



NORTHWEST FLORIDA STATE COLLEGE

BSC1005 – General Biology – 4 credit hours Spring 2016

Professor: Dr. Summer Hayek

Office Hours: I am available 30 minutes before each class or by appointment.

Phone: 850-729-5376 (leave message with Deanna Simpson at Niceville campus)

Email: hayeks@nwfsc.edu

Final Exam: There is no cumulative final exam for this class. The fourth and final unit exam will take place on May 9th, 2016, from 9:00-10:50am.

Web Page: <https://d2l.nwfsc.edu/d2l/home>

Course Reference Number: 20194

Campus/Room: Fort Walton Beach Campus, Science Building (#6), Room 616

Class Days: Monday and Wednesday

Class Time: 9:00 -10:50am

Electronic Resources: <http://b.socrative.com/login/student/>

Course Description

From the college catalog:

(BSC 1005 – General Biology – 4 Credit Hours) The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

From the instructor:

BSC1005 offers an introduction to the fundamental principles of biology, including the biochemistry of life, genetics, evolution, and ecology. Each topic is presented with an emphasis on human relevance, including human anatomy and disease. Content will be presented using teamwork-based, hands-on critical thinking activities to introduce biology in a practical, real-world context. BSC1005 is not simply a "mini" version of a major's Biology course. The mission of this course is to promote biological literacy. You will leave this class with a greater awareness and understanding of contemporary issues in biology and with skills to solve problems and make decisions as you face science-related issues in the future.

Course Prerequisites

None

Course Materials

-Mader & Windelspecht, *Inquiry Into Life (14th addition)*, McGraw Hill (available from NWFSC bookstore)

-Wi-Fi-enabled device such as a cell phone, tablet, or laptop

-Class notes and handouts (available to view, download, and print from the D2L course website)

Student Learning Outcomes

By the end of this course, you will:

- Understand that biological processes are driven by chemical principles.

- Understand that life is composed of basic structural units that define the biological function of cells, organisms, and ecosystems.
- Explain how genetic information translates into organismal development and behavior and drives the diversity of life.
- Know that all living things are interconnected and interact with one another.
- Use the scientific method to assess the validity of scientific claims, both in published research and in the popular media.
- Use modeling and quantitative skills to address biological concepts.
- Work effectively in a collaborative team environment.
- Communicate science knowledge, both written and orally, with others.

Grading Procedures

Your final grade will be calculated from the following forms of assessment:

Assessment	Points	% of final grade
QUIZZES	200	20%
UNIT EXAMS	400	40%
GROUP LEARNING	400	40%
<i>In-class activities</i>	200	
<i>Group participation</i>	200	
	1000	100%

Grades will be assigned based on the percentage of total points accumulated:

- A** = 90 – 100%
- B** = 80 – 89%
- C** = 70 – 79%
- D** = 60 – 69%
- F** = ≤ 59%

- **Quizzes**

At the end of most class meetings, you will be given a short series of study questions related to the information covered in that lesson. At the start of the next class meeting, you will use your Wi-Fi-enabled device and the Socrative student response system to submit your answers. Your two lowest quiz scores will be dropped, and your final number of quiz points will be calculated from your average quiz performance throughout the semester. For example, if your average quiz score is an 80%, you will earn 160 of the possible 200 points.

- **Unit exams**

There will be 4 unit exams throughout the semester, each worth 100 points for a total unit exam score of 400 points. Each unit exam will include two parts: an open-book, take-home portion worth 50 points and a closed-book, in-class portion worth 50 points. The take-home exam for each unit will be posted on D2L at least one week prior to the due date and will be due the day of the in-class unit exam. You will work on the take-home portion of the exam with your assigned group members and will turn in a single copy of your answers; everyone in your group will receive the same score. You must complete the in-class exam by yourself.

- **Group learning**

This section of BSC1005 is designed around the concept of active learning, which occurs when students actively participate in lecture rather than passively listen while taking notes. Many scientific studies

have shown that active learning dramatically improves student interest, performance, and long-term knowledge retention. We will move beyond simply memorizing facts to integrate the concepts introduced within a practical, real-world context.

You will work with an assigned group to complete active learning activities during each class, including problem sets, case studies, model building, and review of the primary literature. Each group will turn in a copy of its work for grading. Your two lowest scores will be dropped, and your final number of in-class activity points will be calculated from your average in-class performance throughout the semester. For example, if your average in-class activity score is a 90%, you will earn 180 of the possible 200 points.

Group participation is an important part of this course. At the end of each unit, group members will use a teamwork rubric to anonymously grade the contribution of each individual in their group during that unit. Your final number of group participation points will be calculated from the average percentage grade you receive from your teammates. For example, if your average group participation score is an 85%, you will earn 170 of the possible 200 points.

Incomplete Grades

At the discretion of the instructor, an incomplete grade (“I”) may be awarded if you are unable to finish the required work because of unforeseen extenuating circumstances such as illness or TDY assignment. To receive an “I” grade, you must have successfully completed a significant portion of the required coursework and be able to finish the remaining work without attending class. An “I” grade will automatically convert to a grade of “F” if you do not complete the remainder of the coursework by the established deadline.

Make-up and Late Work

Excused absences require official documentation and include serious illness or emergency, official military orders, and college-approved business. If you have to miss class or an exam for an excused absence, you must inform the instructor ahead of time. The exception to this policy is for unforeseen illness or emergency. In such cases, you must provide documented evidence of your absence as soon as possible and before any make-up work will be scheduled. If you miss class for an excused absence, you will not be responsible for the quiz or in-class work performed that day. However, you are still responsible for learning the material covered during the missed class for future quizzes and exams. If you miss an exam for an excused absence, you may schedule a make-up exam within one week of the original exam date.

One unexcused make-up exam is allowed per student, provided the instructor is informed of the absence before the exam. All make-up exams for unexcused absences will take place on the last day of class, following completion of the fourth unit exam. Missed quizzes and in-class group work will not be excused in these cases.

Late work will be docked 10% each day (including weekends) and will not be accepted after the third late day.

Class Attendance

You are expected to attend class regularly. You are allowed two unexcused absences without affecting your quiz points or in-class activity grade. Remember that tardiness may result in a lower grade, as graded quizzes are given at the start of class. Students who stop attending class or are not able to pass the course due to attendance expectations may receive a failing grade of “FA.” An “FA” grade is a failing grade in GPA calculations and may impact the receipt of federal aid in subsequent courses.

Course Communication, Website, and Online Tools

All class communication will be conducted in person during class or office hours, through the D2L course website, or through NWFSC email. All students should activate their NWFSC email accounts, as personal email accounts cannot be used for correspondence.

Class business will be managed electronically via NWFSC's D2L system. You will use D2L to access and print (if desired) all handouts, including learning objectives, class notes, study questions, and take-home exams. You will also be able to view your grades for individual assignments as well as your cumulative grade-to-date via D2L. You will need a NWFSC username and password to access D2L; it is your responsibility to ensure that you have access and understand how to use the site.

This class will use the Socrative online student response system for quizzes. You can access Socrative by downloading the free "Socrative Student" app on your mobile device or through the student portal on the Socrative website. Our course-specific room name is "HayekBioS16".

Cell Phone/Electronic Devices

Electronic devices (laptops, tablets, phones, etc.) are permitted during class for quiz questions and note taking but must not distract from learning. Courtesy to the professor and other students requires that phones be on vibrate or silent mode during class. No student should initiate conversations, including texts, during class activities. Use of electronic devices during exams may constitute grounds for disciplinary action; such devices must be completely out of sight during these times. Where emergency or employment situations require access to electronic communication, arrangements may be made in advance with the instructor.

Emergency College Closure

The schedule, requirements, and procedures for this course are subject to change due to unusual or extraordinary circumstances. If class is cancelled or the college closes for any reason, any missed assignments or exams will be postponed, and a revised schedule will be provided by email or at the next class meeting. If changes to graded activities are required, students will not be penalized as a result of the adjustments but will be responsible for meeting any revised deadlines and standards.

Children in the Classroom

As a courtesy to other students and the learning process, students may not bring children with them to class sessions. Health and safety concerns prohibit children from accompanying adult students in any lab, shop, office, or classroom or other college facility where potential hazards exist. If a child-related emergency means you must miss class, contact the instructor as soon as possible to determine your options. The full "Children on Campus" policy statement appears in the College Catalog.

Student Rights, Responsibilities, and Academic Integrity

Students are responsible for adherence to all college policies and procedures, including those related to academic freedom, cheating, classroom conduct, computer/network/e-mail use and other items included in the *Northwest Florida State College Catalog and Student Handbook*. Students should be familiar with the rights and responsibilities detailed in the current *Northwest Florida State College Catalog and Student Handbook*. Plagiarism, cheating, or any other form of academic dishonesty is a serious breach of student responsibilities and may trigger consequences that range from a failing grade to formal disciplinary action.

Learning Resources

The Academic Success Center (ASC) is located in the Activities Center on the Niceville Campus. The ASC provides free learning support services such as tutoring, ESOL, and writing assistance for all NWFSC students. Individual and group tutoring is available in a wide range of subjects on a walk-in-basis and by appointment. For more information, call the Academic Success Center at (850) 729-5389 or visit their website.

Reading to Learn (R2L) is a project of Northwest Florida State College designed to support students' learning through direct instruction of reading strategies. Students may access R2L through its website.

Math Labs are located in the Math Building L Room L-131 on the Niceville Campus, in Building 7 Room 702 on the Fort Walton Beach Campus, and Room 131 at the Crestview Center. The math labs are open to all students and provide free walk-in tutoring for all mathematics courses. For lab hours, students may call the Math Department at (850) 729-5377 or visit their website.

Smarthinking is online, real-time tutoring offered free to students, who may access this service via RaiderNet.

There are numerous open **computer labs** throughout the Northwest Florida State College campuses. Students may access the website for lab locations and hours.

Testing Centers administer college admissions tests, placement tests, proctored exams, ACT/SAT, GED, CLEP, and DSST (formerly known as DAN TES). General information concerning tests and hours may be accessed on the Testing Center website. Makeup exams may be taken in the Testing Center, depending upon the individual situation.

The **library** is a comprehensive learning resource center (LRC) providing information in print, digital, and multimedia formats to support the educational objectives of the College. In addition to in-house materials, online services and resources can be accessed through the LRC website. Library hours are posted each semester at the building entrance and on the LRC website.

Assistance for Military and Veterans

Northwest Florida State College supports our military and veterans students. You may contact NWFSC Eglin AFB Education Services Building at 850-200-4180 or NWFSC Hurlburt Center Educational Services Building at 850-200-4190 or visit NWFSC's military page:

www.nwfsc.edu/Students/Enrollment/Admissions/Military.cfm

Students with Disabilities

Northwest Florida State College supports an inclusive learning environment for all students. If you have a disability for which accommodations may be appropriate to assist you in this class, please contact the Office of Disability Support Services on the Niceville Campus, or call 850-729-6079 (TDD 1-800-955-8771 or Voice 1-800-955-8770).

Course Outline

*This outline is subject to change at the instructor's discretion.

WEEK	MEETING	LESSON TOPICS AND EXAM DATES
1	Jan. 11 th Class #1	Class overview & syllabus Biochemistry of Life lesson #1 <i>What is life; Scientific method</i>
	Jan. 13 th Class #2	Biochemistry of Life lesson #2 <i>Atomic structure & bonding</i>
2	Jan. 18 th	MARTIN LUTHER KING JR. DAY – NO CLASS
	Jan. 20 th Class #3	Biochemistry of Life lesson #3 <i>Water & pH</i>
3	Jan. 25 th Class #4	Biochemistry of Life lesson #4 <i>Molecules of life; Energy transfer & enzymes</i>
	Jan. 27 th Class #5	Biochemistry of Life lesson #5 <i>Cell structure; Membrane transport</i>
4	Feb. 1 st Class #6	Biochemistry of Life lesson #6 <i>Photosynthesis</i>
	Feb. 3 rd Class #7	Biochemistry of Life lesson #7 <i>Cellular respiration; Diseases of metabolism</i>
5	Feb. 8 th Class #8	Biochemistry of Life take-home exam due Biochemistry of Life in-class exam
	Feb. 10 th Class #9	Genetics & Inheritance lesson #1 <i>Gene expression</i>
6	Feb. 15 th Class #10	Genetics & Inheritance lesson #2 <i>DNA replication; Somatic cell division (mitosis)</i>
	Feb. 17 th Class #11	Genetics & Inheritance lesson #3 <i>Cell cycle control; Cancer</i>
7	Feb. 22 nd Class #12	Genetics & Inheritance lesson #4 <i>Sex cell division (meiosis)</i>
	Feb. 24 th Class #13	Genetics & Inheritance lesson #5 <i>Mendelian patterns of inheritance</i>
8	Feb. 29 th Class #14	Genetics & Inheritance lesson #6 <i>Complex patterns of inheritance</i>
	Mar. 2 nd Class #15	Genetics & Inheritance lesson #7 <i>Biotechnology; Forensics</i>
9	Mar. 7 th Class #16	Genetics & Inheritance lesson #8 <i>Stem cells</i>
	Mar. 9 th Class #17	Genetics & Inheritance take-home exam due Genetics & Inheritance in-class exam
10	Mar. 14 th Class #18	Evolution & Diversity lesson #1 <i>Evolution theories, misconceptions, and evidence</i>
	Mar. 16 th Class #19	Evolution & Diversity lesson #2 <i>Agents of evolution; Hardy-Weinberg equilibrium</i>
11	Mar. 21 st	SPRING BREAK – NO CLASS
	Mar. 23 rd	SPRING BREAK – NO CLASS
12	Mar. 28 th Class #20	Evolution & Diversity lesson #3 <i>Macroevolution; Systematics & phylogeny</i>
	Mar. 30 th Class #21	Evolution & Diversity lesson #4 <i>Origins of life on Earth</i>

13	Apr. 4 th Class #22	Evolution & Diversity lesson #5 <i>Prokaryotic diversity</i>
	Apr. 6 th Class #23	Evolution & Diversity lesson #6 <i>Endosymbiosis; Eukaryotic diversity</i>
14	Apr. 11 th Class #24	Evolution & Diversity lesson #7 <i>Human evolution</i>
	Apr. 13 th Class #25	Evolution & Diversity take-home exam due Evolution & Diversity in-class exam
15	Apr. 18 th Class #26	Ecology & Sustainability lesson #1 <i>Ecological organization</i>
	Apr. 20 th Class #27	Ecology & Sustainability lesson #2 <i>Population growth; Predator-prey cycles</i>
16	Apr. 25 th Class #28	Ecology & Sustainability lesson #3 <i>Carbon cycle & global warming</i>
	Apr. 27 th Class #29	Ecology & Sustainability lesson #4 <i>Biogeochemical cycles; Biodiversity</i>
17	May 2 nd Class #30	Ecology & Sustainability lesson #5 <i>Sustainable living</i>
18	May 9 th 9-10:50am	Ecology & Sustainability take-home exam due Ecology & Sustainability in-class exam

- **Important dates**

Last day to add or drop classes with a refund:

January 19th, 2016

Last day to withdraw or change to "Audit":

March 30th, 2016