## Course Name:
PRINCIPLES OF BIOLOGY I

## Course Number:
BIOL 1107

## Course Description:
An integrated introduction to modern biology from atomic particles to evolution. General topics to be considered include chemical, molecular and cellular basis of life, photosynthesis, cell metabolism, cell division, genetics, biotechnology, and evolution. This course provides content appropriate for science and non-science majors. Fall, Spring, Summer. 3 credit hours.

## Pre-requisites/Co-requisites:
Prerequisite: Exemption from or successful completion of all Learning Support courses.
Co-requisite: BIOL 1107L

## ABAC Course Learning Outcomes:
Students will interpret scientific principles, theories, and laws as they apply to the dynamic nature of scientific disciplines.

### Principles of Biology I Course Outcomes:
Students should be able to:
1. Demonstrate knowledge of Biology, Science and the Scientific Method
2. Demonstrate proficiency in the process skills associated with science
3. Demonstrate knowledge of the basic chemical nature of living things (e.g., chemistry, carbon, water, thermodynamics)
4. Demonstrate knowledge of cell structure and function
5. Demonstrate knowledge of basic chemical processes involved in living organisms (e.g., respiration, photosynthesis, and metabolism)
6. Demonstrate knowledge of cellular reproduction and genetics
7. Demonstrate a knowledge of the basics of evolutionary theory and natural selection
8. Demonstrate knowledge and general understanding of the history (and biologists) involved in classic experiments

## Grading Scheme:
Examinations (Quizzes, In-Class Hourly and Final) ..................................................80%
Other Activities (Clicker, Participation, Homework) ...............................................20%

## General Topics and Schedule:
Introduction to Scientific Inquiry (Chapter 1)
Evolutionary Theory (Chapter 22)
The Chemical and Energetic Context of Life (Chapter 2)
Water and Life (Chapter 3)
Carbon and Molecular Diversity (Chapter 4)
Macromolecules (Chapter 5)
Metabolism (Chapter 8)
College Policy on Class Attendance:

ATTENDANCE

Courses at Abraham Baldwin Agricultural College are provided for the intellectual growth and development of students. The interaction with instructors and other students is an important element of the learning process, and a high correlation exists between class attendance and course grades. Therefore to attain maximum success, students should attend all their classes, be on time, and attend all scheduled course activities. Absence from class, for whatever reason, does not excuse a student from full responsibility for class work or assignments missed. Students must accept this responsibility.

Individual instructors will establish attendance policies for each class, will publish the policy in the course syllabus, and keep attendance records. The penalty for absences is at the discretion of the instructor and may include failure of the course. A student who stops attending class without officially withdrawing will still receive a grade for the course. A student penalized for excessive absences may appeal through the grade appeal process, as stated in the college catalog and student handbook.

INSTITUTIONAL ABSENCE

Institutional Absence is defined as an absence that occurs due to activities students are involved in as official representatives of the college. A student who serves as an official representative of the college is defined as one whom:

- is authorized to use the college name in public relationships outside the institution;
- regularly interacts with non-college individuals and groups over an extended period of time (at least one semester);
- represents the college as a part of a group and not as an individual;
- represents the college under the direct supervision of a college faculty or staff member; and is authorized, in advance, by the President, or his/her designee, of the college.

Such a student is in no way released from the obligations and responsibilities of all students, but will not be penalized with unexcused absences when absences result from regularly scheduled activities in which he/she represents the college.

Further, it is the responsibility of each student to contact instructors prior to the absence and to make arrangements to make up any work that will be missed, in a manner acceptable to the instructor. Advisors of activities will schedule off-campus activities in a manner that does not unduly disrupt the learning process for a student.


College Policy on Academic Dishonesty:

STUDENT CODE OF CONDUCT AND DISCIPLINARY PROCEDURES

Abraham Baldwin Agricultural College (ABAC) has the dual responsibility of educating students and helping them develop into mature citizens who take their place in the larger community. In order to accomplish this mission, the College seeks to develop an environment which fosters respect and integrity among its members. To facilitate this environment and to meet its educational goals, the College has adopted conduct regulations for individuals and organizations and has established a judicial process for dealing with alleged violations of those
regulations. For a complete
Conduct which is of a disorderly nature and in violation of written policy shall subject the student or
organization to disciplinary action. The student is also subject to city, state, and federal law. The College will not
intervene nor will it ask special treatment for a student who has violated any law.

Proceedings under this Code may be instituted against students charged with a violation of a city, state, or
federal law when the alleged conduct is also a violation of this Code. Proceedings under this Code may be
carried out before, simultaneously with, or following civil or criminal proceedings, and will not be subject to
challenge on the ground that criminal charges involving the same incident have been dismissed or reduced.
Generally, College conduct regulations shall apply to conduct which occurs on College premises. Further, the
conduct regulations shall apply to conduct which occurs while a student is attending or participating in any
College sponsored activity wherever that activity may take place, or any behavior, on or off College premises,
which adversely affects the College community or the pursuit of its objectives. All students are subject to the
regulations outlined in the Code of Conduct, College Catalog, and Student Handbook. Unfamiliarity with these
regulations is not a valid excuse for infractions.
Provisions of the Student Code of Conduct may be revised, supplemented, or amended as necessary at any time
by the appropriate College authorities. The students and administration of Abraham Baldwin Agricultural
College are bound by the regulations set forth in the following as well as any additional rules and regulations
resulting from revisions to the Code during any academic year. For definitions and the Academic Code of
Conduct, please see details the Student Handbook.


This course fully complies with the accommodations available through the office of disability services. If there is
a student in this class who has documented specific needs because of learning disabilities or any other
disability, please contact the instructor to discuss accommodations. Additionally, the Academic Achievement Center
(AAC) at ABAC offers a free tutoring service to all students.

This is a partial syllabus. More detailed information relating to the class and Instructor will be made available to
each student.

Course Syllabus

Course Name:
PRINCIPLES OF BIOLOGY I LABORATORY

Course Number:
BIOL 1107L

Course Description:
One two-hour laboratory period each week to accompany BIOL 1107. Fall, Spring, Summer. 1 credit hour.

Pre-requisites/Co-requisites:
Pre-requisites: Exemption from or successful completion of all Learning Support courses.
Co-requisite: BIOL 1107
**ABAC Course Learning Outcomes:**

Students will interpret scientific principles, theories, and laws as they apply to the dynamic nature of scientific disciplines.

**Principles of Biology I Laboratory Course Outcomes:**

Students should be able to:

1. Demonstrate knowledge of lab safety procedures, skills and policies
2. Demonstrate competence in the process skills associated with science
3. Demonstrate knowledge of diagnostic tests, reagents and their function
4. Demonstrate knowledge of cell structure and function
5. Demonstrate knowledge of chemical processes in living organisms and classes of biological molecules
6. Demonstrate knowledge of genetics and cell division

**Grading Scheme:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Examinations (Quizzes, Midterm, Final)</td>
<td>70%</td>
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<tr>
<td>Other Activities (Pre-Labs, Lab Reports, Worksheets, Participation)</td>
<td>30%</td>
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**General Topics and Schedule:**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Safety and Introduction to Scientific Inquiry</th>
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<tbody>
<tr>
<td>Week 2</td>
<td>Properties of Water</td>
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<td>Week 3</td>
<td>Organic Molecules</td>
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<td>Week 4</td>
<td>DNA Extraction and Sequencing</td>
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<td>Week 5</td>
<td>Lab Midterm All Sections</td>
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<td>Week 6</td>
<td>Function of Enzymes</td>
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<td>Week 7</td>
<td>Cellular Respiration</td>
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<td>Week 8</td>
<td>Photosynthesis</td>
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<tr>
<td>Week 9</td>
<td>Microscope Techniques and Living Cells</td>
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<tr>
<td>Week 10</td>
<td>Mitosis, Meiosis and Genetics</td>
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<tr>
<td>Week 11</td>
<td>Passive Transport: Osmosis and Diffusion</td>
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<tr>
<td>Week 12</td>
<td>Lab Final All Sections</td>
</tr>
</tbody>
</table>

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