What is Biology for Non-Science Majors I?
Biology 1408 is a 4 credit-hour general Biology course designed for the non-science major. Emphasis will be on scientists and their contributions to the science field, scientific problem solving, unity of life including cells and genetic information, energy pathways important to life, and current issues in biology. (3 Lec., 3 Lab.) (Coordinating Board Academic Approval Number 2601015103)

Prerequisites:
One of the following must be met: (1) Developmental Reading 0093 AND Developmental Writing 0093; (2) English as a Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading and Writing standards AND DCCCD Writing score prerequisite requirement.

How can I contact Mrs. Barbero?
Email: pbarbero@dcccd.edu
Office: C-270
Office #: (972) 860-8343
Office Hours: MW 12:30 pm – 1:30 pm; TR 2:00 pm – 3:00 pm.
    Emails will be responded to within 24 hours.

What are the student’s responsibilities?
Attend Class: (Monday, September 5th – Sunday, December 10th)
    100% online delivery with scheduled due dates. This class requires completion of weekly lab experiments using a lab kit.

Last Date to Withdraw: November 11th, 2017

Final Exam Day and Time: Online, must be taken Monday, Dec 4th – Sunday, Dec 10th

Adhere to the Honor Code Policy
Any test, quiz, or assignment you complete is to be your work alone. Tests and quizzes taken in eCampus are timed and I expect you to NOT use your books, notes, or the internet to assist you. 1 point per minute time exceeded is deducted from your score.

Obtain Required Materials
Materials for General Biology include:

✓ Stand Alone Modified Mastering Access Code (includes etext) for Audesirk
ISBN: 9780134260204

At Home Lab Materials: Dallas County CC Custom Biology Kit, eScience Labs, LLC. ($100 + $19.95 S&H) See eCampus for ordering instructions.

Digital Camera: Camera in cell phone/iPad acceptable – must be able to take clear pictures

Computer with reliable internet access: You should have regular, reliable access to the Internet (access with only a mobile device/ tablet is NOT enough to succeed in this class). Blackboard (eCampus) does not have full functionality with a mobile device/ tablet.
Be Able to Use and Access eCampus (https://dccc.blackboard.com/)
eCampus (Blackboard) will be used to track grades, turn in assignments, and download lecture notes. As a student, you need to have access to a computer with internet access. There are various computers available on campus in L108 and the library.
Problems with eCampus? eCampus Tech Support Phone: 1-866-374-7169 or 972-669-6402 or Help Website: http://bbcrm.edusupportcenter.com/

Have Technical Requirements Needed to Succeed
A basic level of technical competence and equipment are necessary for participating in this online class. You should already be able to perform the following tasks:
- Attach document files to assignments in eCampus.
- Locate, save, and retrieve files on the computer.
- Send/receive email.
- Submit comments to a discussion board.
- Use a web browser like Internet Explorer or Firefox and search engines like Google.

You should have regular, reliable access to the following software and Internet resources (access to only a mobile device is NOT enough to succeed in this class)

Attendance Policy:
In order to be successful, students must attend and participate in enrolled courses. Students are expected to log--in and utilize the course materials and activities in eCampus on a regular basis. As a minimum expectation, you should login to the course at least four separate days each week. Because this is a shortened flex term, as a general guideline, you should be actively learning through working with the online LECTURE materials for about 6 hours per week (the same as you would spend attending class) and dedicate at least the same amount of additional time to studying and reviewing the lecture materials either offline or online. You should also be actively working with the online LAB materials and completing experiments using the lab kit for about 6--9 hours each week. In total, to be successful, the typical student should spend a MINIMUM of 15-20 hours working on course materials each week of the flex term.

Students who struggle with science concepts, mathematics, or other complex coursework should expect to spend much more than this minimum to succeed.

Student Contract
To create a good course environment you will attempt to follow these guidelines:
- The student agrees to devote a reasonable amount of time and energy to successful completion of the course, to meet all deadlines, to avoid plagiarism and other forms of cheating, and to communicate frequently and clearly with the instructor, particularly when difficulties arise.
Communication with Instructor
The primary means of communication for this class will be EMAIL. You are responsible for ensuring that your email address is correctly listed in the course (check this on the first day!) and that you are receiving emails from the instructor. To ensure you receive all notices from the instructor in a timely manner, check your email frequently (at least 3-4 times per week).

If you send the instructor an email with a technical problem or other request that requires a rapid response to meet a deadline, make sure to use the correct subject line and then check your email frequently between the time you send your request/problem and the due date. Extensions will NOT be granted in situations where the instructor responded before the due date with instructions, but the student did not check frequently enough to see the response.

The instructor will reply to all emails sent in the proper format within 24 hours, so double check your format and re-send your email if you do NOT hear back from the instructor within this time frame. Do NOT assume that an unanswered email was received – ALWAYS RE-SEND if you do not receive a reply in 24 hours!

REQUIRED SUBJECT LINE FORMAT: When contacting the instructor, the SUBJECT LINE must contain the course ID (BIOL1408-**section #**) AND the student’s first and last name.

Instructor Policies and Suggestions for Student Success

Be Familiar with the Course Design
- This course is divided into 14 lessons, each with an accompanying lab. Each major exam will cover several lessons, and the final exam is comprehensive over all 14 lessons and labs.
- The course requires purchase of a textbook and commercial lab kit supplemented by online instructional materials and graded assessments.
  - The online lesson materials are designed to guide student learning through supplementary explanations of the chapter material, interactive animations, self-assessments, and connections and applications to real life.
  - The online lab materials include estimated times for completion, materials lists, a lab report to complete and submit for grading, and video demonstrations that introduce each lab activity and help students set up and successfully complete the experiments.
- This online course is NOT self-paced. The course calendar provides the due dates for each lesson, lab, and graded materials at the beginning of the semester. Although students may work ahead, many graded assignments are cooperative and must be completed during the week assigned.

Understand Weekly Learning Outcomes
The learning objectives summarize the desired outcomes for each student upon completion of the lesson. Graded assessments will evaluate whether students have learned the material sufficiently to demonstrate the objectives. Therefore, students should use the objectives to guide their learning and study activities.
Late Work, Lab and/or Exam Make-up Policy

- Due dates for all assignments are laid out in the course calendar you receive on the first day of class. Ample time has been allotted to complete each lesson and lab. All assignments are expected on or before the deadline indicated in the syllabus course calendar available from the beginning of the semester. Students are expected to plan in advance to allow time to complete all graded assignments by the due date and time.
- Unless specifically noted, all assignments are due by 11:59 pm on the due date. However, no resets or technical assistance will be provided for assignments after 10:00 pm, even on DUE DATES. This means you should plan to finish your assignments by 10:00 pm.
- **Problems and Late submission:** If any problem, emergency or minor, will prevent you from completing one or more assignments or an exam by the due date, you must contact me immediately to request approval to submit an assignment late.
  - The FIRST time you request an extension, you will receive an additional 3 days for that week’s assignments with no point penalty.
  - After the “free” extension, you may still request permission to submit a week’s assignments late, but you will be charged a late penalty of 10% for every 3 days after the original due date, regardless of the reason for the extension.
  - For exams, a student will be required to provide written documentation of the emergency that caused the student to miss an exam due date before make-up arrangements will be made.

**NOTE:** If a technical problem arises while you are working on an assignment or test, you must contact me immediately and then watch your email for my response with what you need to do next to avoid a late penalty. Technical problems occurring after 10:00 pm can receive technical support (such as resetting the assignment), but will be subject to the late penalty. Technical problems occurring during the last hour before an exam is due do NOT count as an emergency. Start exams well before the time they must be submitted.
How am I graded?

<table>
<thead>
<tr>
<th>Your course grade is determined as follows:</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>150</td>
</tr>
<tr>
<td>Chapter Assignments (10@30 pts each)</td>
<td>300</td>
</tr>
<tr>
<td>Lab Reports (10@ 35 pts each)</td>
<td>350</td>
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<tr>
<td>Discussion Boards (2 @ 25 pts each)</td>
<td>50</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
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</table>

Chapter Assignments: Chapter assignments will be completed online in MasteringBiology using the access code that came with your textbook. Chapter assignments review the important material from each chapter. They consist of tutorials, activities, and multiple choice.

Orientation Activities: All students must complete the orientation activities posted in the “Orientation Activities” menu button during the first week of classes. Many orientation activities are graded as complete/incomplete and include introducing yourself on the discussion boards. The orientation activities conclude with a graded orientation quiz and orientation checklist. The orientation activities are MANDATORY and count as a lesson assignment.

Discussion Boards: Discussion boards are designed to stimulate scientific thought and class interaction to connect your learning of science to the real world. Each assignment will begin with a discussion prompt about a particular topic for you to write about. You will be expected to think about the topic, review course materials, and perform research to produce an original written essay that answers the prompt. Original posts, replies, and conclusion due dates are staggered to maximize interaction. Each discussion board will appear one week before that discussion is assigned and will provide additional details and grading rubrics.

Lab Reports: For each of the labs in this course, you will spend several hours doing the lab experiments and recording data, then you will use that data to complete a lab report in eCampus. Each lab report will consist of essays, short answer, fill-in data tables, and multiple choice questions. The lab report will require 1 – 2 hours to complete (in addition to the time required to complete the actual lab). All lab reports also consist of uploading PHOTOGRAPHS to document your completion of the lab experiment. Make sure to check which photos are required before you start the lab each week because the photos are a significant part of your lab grade.

Photos are required for each lab and contribute to your lab report grade in the following way:
No pictures attached to lab report: - 15 points deducted from grade
Photos attached to lab report: + 5 points to grade

Midterm and Final Exams: Exams will be taken online in the course management system and will consist of a combination of multiple choice, matching, and/or short essay questions over the chapters indicated in the course calendar. Tests are TIMED and CLOSED BOOK, CLOSED NOTES. You are not allowed to use your notes or search the web during tests.

Extra Credit: At the instructor’s discretion, a few extra credit assignments may be offered throughout the semester. Due dates for any extra credit assignments offered are final and no extensions will be allowed.

Grading Policies: The instructor agrees to provide timely responses to student requests or inquiries and communicate frequently through email, course announcements, and timely grading with feedback. Lesson Assignments and Exams are graded immediately upon completion. Lab Reports and Discussion Boards will be graded within 1 week after due date.

**NO LATE WORK IS ACCEPTED IN THIS CLASS! DEADLINES FOR ASSIGNMENTS ARE NON-NEGOTIABLE!**
What are the course objectives?

Lecture Learning Outcomes from Texas Higher Education Coordinating Board

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. Interpret the results of karyotypes, pedigrees, and biotechnology experiments.
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Analyze evidence for evolution and natural selection.

Lab Learning Outcomes from Texas Higher Education Coordinating Board

Upon successful completion of this laboratory-based course, students will:
1. Be able to 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 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. Interpret the results of karyotypes, pedigrees, and biotechnology experiments.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection.

What are EFC’s policies?

Institutional policies can be found at the following:

The guidelines in this syllabus may be changed, deleted or amended at any time by the instructor.
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<thead>
<tr>
<th>Week</th>
<th>Lesson and Chapter</th>
<th>Lab</th>
<th>Assignments</th>
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<td>Orientation Activities</td>
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<td>Disc Board: Let’s Get Acquainted</td>
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<tr>
<td></td>
<td>Lesson: Introduction to Biology</td>
<td>Lab: Safety and Laboratory Techniques</td>
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<td></td>
<td>Chapter 1: An Introduction to Life on Earth</td>
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<td>2</td>
<td>Lesson: The Chemistry of Life</td>
<td>Lab: Polar Bonding (extra credit)</td>
<td>Chapter 1&amp;2 Assignment</td>
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<td></td>
<td>Chapter 2: Atoms, Molecules, and Life</td>
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<tr>
<td>3</td>
<td>Lesson: Biomolecules</td>
<td>Lab: Biomolecules</td>
<td>Chapter 3 Assignment</td>
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<td></td>
<td>Chapter 3: Biological Molecules</td>
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<td>Discussion Board: Who’s The Biggest Loser?</td>
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<td>4</td>
<td>Lesson: Cells</td>
<td>Lab: Diffusion and Osmosis</td>
<td>Chapter 4 &amp; 5 Assignment</td>
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<td>Chapter 4: Cell Structure and Function</td>
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<td></td>
<td>Lesson: Cell Membranes and Material Movement</td>
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<td></td>
<td>Chapter 5: Cell Membrane Structure and Function</td>
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<td>5</td>
<td>Lesson: Basics of Energy Exchange</td>
<td>Lab: Enzymes</td>
<td>Chapter 6 Assignment</td>
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<td>Chapter 6: Energy Flow in the Life of a Cell</td>
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<td>6</td>
<td>Lesson: Photosynthesis</td>
<td>Lab: Photosynthesis</td>
<td>Chapter 7 Assignment</td>
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<td>Chapter 7: Capturing Solar Energy: Photosynthesis</td>
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<td>7</td>
<td><strong>MIDTERM EXAM</strong></td>
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<td>8</td>
<td>Lesson: Respiration</td>
<td>Lab: Respiration</td>
<td>Chapter 8 Assignment</td>
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<td>Chapter 8: Harvesting Energy: Glycolysis and Cellular Respiration</td>
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<td>9</td>
<td>Lesson: Cell Division</td>
<td>Lab: Mitosis</td>
<td>Chapter 9 Assignment</td>
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<td>Chapter 9: Cellular Reproduction</td>
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<td>10</td>
<td>Lesson: Sexual Reproduction</td>
<td>Lab: Meiosis</td>
<td>Chapter 10 Assignment</td>
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<td>Chapter 10: Meiosis: The Basis of Sexual Reproduction</td>
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<td>Chapter 42: Animal Reproduction</td>
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<td>11</td>
<td>Lesson: Patterns of Inheritance</td>
<td>Lab: Mendelian Genetics</td>
<td>Discussion Board: Genetic Diseases</td>
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<td>Chapter 11: Patterns of Inheritance</td>
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<tr>
<td>12</td>
<td>Lesson: Human Genetics</td>
<td>Lab: Human Genetics (extra credit)</td>
<td>Chapter 11 Assignment</td>
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<td>Chapter 11: Patterns of Inheritance</td>
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<tr>
<td>13</td>
<td>Lesson: DNA Replication</td>
<td>Lab: Gene Expression</td>
<td>Chapter 12&amp;13 Assignment</td>
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<td>Chapter 12: DNA: The Molecules of Heredity</td>
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<td></td>
<td>Lesson: Gene Expression</td>
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<td></td>
<td>Chapter 13: Gene Expression and Regulation</td>
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<tr>
<td>14</td>
<td><strong>FINAL EXAM</strong></td>
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*This calendar may be amended by the instructor at any time.*