Syllabus
Basic Biology I (1408-73430)
(Jan22- Mar23)

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Office Hours: MW 12:30-1:30; Tues 11:30-1:30

Certification Date: 1/29/2019
Last day to drop with a “W”: 3/4/2019

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. **FREE OpenStax Biology.** Students can use the Free OpenStax Biology or any Biology textbook for nonmajors. The online version of the textbook is available Free at [OpenStax CNX](https://openstax.org). Powerpoints & individual chapters of Open Stax are available on your course on ecampus Blackboard. You may print individual chapters Free. You may also purchase hard copy in the book ISBN 978-1-938168-09-3 for a cheaper cost from anywhere or one can also use (the cengage textbook cited on econnect)

2. **Lab Internet Access Code:** Totally Online Basic Biology I by Shelp ISBN 978-0-996-5286-0-3. **It is recommended that you purchase the access code directly from [www.biolabmanual.com](http://www.biolabmanual.com) as it is easier to register on [www.biolabmanual.com](http://www.biolabmanual.com) or purchase a card in the college bookstore that will enable you to gain access to the totally online labs.**

The above instructional materials may be purchased online at [www.biolabmanual.com](http://www.biolabmanual.com) or in the College Bookstore [www.follet.com](http://www.follet.com).

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/en-us/microsoft-365/store). Adobe Acrobat Reader is available free at [Adobe Acrobat Reader DC](https://get.adobe.com/reader/).  

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.

**Specific Course Learning Outcomes**

Prescribes what students must demonstrate to successfully complete an assignment

**Course Outline**

Ch 1 Study of Life
Ch 2 Chemical Foundation of Life
Ch 3 Biological Macromolecules
Ch 4 Cell Structure
Ch 5 Plasma Membranes
Ch 6 Metabolism
Ch 7 Cellular Respiration
Ch 8 Photosynthesis
Ch 10 Cell Reproduction
Ch11 Meiosis & Sexual Reproduction
Ch12 Mendel’s Experiments
Ch13 Modern Inheritance
Ch 14 DNA Structure & Function
Ch 15 Genes and Proteins
Ch 17 Biotechnology
Ch18 Evolution and Origin of Species

**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.

<table>
<thead>
<tr>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 420 - 465</td>
<td>A = 90 - 100</td>
</tr>
<tr>
<td>B = 375 - 419</td>
<td>B = 80 - 89</td>
</tr>
<tr>
<td>C = 325 - 374</td>
<td>C = 70 - 79</td>
</tr>
<tr>
<td>D = 280 - 324</td>
<td>D = 60 - 69</td>
</tr>
<tr>
<td>F = 0 - 279</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. (150 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. (100 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. (25 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. (30 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.** There are three extra credit opportunities. The orientation quiz is worth 10 points extra credit and on time and complete assigned work submission is worth 10 points. Another extra credit assignment is also possible.

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>150 points</td>
<td>32%</td>
</tr>
<tr>
<td>Laboratory Quizzes</td>
<td>100 points</td>
<td>22%</td>
</tr>
<tr>
<td>Laboratory Practicals</td>
<td>80 points</td>
<td>17%</td>
</tr>
<tr>
<td>Special Event</td>
<td>25 points</td>
<td>5%</td>
</tr>
<tr>
<td>Biology in the News</td>
<td>30 points</td>
<td>7%</td>
</tr>
<tr>
<td>Discussion Boards</td>
<td>20 points</td>
<td>4%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>60 points</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>465 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, North Lake 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.

**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 1409 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**

*Institutional Policies relating to this course can be accessed from the following link*

[www.northlakecollege.edu/syllabipolicies](http://www.northlakecollege.edu/syllabipolicies)

**COUNSELING SERVICES (A430)**

Counseling services for personal issues are provided to all students currently enrolled at North Lake College. These services are provided by licensed professionals who are bound by confidentiality (within ethical parameters) at no charge. With the assistance of a counselor, students are able to identify, understand, resolve issues and develop appropriate skills. To make an appointment call 972-273-333 or visit A 430.

**THE ACADEMIC SKILLS CENTER (A332)**

The Academic Skills Center (ASC) is designed to provide assistance to students in the following areas:
- Labs for students enrolled in foreign language, Developmental Reading, and ESOL courses. One-on-one tutoring is available.
- The Writing Center can help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, and properly use and document sources. Rather than merely editing or “fixing” papers, tutors focus on helping students develop and improve their writing skills.
The Online Writing Lab (OWL) allows students to submit papers to our writing tutors electronically and get feedback within 24-72 hours. The OWL can be accessed through eCampus. After logging on to eCampus, click on the Community Tab at the top. Type "Owl" in the search field and click "Go." Next, click on the double drop-down arrows next to "NLC-OWL2," and then click on "Enroll." Once enrolled, students can receive services from the OWL.

For more information or to schedule a tutoring appointment, come by A-332 or call 972-273-3089.

<table>
<thead>
<tr>
<th>SCIENCE CENTER (P333)</th>
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<tr>
<td>The Science Learning Center is available to all online students. It is located in P333 just across from the Science Division Office. This room has computers, eCampus connection, and qualified tutors. All of this is free to you who have registered from the Inet Biol 1408 course. If you would like to have tutoring for specific topics, this service is free to you as well as the on campus students. I am aware that some students are not within the range of the North Lake College campus. I have added as much additional information as possible to help. If you need a specific answer or have questions, you are welcome to call during my office hours and I will be glad to give you time for question and answer session.</td>
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Disability Services: If you need special accommodations, talk to the instructor or the Disability Services Office. Accommodations can be made. You can contact the Disability Services Office in person (A430) or by phone at 972-273-3165. For more information, visit http://www.northlakecollege.edu/services-and-resources/advice-and-assistance/Pages/disability-services.aspx

Grade reports are no longer mailed. Convenient access is available online. Just use your student identification number when you log in to eConnect. Web site address: https://econnect.dcccd.edu/

How to check your grades online: Go to the student menu on eConnect

1. Select "My Grades" under "My Personal Information."
2. If you are not already logged in, you will be prompted to do so.
3. Select the grade type you wish to review.
4. Press the submit button.
5. All Grades for the selected grade type will be displayed.
6. Note: You will need your 7 digit Student ID # and your 6 digit PIN to log in.

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