

ESSEX COUNTY COLLEGE –  
BIOLOGY, CHEMISTRY & PHYSICS DIVISION

College Biology II / BIO 102

Course Syllabus



**Instructor:** .....  
**Office:** Room ..... (Blue Area)  
**Office Phone:** 973-877-.....  
**Office E-mail** .....  
**Office Hours:** .....

**Classroom:** Lecture \_\_\_\_\_ Lab: \_\_\_\_\_  
**Class Meeting Days / Times:** \_\_\_\_\_

**Required Textbook:** **Inquiry Into Life**, 16<sup>th</sup> Ed. by Sylvia Mader (2020)  
**Laboratory Manual:** **Inquiry Into Life**, 16<sup>th</sup> Ed. by Sylvia Mader (McGrawHill Create -2020)

**Other Suggested Supplies:** Study Guides, Objective Sheets & PowerPoint presentations are provided by the instructor or can be found on the following web site: [eccbiology.blogspot.edu](http://eccbiology.blogspot.edu)

**Course Prerequisite:** ENG 096 and RDG 096

Course Co-requisite: None

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**Course Description:** Using a conceptual approach, this course places emphasis on human biology and evolution. Basic principles concerning the structure and function of human body systems in both health and disease conditions are studied. This course can be taken to satisfy the science requirement of non-science majors and can be taken independent of, before, or after BIO 101. Materials for the course can be found at <http://eccbiology.blogspot.com>.

**General Education Goals:** BIO 102 is affirmed in the following General Education Foundation Category: **Scientific Knowledge and Reasoning**. The corresponding General Education Goal is as follows: Students will use the scientific method of inquiry through the acquisition of scientific knowledge. BIO 102 also addresses the General Education Integrated Course Goal: **Information Literacy**, which is as follows: Students will address an information need by locating, evaluating, and effectively using information.

**Course Goals:** Upon successful completion of this course, students should be able to do the following:

1. explain the concepts of structure and function in biology;
2. explain the concept of and describe the evidence that supports human evolution; and
3. investigate a topic in biology and report the findings in written form.

**Measurable Course Performance Objectives (MPOs):** Upon successful completion of this course, students should specifically be able to do the following:

1. Explain the concepts of structure and function in biology:
  - 1.1 *identify the structures and describe the functions of the cardiovascular system;*
  - 1.2 *identify the structures and describe the functions of the endocrine system;*
  - 1.3 *identify the structures and describe the functions of the digestive system;*
  - 1.4 *identify the structures and describe the functions of the immunological system;*
  - 1.5 *identify the structures and describe the functions of the muscular system;*
  - 1.6 *identify the structures and describe the functions of the nervous system;*
  - 1.7 *identify the structures and describe the functions of the reproductive system;*
  - 1.8 *identify the structures and describe the functions of the respiratory system;* and
  - 1.9 *identify the structures and describe the functions of the urinary system*
2. Explain the concept of and describe the evidence that supports human evolution:
  - 2.1 *describe the theory of natural selection;*
  - 2.2 *explain fossil evidence of hominid ancestors;*
  - 2.3 *explain biochemical evidence and the universality of the molecules DNA and RNA;*
  - 2.4 *explain comparative anatomy;*
  - 2.5 *explain the role of biogeography in speciation;* and
  - 2.6 *explain comparative embryology*
3. Investigate a topic in biology and report the findings in written form:
  - 3.1 *identify valid internet sources that support the paper;* and
  - 3.2 *develop a scientific research paper using the source material as evidence*

**Methods of Instruction:** Instruction will consist of a combination of lectures and laboratory activities. Specifics regarding each method of instruction are as follows:

1. Lectures: Each week a new unit will begin with a lecture presentation. For each unit, the instructor will provide the students with a study package to assist them as the topics are presented. A study package usually consists of an objective sheet, a study outline, and a glossary of important terms. Lectures serve as an overview for the material in the weekly units. These lectures are presented in a PowerPoint format to help the students in organizing and mastering the topics of the week. **NOTE:** The objective sheet, the study guide, the glossary and the PowerPoint presentation can be found on the web page for the courses (see <http://eccbiology.blogspot.com>).
2. Laboratory activities: Laboratory activities, continuation of the lecture material, discussion and student feedback will take place during this session.

**Outcomes Assessment:** Quiz and exam questions are blueprinted to ensure that the course objectives are met by the students. Checklist rubrics are used to evaluate a required essay on human evolution and the scientific research paper for the presence of course objectives. The results of this data analysis are used to guide necessary pedagogical and/or curricular revisions.

**Course Requirements:** All students are required to:

1. Take the quiz for each Unit presented. These weekly quizzes will be composed of questions covering material presented each week during the lecture, the laboratory and/or from the required reading material. The quizzes usually include a variety of question formats such as multiple choice, fill-in or matching questions. Often students will be asked to label diagrams (e.g., label a drawing of a flower) or to write a short essay as part of these quizzes.

2. Complete an internet scientific research paper as part of the course. Students will choose topics for this research paper with the approval of the faculty member. The topics can be chosen from any material presented in the course. References for this paper will come directly from the internet only. The grade for this paper will be equal to one quiz grade.
3. Read an essay related to the topic of Human Evolution. Students will summarize the essay and answer questions related to its content. The grade for this essay report will be equal to one quiz grade.

**Methods of Evaluation:** Final course grades will be computed as follows:

<b>Grading Components</b>	<b>% of final course grade</b>
<ul style="list-style-type: none"> <li>• <b>In Class Presentation</b> The class presentation will expose the student to websites that are recognized as legitimate sources of information in the fields of biological sciences. In addition, it will increase the student’s knowledge of a specific topic in the field of biology, which relates to at least one course objective.</li> </ul>	<b>10%</b>
<ul style="list-style-type: none"> <li>• <b>6 or more Unit Quizzes</b> (dates specified by the instructor) Unit quizzes will show evidence of the extent to which students meet course objectives.</li> </ul>	<b>80%</b>
<ul style="list-style-type: none"> <li>• <b>Lab reports</b></li> </ul>	<b>10%</b>

**Academic Integrity:** Dishonesty disrupts the search for truth that is inherent in the learning process and so devalues the purpose and the mission of the College. Academic dishonesty includes, but is not limited to, the following:

- plagiarism – the failure to acknowledge another writer’s words or ideas or to give proper credit to sources of information;
- cheating – knowingly obtaining or giving unauthorized information on any test/exam or any other academic assignment;
- interference – any interruption of the academic process that prevents others from the proper engagement in learning or teaching; and
- fraud – any act or instance of willful deceit or trickery.

Violations of academic integrity will be dealt with by imposing appropriate sanctions. Sanctions for acts of academic dishonesty could include the resubmission of an assignment, failure of the test/exam, failure in the course, probation, suspension from the College, and even expulsion from the College.

**Student Code of Conduct:** All students are expected to conduct themselves as responsible and considerate adults who respect the rights of others. Disruptive behavior will not be tolerated. All students are also expected to attend and be on time all class meetings. No cell phones or similar electronic devices are permitted in class. Please refer to the Essex County College student handbook, *Lifeline*, for more specific information about the College’s Code of Conduct and attendance requirements.

## Students with Special Needs: Differently-abled Support Services

Essex County College welcomes students with disabilities into all of the college's educational programs. It is the policy and practice of Essex County College to promote inclusive learning environments. If you have a documented disability, you may be eligible for reasonable accommodations in compliance with college policy, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and/or the New Jersey Law against discrimination. Please note, students are not permitted to negotiate accommodations directly with Professors, Academic Chairpersons, and Deans. To request accommodations or assistance, please self-identify with the Office of Differently-abled Support Services. The office is located in the Student Development and Counseling Department at the Main Campus in Room 4122-I, and on Tuesdays at the West Essex Campus, Advisement Center. Contact us by telephone at 973-877-3071 or by email at [disability@essex.edu](mailto:disability@essex.edu).

**Course Content Outline:** based on the text **Inquiry into Life**, 15<sup>th</sup> edition, by Sylvia Mader; published by McGraw-Hill, 2017; ISBN #: 978-0-259-42616-2; and laboratory manual for **Inquiry into Life**, 15<sup>th</sup> edition, by Sylvia Mader; published by McGraw-Hill, 2017; ISBN #: 978-1-308-86961-2. NOTE: Study guides, objective sheets and PowerPoint presentations are provided by the instructor.

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Week	Class Topic
1	Introduction to Human Organization
2	The Digestive System
3	<b>Unit Quiz #1;</b> Cardiovascular System
4	Lymphatic/Immune System
5	Respiratory System/Urinary System
6	<b>Unit Quiz #2;</b> Skeletal System
7	The Muscular System
8	<b>Unit Quiz #3;</b> Nervous System/Integumentary System
9	Endocrine System
10	<b>Unit Quiz #4;</b> Reproductive System
11	Embryology
12	<b>Unit Quiz #5;</b> Introduction to Genetics
13	Human Evolution
14	Human Impact on the Environment
15	<b>Unit Quiz #6</b>