

Syllabus

Human Biology

1171-FIU01-BSC-2023-SECRVC-11990

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General Information

Professor Information



Instructor:
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By Appointment
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N/A

If you need to reach me, first call my office. If I do not answer, then email me (FIU email). Do not leave a voice-mail message.

Course Description And Purpose

This course assumes prior scientific knowledge of biology at the High School level, and thus serves for non-biology major students who wish to satisfy the Life Science

requirement (lecture and separate lab) within the University Core Curriculum Natural Science category. BSC2023 may also serve as a prerequisite course for specific majors, such as Psychology. The primary emphasis will be on the structure and function of the human organism including basic concepts, principles, and processes in human biology; chemistry, cells, genetics, reproduction, disease, evolution, and the anatomy and function of major organ systems in humans.

Natural Sciences

Our technologically dependent world requires an understanding of the processes that led us here. Learning the basic concepts and ideas of scientific fields provides contact with not just those fields but with how science is done. In these courses, students study the scientific method through examination of the foundational theories of modern scientific thought. Students apply scientific principles and theories to problem solving, evaluate scientific statements, and incorporate new information within the context of what is already known.

Emphasizing the essential connection between theory and experiment, the hands-on laboratory experience found in the BSC2023 Lab provides the context for testing scientific theories. Students will be able to describe the scientific method through examination of the foundational theories of modern scientific thought.

Course Objectives

Students will be able to:

- relate basic chemical structures to physical structures and processes of cells;
- identify the structures and functions of the systems of the human body;
- describe how the human body functions as a whole through the interactions of systems;
- recognize DNA as the basis for genetic control of life, growth and reproduction;
- critically discuss current news stories regarding human health examining the human biology involved and addressing controversies; and
- explore concepts using the scientific method.

Important Information

Policies

Please review the [FIU's Policies webpage](#). The policies webpage contains essential information regarding guidelines relevant to all courses at FIU, as well as additional information about acceptable netiquette for online courses.

While the on-line format of this course offers the student a degree of flexibility in when they participate in the work, **it requires self-discipline to stay on track through the semester.** You will receive Announcement emails (sent to email you have registered

with FIU) indicating where you should be (ideally) in the work and how much you should have completed by that time and each student is responsible for **keeping up with their work**. These Announcements are also seen on your My Blackboard page.

This course is designed in a format that divides the semester's work (12 Modules) in half, with Modules 1-6 open during the first half of the semester and then Modules 7-12 open during the second half of the semester. This results in a self-governed work load of ~ one Module per week. Each Module contains 1-2 Chapters and each Chapter has its own Quiz.

Exams 1 & 2 are like 2 Midterm Exams, with Exam 1 covering the material in Modules 1-6 and Exam 2 the material in Modules 7-12. **If you have a smart-phone, I suggest you now place in your Calendar app the closing days and time (always 9AM) for the quizzes and Exams and also include some alerts to remind you of these closings.**

January 9	Spring 2017 starts (all material opens & closes 9AM throughout semester) - Module 1 opens to familiarize - Student/Instructor Quiz opens
January 13 February 24	Modules 1-6 Quizzes open Modules 1-6 Quizzes close at 9AM 9 quizzes total
February 24 March 3	Exam 1 opens at 9AM Exam 1 closes at 9AM
March 3 April 14	Modules 7-12 open Modules 7-12 close at 9AM 7 quizzes total
April 14 April 21	Exam 2 opens at 9AM Exam 2 closes at 9AM

The suggested work pattern is to do at least one Module per week noting that some Modules have more than one Chapter, therefore **more** than one Quiz. If you choose to wait until the last few days or hours to complete your work, you are taking the chance of having something preventing you from completing the work, much to your unhappiness, since the work will **not** be reopened.

If you have a Quiz or Exam scheduling conflict, let me know in advance. While I will **not** customize the course to fit your schedule, I may be able to open a Quiz or Exam early. **YOU MUST NOTIFY ME IN ADVANCE OF A CONFLICT, NOT AFTER**

THE EXAM HAS CLOSED! You must provide specific information on why you need a schedule change and the Instructor has the right to either grant or deny the change based on the supporting information. Baring hurricanes and other natural disasters, there will be **no extensions** on the closing dates for the **Chapter quizzes or Exam 1 and Exam 2**. Please refer to the opening and closing dates seen below. Each student is allowed to take a quiz or Exam 2 times. **But if they do take it two times, they receive the average of the two scores.**

If you have an emergency that prevents you from accessing the material (minimum total time period: the last 3 weeks of the ~6 weeks for quizzes and the complete open period for exams), the Instructor **MUST** be contacted (at least 2 weeks for Quizzes and 4 days for Exams) before the closing of the material. These circumstances **must** be supported with original documentation such as the official hospital records showing day of admittance and release or police records showing day or arrest and release.

If you choose to wait till the last few days (or hours) to do the work and something prevents you from completing the work (including an emergency), the material WILL NOT be reopened. By making the choice to wait, you are also accepting the possibility that (Murphy's Law) "If anything can go wrong, it will" and always at the worst possible time.

Technical Requirements & Skills

One of the greatest barriers to taking an online course is a lack of basic computer literacy. By computer literacy we mean being able to manage and organize computer files efficiently, and learning to use your computer's operating system and software quickly and easily. Keep in mind that this is not a computer literacy course; but students enrolled in online courses are expected to have moderate proficiency using a computer. Please go to the "[What's Required](#)" webpage to find out more information on this subject.

Please visit our [Technical Requirements](#) webpage for additional information.

Accessibility And Accommodation

The Disability Resource Center collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive and sustainable. The DRC provides FIU students with disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact the Center at 305-348-3532 or visit them at the Graham Center GC 190.

Please visit our [ADA Compliance](#) webpage for information about accessibility involving the tools used in this course.

Please visit [Blackboard's Commitment Accessibility](#) webpage for more information.

For additional assistance please contact FIU's [Disability Resource Center](#).

Academic Misconduct Statement

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Academic Misconduct includes: **Cheating** – The unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not. **Plagiarism** – The use and appropriation of another's work without any indication of the source and the representation of such work as the student's own. Any student who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, is responsible for plagiarism.

Learn more about the [academic integrity policies and procedures](#) as well as [student resources](#) that can help you prepare for a successful semester.

Course Prerequisites

No prerequisites.

Proctored Exam Policy

There will be no Proctored Exams.

Textbook



Textbook Title

Author

Publisher, Edition, Year

ISBN-10

ISBN-13

You may purchase your textbook online at the [FIU Bookstore](#).

Notes

No purchased textbook is required. All course related material is included in Blackboard or through included web links.

Expectations Of This Course

This is an online course, which means most (if not all) of the course work will be conducted online. Expectations for performance in an online course are the same for a traditional course. In fact, online courses require a degree of self-motivation, self-discipline, and technology skills which can make these courses more demanding for some students.

Course Detail

Course Communication

Communication in this course will take place via **internal messages and announcements**. You may also email me at my regular FIU email, walterm@fiu.edu. **But be sure to put your name and course number in the subject line indicating you are an online student.**

The course message feature is a private, internal Blackboard only communication system. Users must log on to the Blackboard system to send/receive/read messages. There are no notifications in Blackboard to inform users when a new message has been received; therefore, it is recommended that students check their messages routinely to ensure up-to-date communication.

The Announcements are messages posted on your My Course page and sent to your registered email account. This is typically your FIU account email. If you do not check

your registered email account, you will still be responsible for checking for announcements on the Course Blackboard website. The announcement messages are very helpful because I use this tool to inform the whole class about course issues such as material closing or any technology problems students have encountered. I will be sending out an announcement the first day of class. If you do not receive it, contact Technology Support (through link on left-hand menu) and ask them to confirm your email account.

I receive many messages throughout the semester. For some, I respond individually, but to others I will respond as a message to the whole class because I view it as an issue that everyone needs to know about. And for some messages, I do not respond at all. Some of these are the messages that request I reopen material that has closed. Since the course guidelines are very clear on this matter, and since all students will have taken the Student-Instructor quiz covering these guidelines, there is no reason for me to tell the student what they already know: the material will not be reopened.

I typically log in to the course 3 times a week, so you can expect to receive an answer to any messages within 72 hours. If it is an emergency, send an email to my regular FIU email account.

Visit our [Writing Resources webpage](#) for more information on professional writing and technical communication skills

EXPECTATIONS FOR COURSE

This is an online course, which means most (if not all) of the course work will be conducted online. Expectations for performance in an online course are the same for a traditional course. In fact, online courses require a degree of self-motivation, self-discipline, and technology skills which can make these courses more demanding for some students.

Students are expected to:

- **Review the 'How to get Started' information** located in the Course Content.
- **Introduce yourself to the class** during the first week by posting a self-introduction in the appropriate discussion forum. This posting **will NOT** count towards the required 8 Article postings
- **Take the practice quiz** to ensure that your computer is compatible with Blackboard
- **Take Student/Instructor Quiz as many times as necessary to earn a perfect score. This Quiz acts to certify your knowledge of the course rules and deadlines and your acceptance of said rules. Students will not have access to Exam 1 until the Quiz is taken and a perfect score earned.**
- **Interact** online with Instructor/s and peers.

- **Review** and follow the course calendar for due dates and times. **All material in this specific course opens and closes at 9AM.** If you have a smart phone, put those dates and times with alerts in your phone so you do not miss them.
- Log in to the course **as many times as necessary to keep up with the work and complete scored material by the closing date and time**
- Regularly check your registered FIU email and Blackboard page for course Announcements

The instructor will:

- Log in to the course at least **3 times** per week
- Respond to **emails or messages** within **72 hours**

Discussion Forums

Keep in mind that your discussion forum postings will likely be seen by other members of the course. Care should be taken when determining what to post.

Discussion Forum will be used for class discussions and other postings of general interest that are directly related to the course. Keep in mind that forum discussions are public, and care should be taken when determining what to post.

• Articles taken primarily from the New York Times are included in the Course Modules. Read the posted Articles. During the first half of the semester: Choose 2 of the Articles and post an original comment on the Article. Essentially, you will be entering in a conversation with the rest of the class about what you thought of the Article, what you found interesting, did you agree or disagree with the Article's points, etc. After students have made these original postings, you will choose 2 of other student's original postings and you will post a response to these 2 original postings. By the end of the first half of the semester, you will have posted at least 4 times...2 original postings and 2 responses to other student's postings. You will duplicate this process during the second half of the semester so that at the end of the semester you will have a total of at least 8 postings.

Discussion Forum Expectations:

- Provide clear guidance on the expectations and requirements
 1. The approximate length of a response is as long as is necessary for you to say what you wished to say.
 2. Read the articles included in each Module. Choose which ones interest you most. During each half of the semester, you will post an original comment about two of the articles you read (2 postings). Do not recap the Article. You will also post 2 responses to other student's original comments. Think of it as engaging in a conversation with another student. (4 postings (2 originals and 2 responses) during each half, 8 postings total).

- The Articles for each half of the semester will be available from the opening of the quizzes to the closing of the exams.
- I will be monitoring the postings during the semester and will assign the 5% of the grade at the end of the semester. **This 5% is an all or nothing score.** Students who do not make the required 8 postings will receive NO points. So even if you post 7 times, you will receive NO points since it would be viewed as incomplete.

Assessments

In order to mitigate any issues with your computer and online assessments, it is very important that you take the "Practice Quiz" from each computer you will be using to take your graded quizzes and exams. It is your responsibility to make sure your computer meets the minimum [hardware requirements](#).

Assessments in this course are not compatible with mobile devices and should not be taken through a mobile phone or a tablet. If you need further assistance please contact [FIU Online Support Services](#).

In order to mitigate any issues with your computer and online assessments, it is very important that you take the "Practice Quiz" from each computer you will be using to take your graded quizzes and exams. It is your responsibility to make sure your computer meets the minimum [hardware requirements](#).

Assessments in this course are not compatible with mobile devices and should not be taken through a mobile phone or tablet. If you need further assistance please contact [FIU Online Support Services](#).

Quiz and Exam Expectations:

- Please note that the semester is divided into two blocks of time.
- 16 Quizzes; 2 Exams

January 13 – February 24	9 Quizzes
February 24 – March 3	Exam 1
March 3 – April 14	7 Quizzes
April 14 – April 21	Exam 2

- Quiz duration: 30 minutes Exam duration: 1 hour

- Quiz and Exam links are seen on the Assessments page
- Details for results:
 1. Students will be able to see the results immediately after Quiz or Exam.
 2. Students will they be able to see the total earned score only.
 3. Students may take each Quiz or Exam 2 times. But if you choose to do so, you will receive the **average** of the two scores. Questions on the second attempt may be different from the first attempt.
- **Each student will be required to enter into a "course contract" with the Instructor by taking the INSTRUCTOR-STUDENT CONTRACT QUIZ found on the Course Content page and under Assessments. This contract specifies that you have read the Syllabus and therefore understand the time frame for completion of the Exams, Quizzes, and Discussion Postings. You do not receive points for this quiz. But completing it and earning a perfect score is a requirement for accessing Exam 1. You may take the quiz as many times as is required for you to earn a perfect score.**

Assignments

No Assignments

Adobe Connect Pro Meeting

No Adobe Connect Pro Meeting

Grading

The Instructor has no specific control over what is seen in the student's "My Grades". It shows students what scores have been earned only on completed work. **It does NOT show missing work.** So it is each student's responsibility to keep a record of assigned work (as seen in the Syllabus) and use that list to check the My Grades information, thereby confirming that the student has completed all of the necessary work. **It is NOT Blackboard's responsibility to inform students that they have not completed specific quizzes or exams.** Any figures shown on My Grades, such as 158 (earned points)/ 340 (total points) will NOT be used to calculate your grades since it does not reflect the weights seen below or missing work.

Just about every semester, I have students who contact me after the closing of quizzes or exams and tell me that they did the work but the scores are not showing up on their MyGrades. The Blackboard program has very comprehensive tracking applications built into it so we are able to determine every keystroke a student makes while logged on to

the Blackboard shell. **So here is a VERY strong suggestion...when you have determined that yes, you have completed all of the assigned work (by comparing the syllabus to your MyGrades and confirming you have a score for each piece of work), take a screenshot of your MyGrades page (being sure your name and number is included) and save it. That way, you have supporting evidence if there is a situation after the material closes.**

Course Requirements	Number of Items	Points for Each	Total Points Available	Weight	
Quizzes	16	10	160	45%	
Exams	2	50	100	50%	
Discussion/Participation	8			5%	
Total				100%	
Letter	Range (%)	Letter	Range (%)	Letter	Range (%)
A	93 or above	B	83 - 86	C	70 - 76
A-	90 - 92	B-	80 - 82	D	60 - 69
B+	87 - 89	C+	77 - 79	F	59 or less

Course Calendar

Weekly Schedule

COURSE CALENDAR WEEKLY SCHEDULE

Date	Tasks
January 9	Welcome to Human Biology - Read information on Homepage and Syllabus and familiarize yourself with the Blackboard Learn9 online course structure by looking at Module 1 (quizzes will not open until August 26). - Take Student-Instructor Quiz (You may take this as many times as is necessary to earn a perfect score of 15. While this score will not be part of your grade, Exam 1 (February 24 – March 3) will not be available for you until the perfect score is earned.)
1st Quiz Period January 13 – February 24	Chapter quizzes in Modules 1-6 (9 total) are located in each Course Content's Modules and links are in Assessments and will close 0900 (9:00 AM) on February 24.
Module 1:	Chapters 1 & 2

Date	Tasks
Module 2:	Chapters 3 & 4
Module 3:	Chapter 5
Module 4:	Chapter 5
Module 5:	Chapter 7 & 8
Module 6:	Chapter 9
February 24 – March 3 EXAM 1 and Postings	<p>EXAM 1 opens 0900 (9:00 AM), February 24; closes 0900 (9:00 AM), March 3</p> <p>Discussion Forum: You need to post 2 original and 2 response to other student's original postings on any of the Articles included in these Modules (4 total by March 3). These postings are on the Discussion Forum under the specific Module/Article listing.</p>
2nd Period March 3 – April 14	All Chapter quizzes (7 total) from Modules 7-12 will close April 14 at 0900 (9:00 AM),
Module 7:	Chapter 10
Module 8:	Chapter 11
Module 9:	Chapter 12 & 13
Module 10:	Chapter 14
Module 11:	Chapter 15
Module 12:	Chapter 16
April 14 – April 21 EXAM 2 and Postings	<p>EXAM 2 opens 0900 (9:00 AM), April 14; closes 0900 (9:00 AM), April 21.</p> <p>You need to post 2 original and 2 response to other student's original postings on the Articles included in these Modules (8 total by April 21; 4 from first half of semester and 4 from second half of semester).</p> <p>These postings are on the Discussion Forum under the specific Module/Article listing.</p>

Chemistry

Learning Objectives

- All forms of matter are composed of one or more elements. Be able to list the major elements in living things.
- Describe how protons, electrons, and neutrons are arranged into atoms and ions.
- Define the terms atomic number and atomic mass and be able to describe their significance.
- Atoms with the same atomic number but a different mass number are isotopes. List the isotopes of hydrogen and of carbon.
- Be able to describe radioisotopes and list three ways they are used in biology.
- The union between the electron structures of atoms is known as the chemical bond. Be able to list and describe the three types of chemical bonds found in living things.
- Be able to describe the distribution of electrons in the space around the nucleus of an atom.
- An atom tends to react with other atoms when its outermost shell is only partly filled with electrons. Be able to discuss why this happens.
- Be able to define the two types of ions and describe how ionic bonds form between positive and negative ions.
- In a covalent bond, atoms share electrons. List several elements that tend to form covalent bonds.
- Distinguish between a nonpolar covalent bond and a polar covalent bond and give an example of each.
- Define hydrogen bond and describe conditions under which hydrogen bonds form and cite one example.
- Explain what is meant by the polarity of the water molecule, and how the polarity of water molecules allows them to interact with one another.

Cellular Organization

Learning Objectives

Cellular Organization

- Give the function and cellular location of the following basic eukaryotic organelles and structures: cell membrane, nucleus, endoplasmic reticulum, Golgi bodies, lysosomes, mitochondria, ribosomes, chloroplasts, vacuoles, and cell walls.
- A micrometer is one-millionth of a meter long. A nanometer is one-billionth of a meter long. How many micrometers tall are you?
- Describe the function of the nuclear envelope and nucleolus.
- Describe the details of the structure of the chloroplast, the site of photosynthesis.
- Mature, living plant cells often have a large, fluid-filled central vacuole that can store amino acids, sugars, ions, and toxic wastes. Animal cells generally lack large vacuoles. How do animal cells perform these functions?
- Microtubules, microfilaments, and intermediate filaments are all main components of the cytoskeleton.
- Flagella and cilia propel eukaryotic cells through their environment; the microtubule organization in these organelles is a 9+2 array.

Cellular Regulation

Learning Objectives

- Materials are exchanged between the cytoplasm and external cell environment across the plasma membrane by several different processes, some require energy, some do not..
- Describe the general structure of a phospholipid molecule and what makes it suitable as a major component of cell membranes.
- Explain the behavior of a great number of phospholipid molecules in water.
- Describe the most recent version of the fluid mosaic model of membrane structure.
- Molecules moving to regions where they are less concentrated are moving down their concentration gradient.
- Random movement of like molecules or ions down a concentration gradient is called simple diffusion.

Cellular Regulation

- When salt is dissolved in water, which is the solute and which is the solvent?
- Explain osmosis in terms of a differentially permeable membrane.
- Define tonicity and be able to use the terms isotonic, hypertonic, and hypotonic.

Tissues

Learning Objectives

- Be able to list the major functions of each of the four major animal tissue types.
- Distinguish between simple and stratified epithelial tissue.
- Compare and contrast the different types of connective tissues: loose, dense, fibrous, cartilage, bone, blood, adipose. Be able to list the function of each type.
- Know the three types of muscle and be able to differentiate them visually and according to their functions.
- Be able to diagram a typical neuron and its three areas: dendrite, axon, and cell body.
- Know the characteristics of the various types of animal tissues. Learn the types of cells that compose each tissue type and be able to give some examples of organs that contain significant amounts of each tissue type.
- Detail the functions carried out by epithelial tissue and state the general location of each type.
- Be able to discuss the meaning of the term gland, cite three examples of glands, and state the extracellular products secreted by each.
- Describe the basic features of connective tissue, and explain how the cells of this tissue type enable connective tissue to carry out its various tasks.
- List three of the functions of blood.
- List two functions of bone and/or cartilage.
- Distinguish among skeletal, cardiac, and smooth muscle tissues in terms of location, structure, and function.

Tissues
<ul style="list-style-type: none">• Muscle tissues contain specialized cells that can contract.• Neurons are organized as lines of communication.
Digestive System
Learning Objectives