

Essential minimum information required by STC

South Texas College  
Biology Department  
Section Outline

Biology 2406.V60  
(Online)

Environmental Biology  
Summer III 2017

***THIS ONLINE CLASS HAS NO CLASSROOM MEETINGS! All assignments, communications and activities are submitted online!***

Name of the Biology Department Chair: Dr. Murad Odeh

## Instructor Information

### 1. Dr. Jan A. Nilsson

2. Office: Room 2.1204 / Building J, Pecan Campus.

3. Office Telephone Number: (956) 872-2334

(Please use Blackboard Help Desk for class questions, and Blackboard e-mail for private questions.)

4. FAX Number: (956) 872-2117 (Department FAX -- not direct access to the instructor)

5. E-mail Address: Blackboard e-mail for your class (student e-mail sent to the STC email box [nilsson@souttexascollege.edu](mailto:nilsson@souttexascollege.edu) will not be answered unless it is an emergency)

6. Office Hours and teaching load: For online classes in the Class Help Desk in the Blackboard course shell following my evening class, Tuesday and Thursday 10.00 - 11.00 pm. Like most STC instructors this instructor teaches overloads, however, for all practical purposes the instructor will when possible, answer questions in the **Blackboard Class Help Desk every day** throughout the week

(24/7).

Normal response time to student e-mail or help desk post at STC is within 48 hours. The instructor reserves the right to decide if a message needs an immediate reply. However, for all practical purposes the instructor will when possible, answer questions in the Blackboard Class Help Desk every day throughout the week (24/7).

Clarification: In online classes we communicate online, so the office hours for online classes at STC are online. If a meeting in the STC office is necessary an arrangement can be made for student who participate in the class as expected, but not until attempts have been made to solve concerns and problems by communicating online.

**Class Schedule:**

BIOL 2406.V60 Online

BIOL 1409.V60 Online

## STC Biology Program Information

### 1. Biology Program Learning Outcomes

1. The student will be able to apply laboratory techniques and the scientific method to perform experiments, and to collect, summarize and interpret data in the biological disciplines.
2. The student will have a broad knowledge of cells and can explain metabolism including DNA, genetics, and biotechnology.
3. The student can discuss the principles of evolution, how evolution has shaped life on earth and how the theory of evolution impacts the study of biology.
4. The student will differentiate among major classifications of organisms, understand comparative anatomy and physiology, and interpret classification schemes in terms of phylogeny.
5. The student will be able to summarize interactions of organisms with each other and with the environment and the effects of climate change on the biosphere.
6. The student can describe cellular organization in tissues and organs, and extend this knowledge to skeletal, muscle, and nervous organ systems.
7. The student will understand systemic physiology including how organ systems function to regulate homeostasis.
8. The student will differentiate microbial mechanisms of pathogenicity, understand the role of the immune system in protecting against microbes, and evaluate effectiveness of anti-microbial agents.

9. The student will be able to research and analyze the scientific literature and develop informed conclusions.

10. The student can skillfully communicate on critical issues concerned with health of individuals, communities, and ecosystems.

## 2. Core Objectives

- **Critical Thinking Skills (CT):** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information;
- **Communication Skills (COM):** to include effective development, interpretation and expression of ideas through written, oral and visual communication.
- **Empirical and Quantitative Skills (EQS):** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions;
- **Teamwork (TW):** to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal;

## Course Information (BIOL 2406)

### 1. Course Name

Environmental Biology (Online)

### 2. Course Number and Section Number

Biology 2406.V01

### 3. Classroom Location

*Online* in Dr. Nilsson's CyberClassroom.

### 4. Days and Time Class Meets

Online at the students convenience (however, there is a minimum rule of thumb for study time). Attendance and participation policy: Students must submit assignments *anytime at the student's convenience as long as completed in an orderly and timely manner on or before the due date as listed in the semester calendar.* Many assignments can be submitted over a convenient long period of time -- for some assignment the whole semester. **Students missing critical**

deadline dates (see Semester Calendar) are not participating as can be expected and may be removed from the class roster following STC policy. (For more information see, 11. Miscellaneous: Participation Policy.)

## 5. Catalog Course Description

This is a study of human interaction and the effect upon plant and animal communities. Conservation, pollution, energy and other contemporary ecological problems will be discussed. Prerequisites: None. (From South Texas College Course Catalog.)

## 6. Course Learning Outcomes

- The student will understand science and scientific terminology;
- The student will read and discuss scientific literature;
- The student will connect different concepts in the field of environmental biology/science;
- The student will understand sustainability of natural systems and recognize the roles in ecosystems and biological evolution -- including human systems and evolution;
- The student will understand general principles and tools of scientific investigations.

## 7. Departmental Course Requirements, Evaluation Methods, and Grading Criteria

Lecture: 75 percent

Lab: 25 percent

For grading details see the online Grading Criteria and Semester Calendar (navigate to the Environmental Biology Hub and click on the Grading Criteria button or the Semester Calendar button) which both are part of the Syllabus for the class.

## 8. Textbook

2013, Cunningham and Cunningham. Principles of Environmental Science, 7/e or 8/e. Older editions also acceptable, but be prepared for differences and more time searching for content.

There is no lab manual -- all lab activities are online case studies and outdoor semester projects.

## 9. Each Major Assignment and Examination

**List of assignments:** This information is also available on the Grading Criteria page (navigate to the Environmental Biology Hub and click on the Semester Calendar button). Instead of a few major large and time consuming exams, this class instead has several smaller and shorter assignments. The shortest quiz only have one question, and will take less than a minute to finish. **Don't worry about the long list** -- it is just a STC standardized requirement for this section outline. MOST of these assignments are very short and fast assignments, but *they must be listed here as an STC requirement.*

Also see this Grade Recorder page for an assignment list that you can print and use to "fill-in grades" as you progress throughout the semester (navigate to the Environmental Biology Hub and click on the Grade Recorder button).

### I. Introduction / Collaboration Assignments

Student Contract Quiz

Introduction Post

Start Quiz

Class Discussion "Key" Quiz

### II. Reading Quizzes

*Reading Quiz 01* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 02* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 03* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 04* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 05* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 06* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 07* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 08* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 09* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 10* (Blackboard, open book, 4 hours, unlimited attempts)

*Reading Quiz 11* (Blackboard, open book, 4 hours, unlimited attempts)  
*Reading Quiz 12* (Blackboard, open book, 4 hours, unlimited attempts)  
*Reading Quiz 13* (Blackboard, open book, 4 hours, unlimited attempts)  
*Reading Quiz 14* (Blackboard, open book, 4 hours, unlimited attempts)  
*Reading Quiz 15* (Blackboard, open book, 4 hours, unlimited attempts)

### III. Case Studies

Case Study 1  
Case Study 2

### IV. Geography Drills

Geography Drill 1  
Geography Drill 2  
Geography Drill 3

### V. Field Lab Semester Project

Project Selection (Topic)  
Project Submission (Final Project)

### VI. General Class Discussion

General Class Discussion (4 discussion topics)

### VII. Endterm (Final) Exam

Endterm (Final) “Key” Quiz (4 hours, unlimited attempts)  
Endterm (Final) Exam, part 1 (one attempt, timed)  
Endterm (Final) Exam, part 2 (one attempt, timed)

### VIII. Learning Self-Assessment

Learning Reflection

## 10. General description of each lecture or discussion (including Reading Quizzes):

*The course follows the outline as close as possible in the order given below, and the students work at their own preferred speed at their convenience -- as long as finished by the due dates, before taking the Endterm (Final) Exam and submitting a Learning Self-Assessment. Note that starting with edition 7, the textbook has 16 chapters. For more details see the online Semester Calendar.*

### 1. Environment, [Chapter 1](#)

*This chapter covers:* (i) Understanding our environment, (ii) Problems and opportunities, (iii) Human dimensions of environmental science, (iv) Science helps us understand our environment, (v) Critical thinking, (vi) Where do our ideas about the environment come from.

### 2. Chemistry and Ecology, [Chapter 2](#)

*This chapter covers:* (i) Systems describing interactions, (ii) Elements of life, Energy, (iii) Energy for life, (iv) From species to ecosystems, (v) Biochemical cycles and life processes.

### 3. Evolution and Ecology, [Chapter 3](#)

*This chapter covers:* (i) Evolution leads to diversity, (ii) Species interactions shape communities of species (iii) The growth of species populations, (iv) Properties of communities depend on species diversity, (v) Communities are dynamic and change over time.

### 4. Human Populations, [Chapter 4](#)

*This chapter covers:* (i) Past and current population growth, (ii) Perspectives on population growth, (iii) Factors determining population growth, (iv) Fertility is influenced by culture, (v) Demographic transition, (vi) Family planning, (vii) What kind of future are we creating now?

### 5. Biomes and Biodiversity, [Chapter 5](#)

*This chapter covers:* (i) Terrestrial biomes, (ii) Marine environments (iii) Freshwater ecosystems, (iv) Biodiversity, (v) Benefits of biodiversity, (vi) What threatens biodiversity? (vii) Endangered species protection.

### 6. Conservation, [Chapter 6](#)

*This chapter covers:* (i) World forests, (ii) Grasslands, (iii) Parks and preserves.

### 7. Food and Agriculture, [Chapter 7](#)

*This chapter covers:* (i) Global trends in food and nutrition, (ii) How much food do we need? (iii) What do we eat?, (iv) Living soil, (v) Way we use and abuse soil, (vi) Agricultural inputs, (vii) How have we managed to feed billions? (viii) Sustainable farming strategies, (ix) Consumer help shape farming.

### 8. Health, [Chapter 8](#)

*This chapter covers:* (i) Environmental health, (ii) Toxicology (iii) Movement, distribution, and fate of toxins, (iv) Mechanisms for minimizing toxic effects, (v) Measuring toxicity, (vi) Risk assessment and acceptance (vii) Establishing public policy.

----- Edition 6 and earlier -----

### 9. Climate Change and Air Pollution, [Chapter 9](#)

*This chapter covers:* (i) What is the atmosphere, (ii) Climate changes over time (iii) How do we know that climate is changing faster than usual? (iv) Envisioning solutions, (v) Air pollution, (vi) Interactions between climate and air pollution, (vii) Effects of air pollution (viii) Air pollution control, (ix) Current conditions and future prospects.

### 10. Water, [Chapter 10](#)

*This chapter covers:* (i) Water resources, (ii) Major water compartments, (iii) Water availability and use, (iv) Freshwater shortages, (v) Water management and conservation, (vi) Water pollution, (vii) Water quality today, (viii) Pollution control, (ix) Water legislation.

## 11. Geology, [Chapter 11](#)

*This chapter covers:* (i) Earth processes, (ii) Minerals and rocks, (iii) Economic geology and mineralogy, (iv) Environmental effects of resource extraction, (v) Conserving geological resources, (vi) Geologic hazards.

## 12. Energy, [Chapter 12](#)

*This chapter covers:* (i) Energy resources and uses, (ii) Fossil fuels, (iii) Nuclear power, (iv) Energy conservation, (v) Energy from biomass, (vi) Wind and solar energy, (vii) Water power, (viii) Fuel cells, (ix) What's our energy future.

## 13. Waste, [Chapter 13](#)

*This chapter covers:* (i) What waste do we produce, (ii) Waste disposal methods, (iii) Shrinking the waste stream, (iv) Hazardous and toxic waste.

## 14. Urbanization, [Chapter 14](#)

*This chapter covers:* (i) Cities, (ii) Urban planning, (iii) Economics and sustainable development, (iv) Natural resource accounting, (v) Trade, development, and jobs, (vi) Green business and green design.

## 15. Policy, [Chapter 15](#)

*This chapter covers:* (i) Environmental policy and law, (ii) Major environmental laws, (iii) How are policies made? (iv) International policies, (v) What can individuals do? (vi) Working together, (vii) Global development goals.

----- Edition 7 -----

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## 10. Air Pollution, [Chapter 10](#)

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*This chapter covers:* (i) Cities, (ii) Urban planning, (iii) Economics and sustainable development, (iv) Natural resource accounting, (v) Trade, development, and jobs, (vi) Green business and green design.

### 16. Policy, [Chapter 16](#)

*This chapter covers:* (i) Environmental policy and law, (ii) Major environmental laws, (iii) How are policies made? (iv) International policies, (v) What can individuals do? (vi) Working together, (vii) Global development goals.

The online calendar is dynamic and much more detailed.

## 11. Miscellaneous

**MINIMUM TECHNOLOGY STATEMENT:** *Computer.* Students are expected to have daily access to a computer (desktop, laptop, or notebook) and daily Internet connection. Using your a cell phone when on the road might be helpful, but do not expect to pass this course using only a cell phone. If you do not own a computer, there are Internet connected computers accessible in the STC Student Success Centers, but I do not recommend students who do not own a computer to register for online classes.

*Publishers electronic content.* An e-pack or other electronic content from a publisher is NOT used in this class. Thus, students purchasing used books will NOT need to purchase a PIN from the publisher.

*Software and computer platform.* The instructor himself uses Macintosh and Safari, but the platform and software is not important, as long as you pay attention to the STC Blackboard browser guidelines.

**MINIMUM TECHNICAL SKILLS:** The class uses both Blackboard (require a password) and web pages housed outside of Blackboard (do NOT require a password, and referred to as the biology hub). Students are expected to know how to use the computer, how to surf the web to obtain information, how to send e-mail/post in the class help desk, how to send pdf attachments, and how to use Blackboard to submit assignments and participate in class discussions -- or learn at the beginning of the semester. The first period of the semester is set aside for students to familiarize themselves with the class, and can also be used to learn how to use the minimum required technology components.

**PARTICIPATION POLICY:** This class is online, and use Blackboard for class assignment submissions. Students are expected to log in to Blackboard and participate in classes in which they are enrolled -- if needed at least 1 hour per day (or 7 hours per week). (If one hour per day / seven hours per week is not necessary -- in order to complete class assignments in an orderly and timely way -- the more power to that student.)

Do not procrastinate, because emergencies/unexpected things do happen, but to maintain academic quality/integrity and to be fair to students who participate in the class as required, students are expected to submit ALL assignments on time (on or before the deadline). **Please read the “make-up policy” for this class VERY CAREFULLY!**

**Student missing critical Blackboard deadlines may be removed from the class roster following STC policy. Reading Quiz 05** is one of the critical deadlines, which must be submitted with the minimum grade required on or before the deadline in order to remain on the class roster. (For details see the Semester Calendar.)

From STC Policy 3335:

“Dropping a course is the responsibility of the student and not taking the appropriate steps may result in an "F" for the course.

In addition to Division based guidelines related to attendance/participation, faculty may drop students, prior to the withdrawal deadline when, in the opinion of the faculty, the student would have difficulty in successfully completing the course.

If you are unable to complete this course, YOU have the responsibility to withdraw from on or before the last day to withdraw (see Semester Calendar) to get a "W" on your grade report. Withdrawal from a course is a formal procedure, which you must initiate. You may do this in the Admissions Office. If you stop participating in class and miss critical deadlines (see the Semester Calendar) and do not withdraw, the instructor may withdraw you, however it is the students responsibility to withdraw. If you are still on the official STC class roster at the end of the semester you will receive a performance grade, usually an "F". Note: Students often drop courses when help is available that would enable them to continue. **I encourage you to discuss your withdrawal plans with me if you feel the need to withdraw.**

**RETURN OF ASSESSMENTS (TESTS):** Blackboard assessments are graded automatically and available immediately after submission. All grade percentages are listed in the online Grading Criteria. Many grades are posted immediately after submission in My Grades online on Blackboard. Assignments that are not posted are "all-or-nothing" assignments, which means an automatic 100 (A) is earned if submitted as intended on time and following instructions. Final semester grades are received from STC, not posted on Blackboard and not by the instructor. If student wish an early pass or fail grade estimate for graduation purposes from the instructor, a request for such an estimate must be made minimum two weeks before grades are due by STC. If a student has not participated as required and intended during the semester, it may not be possible to do an early pass or fail grade estimate.

**MAKEUP POLICY FOR ALL CLASSES:** **Please read this "make-up policy" for this class VERY CAREFULLY! There are no make-ups.** All assignments must be done in a timely manner, paying attention to posted due dates in the Semester Calendar. **There are no valid excuses if you miss a deadline, because all assignments can be submitted over a convenient long period of time** -- for some assignment the whole semester. **Don't wait to the last minute to submit an assignment in case something goes wrong...!** **When an assignment closes IT WILL REMAIN CLOSED. If an assignment deadline is missed a zero will be recorded.**

**THIS IS A SCIENCE CLASS:** When you answer questions for assessments it is the current scientific understanding that is correct. If a student's opinion does not agree with the current scientific understanding (e.g., about evolution), the student must still answer questions giving the current accepted scientific explanation in order to earn grade points.

**NETIQUETTE:** *Capital Letters.* While sometimes used for emphasis, long statements in capital letters should be avoided. Be aware that typing in all capital letters indicates shouting. *Humor.* Be careful with humor. Satire (humor sometimes used to educate) can be an effective communication tool, but be careful, it may be misunderstood as sarcasm (humor often used to hurt). *Repetition and Redundancy.* Review all discussion postings before posting your own to prevent redundancy and repetition. *Spelling and Grammar.* This is a college class, check your writing for errors by reviewing what you have written before submitting it (Blackboard has a very easy to use spell-checker). *Courtesy and Civility.* Have due regard for all class participants, we are all in this together. Keep in mind that you are taking a college class. Something that would be inappropriate in a traditional class is also inappropriate in an online class.

**STUDENT CODE OF CONDUCT:** Plagiarism, and cheating on tests will result in a grade of F as stated in the STC Student Handbook.

"The penalties for scholastic dishonesty in graded assignments include the possibility of failure in the course. Scholastic dishonesty in examinations will result in a grade of "F" on the examination and an "F" in the course. Students found guilty of scholastic dishonesty are subject to disciplinary action including dismissal from the program and possible dismissal from the College. A student dismissed for dishonesty is not eligible for readmission." (From the STC Student Handbook)

Developmental Studies Policy Statement: The College's Developmental Education Plan requires students who have not met the college-level placement standard on an approved assessment instrument in reading, writing, and/or mathematics to enroll in Developmental Studies courses including College Success. Failure to attend these required classes may result in the student's withdrawal from ALL college courses.

Equal Education Institution and Equal Employment Opportunity South Texas College is an equal education and equal employment opportunity/affirmative action employer. As an equal education institution and equal opportunity

employer, the College does not discriminate on the basis of race, color, national origin, religion, age, sex, sexual orientation, gender, gender identity, disability, genetic information, or veteran status. Discrimination is prohibited and the College will comply with all applicable College policies, and state and federal legislation. This policy extends to individuals seeking employment with and admission to the College.

**Title IX Statement:** Title IX of the Education Amendments of 1972 protects individuals from discrimination based on sex in any educational program or activity operated by recipients of federal financial assistance. Sexual harassment, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. More information on Title IX policy and procedures can be found at <http://www.southtexascollege.edu/about/notices/title-ix.html>. Questions regarding Title IX or concerns about accommodations, including complaints of sexual harassment, sexual assault, sexual violence, or other sexual misconduct should be directed to our Office of Student Rights and Responsibilities (formerly the Conflict Resolution Center) at 956-872-2180 or [crc@southtexascollege.edu](mailto:crc@southtexascollege.edu)

**Pregnant and Parenting Students:** South Texas College does not discriminate against any student on the basis of pregnancy, parenting or related conditions. Pregnant or parenting students seeking accommodations should contact the Office of Student Rights and Responsibilities (formerly the Conflict Resolution Center) immediately at 956-872-2180 or [crc@southtexascollege.edu](mailto:crc@southtexascollege.edu).

**Alternative Format Statement:** This document is available in an alternative format upon request by contacting the Biology Department secretary, building J, 3rd floor.

**ADA Statement:** Individuals with disabilities requiring assistance or access to receive services should contact disABILITY Support Services at ( 956 ) 872-2173.

**Veterans Statement:** The STC Office of Veterans Affairs provides support services to our military veterans and their dependents, and assists them in applying for and obtaining their educational benefits. Contact the Office of Veterans Affairs (Bldg. K2.602, K2.604) at 956-872-6723 for questions or to set an appointment.

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The syllabus / section outline / course requirements may be changed due to unforeseen circumstances to meet the needs of a particular class. The instructor therefore reserves the right to alter (add, delete, or revise) any items of the above. The student is responsible for taking note of any such changes and acting accordingly.