Course Description

Basic Biology I (1408) is designed for students who are not majoring in science. Selected topics in biology are presented to students to promote their understanding of biological concepts and enable them to use these concepts in their daily lives. Topics include life chemistry, the cell, respiration, photosynthesis, cell reproduction, genetics and evolution.

Prerequisite - None.

Instructional materials needed for Basic Biology I (1408)

1. **OpenStax Biology** ISBN 978-1-938168-09-3 The online version of the textbook is available free at [OpenStax CNX](https://openstax.org). You may print individual chapters free. You may also purchase a hard copy of the book at the college bookstore.

2. **Lab-Internet Access Code** – Totally Online Basic Biology I by Shelp ISBN 978-0-996-5286-2-7. You can purchase the access code directly at [biolabmanual.com](http://biolabmanual.com) or purchase a card in the college bookstore that will enable you to gain access to the totally online labs.

3. You will need a computer with Internet access, Microsoft Word and Adobe Reader. Students enrolled in the DCCCD can install Microsoft Office free at [Microsoft Office Apps](https://www.microsoft.com/store). Adobe Acrobat Reader is available free at [Adobe Acrobat Reader DC](https://get.adobe.com/reader/).
Responsible citizenship today requires informed decisions related to such topics as radiation, toxic waste, safe housing, transportation, genetically modified foods, and health. These decisions require a background in science. The instructor will present the concepts of biology in a context that will help you effectively read science related articles online such as Newsweek Global, Science News or in daily newspapers and periodicals such as Time, Discover, and National Geographic.

**Procedure**
The method of teaching employed in Basic Biology I (1408) approaches the learning process from the point of view that learning is something done by you the student, not something done to you. The student is responsible for his/her own learning. The instructor will facilitate the investigative learning process by assigned readings, chats, discussion boards, reviews, practice quizzes, test, etc. This course is not self-paced. The content of the course will follow the schedule with specific deadlines for each activity. The major contributing factor to student failure in this class is procrastination.

**Text Assignments**
The text assignments consist of selecting OpenStax or other Internet sources which will prepare the student to take a lecture quiz for each lesson.

**Laboratory**
The laboratory activities will provide you with the opportunity to participate in the scientific process by using an Internet Access Code. Read each laboratory assignment carefully as you work through the online lab. Complete the Lab Report using the template found at biolabmanual.com. Submit the Lab Report as an attachment to an eCampus assignment, then allow 24 hours for grading. Your instructor will evaluate the lab report and, if satisfactory, provide a password so you can take a ten point multiple choice quiz online located in your eCampus course.

**Lecture Quizzes**
A 15 question multiple choice quiz will be taken at the end of each lesson. You will take a comprehensive final exam at the end of the semester. Please see the semester course schedule for details about the time frame for each part of the course.

**Lock on Quiz or Test in Grade book**
If you see a lock in place of a grade, you experienced a computer error or selected the back arrow during your exam. Your test is locked and will have to be cleared by the instructor to retake the test. For security measures, one unlock is allowed without penalty. Be sure you are on a reliable computer and do not use the back arrow.

**Discussion Boards**
You are asked to participate in four Discussion Boards. To receive full credit you must add a new post by following the instructions for each Discussion Board and replying to at least two other student’s posts. To add a new post, select the “+ Thread” button in the upper left corner of the discussion board screen. To respond, select “Reply” below the thread you are replying to. Anonymous messages on the discussion are not allowed.

**How Your Grade Is Determined**
The course grade is determined by the following point system.
You may accumulate points as follows:

1. **Lecture.** Timed online multiple-choice Lecture Quizzes worth 15 points each will be given at the end of each Lesson. A second attempt is allowed in case of technical difficulties. (195 Points)

2. **Laboratory.** Labs will coordinate with the text material. After completing a lab, submit your Lab Report as an attachment in eCampus. Your instructor will evaluate your lab exercises and if satisfactory, issue a password that you may access in “My Grades”. This password will enable you to take the 10 point multiple choice quiz. (120 Points)

3. **Laboratory Practicals.** Two lab practicals worth 40 points each will be given. The first Lab Practical will cover the content of labs 1-5 and the second Lab Practical will cover content of labs 6-10. Laboratory understanding, critical thinking skills, and the ability to interpret data will be evaluated. (80 Points)

4. **Special Event.** An activity is provided that may consist of television programs, assigned movies, or other learning opportunities. (5 Points)

5. **Biology in the News.** To encourage you to make the connection between textbook biology and biology that appears in daily newspapers and weekly periodicals, you will write a three paragraph paper that will help you recognize how science and technology influence and contribute to daily life. (20 Points)

6. **Discussion Board.** During the semester four group interaction activities will give students the opportunity to discuss issues related to topics in the course. (20 Points)

7. **Final Exam.** A comprehensive, 60 question multiple choice exam covering the major objectives of all textbook reading assignments will be taken at the end of the semester. (60 Points)

8. **Extra Credit.** The orientation quiz is worth 10 points extra credit.

9. **Late Policy/Makeup Week.** Only late work with a documented excuse may be made up. Notify your instructor in advance if you have a conflict with a deadline for approval to makeup the work. In case of an emergency, provide a valid, documented excuse within 24 hours of the missed deadline. Late work without documentation will not receive credit. All excused late work for the first half of the semester must be completed by midterm week (see your schedule for deadline). All excused late work for the second half of the semester is due prior to final exam week (see your schedule for dates).

In summary:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Quizzes</td>
<td>195 points</td>
<td>36%</td>
</tr>
<tr>
<td>Laboratory Quizzes</td>
<td>120 points</td>
<td>24%</td>
</tr>
<tr>
<td>Laboratory Practicals</td>
<td>80 points</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Special Event</strong></td>
<td>5 points</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Biology in the News</strong></td>
<td>20 points</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Discussion Boards</strong></td>
<td>20 points</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Final Exam</strong></td>
<td>60 points</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>500 points</td>
<td>100%</td>
</tr>
</tbody>
</table>

* It is the student's responsibility to withdraw from the course in the event that they wish to drop the course. Non-completion without an official drop will result in an F grade.

*Disclaimer - The instructor, Brookhaven College and the Dallas County Community College District will be held blameless should the course schedule or content be changed.*

The instructor reserves the right to amend this syllabus as necessary.
Student Learning Outcomes (Lecture)
Upon successful completion of this course, students will:
1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
5. Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each.
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Analyze evidence for evolution and natural selection.

Student Learning Outcomes (Lab)
Upon successful completion of this course, students will:
1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
7. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
8. Identify the importance of karyotypes, pedigrees, and biotechnology.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection.

Core Objectives
Biology 1408 is part of the Life and Physical Sciences Foundational Component Area 030.

i. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method.

ii. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

iii. The following four Core Objectives must be addressed in each course approved to fulfill this category requirement:

(A) Critical Thinking Skills: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information;

(B) Communication Skills: to include effective development, interpretation and expression of ideas through written, oral and visual communication;

(C) Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions;

(D) Teamwork: to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal;
INSTITUTIONAL POLICIES

Brookhaven College Institutional Policies Addendum can be found at the following link:
Brookhaven College Institutional Policies

Grade reports are no longer mailed. Convenient access is available online. Use your 7 digit student ID when you log in to eConnect

How to check your grades:

1. Go to the student menu on eConnect
2. Select "My Grades" under "My Personal Information."
3. If you are not already logged in, you will be prompted to do so.
4. Select the grade type you wish to review.
5. Press the submit button.
6. All Grades for the selected grade type will be displayed.

Note: You will need your 7 digit Student ID to login.

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