Syllabus
Basic Biology I (1408)

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Office Hours: by appointment
Last day to withdraw with a “W”: November 14th 2019

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. You may print individual chapters free. You may also purchase a hard copy of the book at the college bookstore.

2. **Lab Manual** – Basic Biology I by Phillip Shelp

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. Adobe Acrobat Reader is available free at Adobe Acrobat Reader DC.

Introduction

The world today is dominated by science and technology. Students majoring in fields other than science will need a science background to function effectively in most jobs today. Students majoring in business may find themselves in accounting, marketing, or sales for a company which produces high-tech products in the area of defense, electronics, food production, and genetic engineering. Regardless of your vocational endeavor, your life is affected by science.

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. Read each laboratory assignment carefully as you work through the lab. Your instructor will evaluate your lab work and, if satisfactory, issue a password so you can take a 10-points lab quiz available on ecampus; lab quizzes will only be available 24 hr after the lab day; if you miss a lab quiz there won’t be another opportunity to take it. After every 5 labs, lab participation will be evaluated in your lab manual and Lab practicals will be conducted.

**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.

**Locks on Quiz or Test in Grade book**
If you see a lock in place of a grade, you had a computer error or selected the back arrow during your exam. Your test is locked and will have to be cleared 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.

<table>
<thead>
<tr>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 495 – 550</td>
<td>A = 90 – 100</td>
</tr>
<tr>
<td>B = 440 – 494</td>
<td>B = 80 – 89</td>
</tr>
<tr>
<td>C = 385 – 439</td>
<td>C = 70 – 79</td>
</tr>
<tr>
<td>D = 330 – 384</td>
<td>D = 60 – 69</td>
</tr>
<tr>
<td>F = 0 – 329</td>
<td>F = 0 – 59</td>
</tr>
</tbody>
</table>

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. Two attempts are allowed for each Lecture quiz.

2. **Laboratory.** Labs will coordinate with the text material. When you complete each lab, your instructor will issue a password that you may use to take the 10-point multiple choice quiz available on eCampus, lab quizzes will be available ONLY 24 hr after the lab. Lab participation will be graded by verifying the lab manual.

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.

4. **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 short paper that will help you recognize how science and technology influence and contribute to daily life. BITN worth 20 points.

5. **Discussion Board.** During the semester 4 group interaction activities will give students the opportunity to discuss issues related to topics in the course. Each discussion will count 5 points.

6. **Genetic Problems.** A worksheet of classic genetic problems will be assigned for a total of 5 points.

7. **Final Exam.** A comprehensive, timed 60 question multiple choice exam covering the major objectives of all textbook reading assignments will be taken at the end of the semester. Each question will count 1 point.
8. Attendance. 30 points are allocated for attendance, students should attend all lectures and be on time. 5 points are deducted for each unexcused absence after 3 unexcused absences. The roll will be taken at the beginning of the lecture (tardies will count as an absence).

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.

In summary:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Quizzes</td>
<td>12 x 10</td>
</tr>
<tr>
<td>Laboratory Practicals</td>
<td>2 x 40</td>
</tr>
<tr>
<td>Laboratory Participation</td>
<td>10 x 2</td>
</tr>
<tr>
<td>Lecture Quizzes</td>
<td>13 x 15</td>
</tr>
<tr>
<td>Biology in the News</td>
<td>1 x 20</td>
</tr>
<tr>
<td>Genetic Problems</td>
<td>1 x 5</td>
</tr>
<tr>
<td>Discussion Boards</td>
<td>4 x 5</td>
</tr>
<tr>
<td>Attendance</td>
<td></td>
</tr>
<tr>
<td>Final Exam</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

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

All the exams count – there will **NOT** be a dropped exam grade.

**EXTRA CREDIT** in this course is **LIMITED to 25 points maximum**, this is a course wide policy. Extra credit opportunities will be offered occasionally throughout the course. These points can be very valuable so plan on making the most of these opportunities as they are available!

The instructor reserves the right to amend this syllabus as necessary.
Educational Outcomes for Biology 1408

**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](https://econnect.dcccd.edu/)

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

[eConnect](https://econnect.dcccd.edu/) Web site address (Source: https://econnect.dcccd.edu/)

**How to check your grades online:**

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 # and your 6-digit PIN to log in.

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