



SCSU / CRHS



Biology 102: The Living World & Human Biology (3 credits)

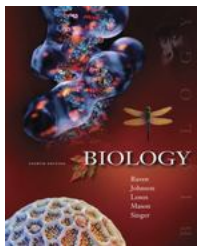
BIOL 103 – Human Biology (3 credits)

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Text: Biology, eighth edition; Authors, Raven, Johnson, Losos, Mason, Singer; ISBN: 0073227390

Course Topics:

1. Scientific Methods
2. Evolution (microevolution and macroevolution)
3. Requirements for evolution
4. Natural Selection
5. Speciation
6. Adaptation
7. Geographical differentiation
8. Phylogenetic reconstruction
9. Genetics: DNA, genes, proteins, mutation, genetic drift, gene flow, non-random mating
10. Homology and Deep Homology
11. Geologic Time
12. Fossils
13. Biological Diversity
14. Disturbances/Succession
15. Species Formation and Definition
16. Classification (Linnaean vs Phylogenetic)
17. Niche
18. Adaptive Radiation
19. Community and ecosystems Assembly Rules
20. Keystone species
21. Ecological displacement/release
22. Symbiosis
23. Earth cycles
24. Population and population ecology
25. Conservation and Restoration

BIOL 102

Purpose of the Senior to Sophomore Course: Grade Level: 11-12; 3 Credits

The purpose of this course as it pertains to Senior to Sophomore is to:

- a. Offer an introductory biology course that is taught at colleges and universities. It will give you a foundation from which to prepare for your college experience as well as meet a portion of liberal arts Goal 3.
- b. It will give you a minimum level knowledge of Ecology and Evolution along with their role in society.

Campus Course Description: Course No: Biology 102: The Living World; 3 Credit Lab Course

The study of factors regulating diversity of the species, population, ecosystem, and biosphere levels. This course satisfies part of the Liberal Arts Goal 3: Natural Science and Goal 10: People and the Environment as stated below:

Goal 3:

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students, laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Goal 10:

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, and religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

BIOL 103

Read this document carefully! There is a lot of necessary information for you to understand, particularly at the beginning of the semester.

COURSE OBJECTIVES

During this course, students will learn about the scientific process through the study of the human body. We will study the function of the human body systems and how they work together to form overall health. There will also be opportunities to learn how the body components are affected by environmental hazards such as; drugs, steroids, and environmental toxins.

COURSE LEARNING OUTCOMES

Biology 103 satisfies Goal 3 of the Liberal Arts requirements; Natural Science

1. Demonstrate understanding of scientific theories
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, as questions about the evidence presented, and make informed judgment about science-related topics and policies.

COURSE FORMAT

Your attendance is expected to all scheduled classes. In addition, it is important that you understand that having access to a computer or having a personal computer is essential to the course.

1. Each topic has textbook chapters associated with it. Taking notes to understand this material will benefit you.
2. Tests are a large percent of your grade. Take them seriously well before the day of the test.
3. There may also be “Pop Quizzes” throughout the semester. You must be present during the time of the quiz to get credit. Exceptions are only made with proper significant and documented absences.
4. In-Class Assignments are those which you will complete during class time with the instructor. If you need to be absent prior email notification and written documentation are needed to obtain the points for the assignment.

Late Assignments

To best support their learning, students should complete assignments by the due date.

If a student is absent on the day an assignment is due, they have two days to complete the missed assignment.

All assignments “expire” two weeks after the original due date. This means that students must complete all missed assignments, missed assessments, and any retake assessments within the two-week window that begins on the original due date. No work will be accepted after the two-week window closes.

Any missed or retake assessments can be done in class or before/after school. If the missed or retake assessment is completed during class, the student is responsible for completing any classwork or taking notes that were missed during that class period.

Policy modifications may be made for students with IEP or 504 plans.

Generally, there will be no reminders to take quizzes and exams (except at the beginning of the semester), and significant documentation will be needed if you are to miss any assignments, labs, quizzes, or exams. That said, it is understandable that this course is not the only thing going on in your life, and

accommodations can be arranged with both documentation and advance notice of any upcoming absences. Always feel free to email with any questions.

ABSENCES

There are no makeups for lecture exams without a significant documented excuse. A missed lecture exam can only be made up given a documented excuse (e.g., doctor's notification). In-class activities and discussions are assessed towards the participation and assignments scores and cannot be made up, so missing class often will negatively impact your grade. If you know you will be absent, please email in advance prior to your absence to ensure that you will not miss any significant assignments/activities.

COVID-19 STATEMENT

St. Cloud State University (SCSU), in coordination with state and local health departments, is closely monitoring the spread of COVID-19 and following the State of Minnesota's laws and guidelines to keep everyone safe.

SAFETY

****Please do not come to class if you are feeling unwell.**** If you have a fever, sore throat, or cough, please stay home, seek medical advice, and focus on getting better.

You'll be expected to work collaboratively to clean up your work areas at the end of each class and when we have labs; I'll provide all the necessary cleaning materials (wipes, sponges, paper towels, etc.) for you to use, but I'll need your help to keep our workspaces clean. This will include all equipment, seats, tables, and countertops that are touched by you and your classmates.

STUDENTS WITH DISABILITIES POLICY

It is St. Cloud State University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. If you have a documented disability that requires accommodation, notify Stephanie Peterson, or your university supervisor within the first week of the semester.

ACADEMIC DISHONESTY

As noted in the *Becoming a Reflective Teacher*, “Academic dishonesty includes, but is not limited to, cheating, plagiarism, misrepresentation of student status, and resume falsification. Plagiarism includes, but is not limited to, the use by paraphrase or direct quotation, the published or unpublished work of another person without full and clear acknowledgment; unacknowledged use of materials prepared by another person or agency engaged in selling or otherwise providing term papers or other academic materials (SCSU Code of Conduct).”

ACADEMIC HONESTY POLICY – SCSU’S STUDENT CODE OF CONDUCT:

<https://www.stcloudstate.edu/studenthandbook/code/default.aspx>

Statement on Student Code of Conduct from St. Cloud State University ([Full Code Available Here](#)):

St. Cloud State University has developed regulations and policies pertaining to students, student organizations, and clubs. It is your responsibility as a student to understand and adhere to code of conduct of the university. Violations of the code, such as academic misconduct, dishonesty, and cheating will not be tolerated. **In particular, this class maintains a strict zero-tolerance policy regarding cheating and plagiarism. If you are caught cheating on exams/quizzes or plagiarizing the work of others, you will receive an automatic zero for the question/assignment.**

COUNSELING AND PSYCHOLOGICAL SERVICES

If you are feeling stressed, or just feel like you need to talk through some things, I encourage you to schedule an appointment or stop into the office. If you would like someone to walk over with you, please ask me!

<https://www.stcloudstate.edu/counseling/> or call 320-308-3171

Location: Eastman Hall

Hours

8:00 a.m. - 4:30 p.m. Monday-Friday during the academic year
7:30 a.m. - 4:00 p.m. Monday-Friday during the summer

After hours use any of these crisis resources:

Local crisis line at 320.253.5555 or 800.635.8008 National Suicide Prevention Lifeline or call 1.800.273.8255 ULifeline: 1.800.273.TALK (8255) or Text "START" to 741-741

FOOD AND HOUSING INSECURITY

Any student who faces challenges securing their food or housing and believes that these needs may affect their academic performance in this course, is urged to contact the Case Manager housed in CAPS (Counseling and Psychological Services) at 320-308-3171 for possible assistance. Feel free to talk to the professor of this course for assistance in accessing this resource if needed.

LGBTQIA STATEMENT

The LGBT Resource Center at St. Cloud State University promotes full inclusion of LGBT+ folk and allies and works to dismantle prejudice, discrimination, and oppression toward and within the LGBT+ community. Visit the LGBT Resource Center for more information regarding the offered support services at St. Cloud State University.

SEXUAL AND RELATIONSHIP VIOLENCE

In the event that you choose to write or speak about having survived sexualized violence, including rape, sexual assault, relationship violence, or stalking and specify that this violence occurred while you were an SCSU student, federal and state education laws require that, as your instructor, I notify the Title IX officer. They (or their designee), will contact you to let you know about accommodations and support services at SCSU and possibilities for holding accountable the person who harmed you.

If you do not want the Title IX Officer notified, instead of disclosing this information to your instructor, you can speak confidentially with the following people on campus and in the community. They can connect you with support services and discuss your options.

SCSU's Gender Violence Prevention Program: (320) 308 - 4958

Central MN Sexual Assault Center (Community program) (320) 251 - 4357

(800) 237 - 5090 (24-hour hotline)

If you are a survivor or someone concerned about a survivor and need immediate information on what to do, please go to

<http://www.stcloudstate.edu/womenscenter/>

SCSU COUNSELING AND PSYCHOLOGICAL SERVICES

<https://www.stcloudstate.edu/counseling/>

Open Monday-Friday 8-4:30pm (320) 308 - 3171

SCSU HEALTH SERVICES

Open Monday-Friday 8-4:30pm (320) 308 – 3191

If you are a survivor or someone concerned about a survivor and need immediate information on what to do, please go to

<http://www.stcloudstate.edu/womenscenter/> or

<https://www.stcloudstate.edu/oea/support.aspx>

STUDENT ACCESSIBILITY SERVICES

<https://www.stcloudstate.edu/sas/faculty-staff/default.aspx> An affirmative action, equal opportunity employer and educator. St. Cloud State University is committed to a policy of nondiscrimination in employment and education opportunity and works to provide reasonable accommodations for all persons with disabilities. Accommodations are provided on an individualized, as-needed basis, determined through appropriate documentation of need. Please contact Student Accessibility Services (SAS), sas@stcloudstate.edu or 320-308-4080, Centennial Hall 202, to meet and discuss reasonable and appropriate accommodations. The accommodations authorized in your plan should be discussed with your instructor. All discussions will remain confidential.

Academic Integrity: (From the SCSU Student Handbook)

Academic dishonesty, including but not limited to, cheating, plagiarism, misrepresentation of student status, and resume falsification. Plagiarism includes, but is not limited to, the use by paraphrase or direct quotation, the published or unpublished work of another person without full and clear acknowledgment; unacknowledged use of materials prepared by another person or agency engaged in selling or otherwise providing term papers or other academic materials; and commercialization, sale or distribution of class notes without the instructor's' permission.

The Professor on Campus and High School Instructor will decide upon consequences to academic dishonesty. Consequences may include, but not limited to, a zero on the assignment and/or removal from the class resulting in a failing grade.

Workload:

You are earning college credits; there is a lot of work involved in mastering the material that must be covered. The amount of time you will need to spend out of class will depend on how organized and disciplined you are, how good of a support system you have, what other courses you are taking, and your personal activities. A good rule of thumb is three hours per week per credit hour. You are in a three-credit course so you should be thinking that you need to put in about nine - fifteen hours a week to do well in this course. It is not impossible, college students do it all the time; but you may find you need to cut back on some things. Do not expect there to be no work on weekends or over winter or spring break. We will need this time and you will be given learning activities over these times that you are expected to have done when you come back. If a student has performed lower than they aimed for on a unit test, **they have 1 week to take the retest. In order to be eligible for retest, students must complete a short writing assignment including a reflection on their performance.**

Learning:

Many high school students don't yet understand how they best learn. Brain research shows that when you are learning a subject, your brain is growing new synapses between the nerve cells associated with that memory. The more synapses you can connect to a memory, the easier it is to retrieve it. These connections can be made in a number of different ways: hearing the material, rewriting things, drawing concepts, placing concepts spatially on paper or in your mind, association of concepts to other things you are familiar with, and walking around while studying are ways to create these synapses. However, if the synapses are not reinforced regularly, these synapses will disappear.

This is why it is important for you to find ways to study on your own. Some suggestions are to Google the topic online and add the word, 'worksheets' to it. You will come across a large number of possible sites that will have worksheets either online or that you can download. You will run across a lot of sites that ask you to join, just go on to the next one. Another word to add instead of worksheets is tutorial. Often you will end up with online sites that are college level. Work through these to practice the concept you are studying. If you don't understand something, write it down and bring it to me so I can try to help.

But studying alone seldom works. You need to develop a working team, possibly two. You must learn how to work as a team in the classroom; the major labs are done as a team and the report is a team report. You may also need to form a network of friends that you can study with after school. This group needs to meet regularly if you wish to make it a successful group. One good place to meet is in the room. I'm in school by 6:30 every day and if you are studying in my room and I hear a misconception stated or just a mistaken notion on how a concept works, I can correct it. I'm also there to answer any questions you might have. I cannot stress how important this group is. The successful students have this support system and use it.