; video clips; lab materials used in lecture for demonstration
2. In lab: compound light microscopes; prepared slides; models; preserved fetal pigs; other preserved materials; standard laboratory glassware; standard reagent solutions; automatic digital sphygmomanometers

STUDENT REQUIREMENTS AND METHODS OF EVALUATION:

1. Reading assignments in the textbook and laboratory manual
2. Lecture examinations
3. Lecture quizzes
4. Laboratory practical examinations
5. Laboratory assignments

Methods of Evaluation: The final letter grade earned for this course will be based mainly on the **total number of points accumulated from lecture tests, lab practicals, assignments, and quizzes**. The following grading scale will be used as a guide in assigning final letter grades:

- A: 90%-100%
- B: 80%-89%
- C: 70%-79%
- D: 58%-69%
- F: below 58%

In addition, the following factors will be considered when assigning a final letter grade:

- 1) evidence of preparation and participation in lecture sessions;
- 2) evidence of demonstrated work in the laboratory; and
- 3) overall attendance.

OTHER REFERENCES

Required textbook and laboratory manual:

Text: Mader, Sylvia S. 2013. *Inquiry into Life*, 14th ed. The McGraw-Hill Companies.

Laboratory Manual: BIO 1002 General Biology II, Customized Laboratory Manual for Illinois Valley Community College. Selected material from: *Inquiry into Life Laboratory Manual*, 14th edition. 2013. Sylvia S. Mader. The McGraw-Hill Companies.

Recommended references;

1. Various laboratory atlases and dissection guides available in the Natural Sciences Laboratory
2. Text website

